

Section 3 Contents

	Page
"Guide to Writing SLO's"	1-18
Blooms Taxonomy	5-7
Worksheets	13-16
"Assessment Workshop"	19-42
Using course-embedded assessment/multiple choice questions	19-22
Using rubrics	23-42

De Anza College
Guide to Writing
Student Learning Outcomes
(SLOs)

September, 2009

- Section I: Key Principles (p. 2)**
- Section II: Back to Basics (p. 3)**
- Section III: Bloom's Taxonomies (p. 4-6)**
- Section IV: Sample SLOs (p. 7-8)**
- Section V: Steps to Writing SLOs (p. 9-12)**
- Section IV: SLOs and Accreditation (p. 12-14)**
- Section V: De Anza SLO Recording Form (p. 15)**
- Section VI: Accreditation and Rubric (p.16-17)**
- Section VII: How to document your work (p. 18)**

[Please note this document has been formatted for double-sided printing.](#)

Student Learning Outcomes - Key Principles

Here are the key concepts to remember about student learning outcomes.

1. An SLO is an over arching goal, one that asks students to synthesize many discreet skills using higher level thinking skills and to produce something that asks them to apply what they've learned.
2. The ACCJC Accreditation standards required that SLOs be written for all courses, programs, degrees and certificates, Student Services and the Library. This has proven so helpful that some colleges are also writing them for Administrative Services.
3. SLOs should be agreed upon by the group that is responsible for delivering the learning experience; for example, all the instructors who teach the same course should agree and teach to the SLOs for that course; all members of a program or department should agree to the program or departmental SLOs; the entire college should be involved in defining and writing institutional SLOs.

Back to Basics: Writing Student Learning Outcomes

Remember that Student Learning Outcomes describe the knowledge, skills, abilities or attitudes that a student can **demonstrate** by the end of your course, program, degree or student service. They describe the big picture, and include four major components. SLOs:

1. Require the use of **higher-level** thinking abilities.
2. Ask students to **synthesize** discreet skills or areas of content.
3. Result in the **production** of educational plans, papers, projects, portfolios, performances, exams etc. that require students to **apply** what they've learned.
4. Require faculty to **evaluate** or **assess** the product to measure a student's achievement or mastery of the outcomes.

SLOs versus Course Objectives

How is that different from course objectives? Course objectives are on smaller scale, describing small, discreet skills or “nuts and bolts” that require basic thinking skills. They are subsets of outcomes. Think of objectives as the building blocks used to produce whatever is used to demonstrate mastery of an outcome. Objectives can be practiced and assessed individually, but are usually only a portion of an overall project or application. See the table below for a more detailed contrast between outcomes and objectives.

	Objectives	Outcomes
Scope	Skills, tools, or content to engage and explain a particular subject	Overarching results - subsequent learning
Target	Details of content coverage and activities which make up a course curriculum.	Higher level thinking skills that integrate the content and activities.
Major Influence	Input – nuts and bolts	Output – Observable evidence (behavior, skill, or discrete useable knowledge) of learning.
Number	Objectives can be numerous, specific, and detailed to direct the daily activities and material.	SLOs are limited in number (5-9) to facilitate modification and improvement of teaching and learning.

“Outcomes demonstrate an understanding and application of a subject beyond the nuts and bolts which hold it together; objectives represent the nuts and bolts.” (Bakersfield College Chemistry Professor).

Bloom's Taxonomies

Look at the following three tables describing the knowledge, skills and abilities, and attitudes in a course. Note that there is a **flow**, a line of progression from the most basic objectives to the most sophisticated outcomes. The charts are adapted from the work of Janet Fulks and Kate Pluta from Bakersfield College.



Knowledge

Objectives

Basic
Knowledge
Thinking

Outcomes

More Sophisticated
Higher Level

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Student remembers or recognizes information or specifics as communicated with little personal assimilation.	Student grasps the meaning behind the information and interprets, translates, or comprehends the information.	Student uses information to relate and apply it to a new situation with minimal instructor input.	Student discriminates, organizes, and scrutinizes assumptions in an attempt to identify evidence for a conclusion.	Student creatively applies knowledge and analysis to integrate concepts or construct an overall theory.	Student judges or evaluates information based upon standards and criteria, values and opinions.
Cite Label List Enumerate Identify Imitate Match Name Quote Recall Reproduce State Write	Convert Define Describe Discuss Estimate Explain Generalize Identify Illustrate Locate Paraphrase Restate Summarize	Apply Chart Compute Demonstrate Determine Dramatize Establish Make Manipulate Prepare Project Solve Use	Analyze Compare Contrast Correlate Diagram Dissect Differentiate Distinguish Infer Investigate Limit Outline Separate	Assemble Create Construct Design Develop Formulate Generate Hypothesize Initiate Invent Modify Reframe Synthesize	Access Appraise Conclude Critique Decide Defend Diagnose Evaluate Judge Justify Rank Recommend Support

Skills and Abilities

Objectives

Basic Knowledge
Basic Skills
Level

Outcomes

More Sophisticated Skills
Higher Level Abilities
Critical Understanding of Performance



Observe	Model	Recognize Standards	Correct	Apply	Coach
Students translate sensory input into physical tasks or activities.	Students are able to replicate a fundamental skill or task.	Students recognize standards or criteria important to perform a skill or task correctly.	Students use standards to evaluate their own performances and make corrections.	Students apply this skill to real life situations.	Students are able to instruct or train others to perform this skill in other situations.
Hear Identify Observe See Smell Taste Touch Watch *Usually no outcomes or objectives written at this level.	Attempt Copy Follow Imitate Mimic Model Reenact Repeat Reproduce Show Try	Check Detect Discriminate Differentiate Distinguish Notice Perceive Recognize Select	Adapt Adjust Alter Change Correct Customize Develop Improve Manipulate Modify Practice Revise	Build Compose Construct Create Design Originate Produce	Demonstrate Exhibit Illustrate Instruct Teach Train

Attitudes

Objectives

Elementary Values and Behaviors
 Inherited Value System
 Egocentric View

Outcomes

More Highly Developed Attitudes
 Well Thought-out Value System
 Higher Level Abilities to Identify and
 Articulate Others' Values

Receiving	Responding	Valuing	Organizing	Characterizing
Students become aware of an attitude, behavior, or value.	Students exhibit a reaction or change as a result of exposure to an attitude, behavior, or value.	Students recognize value and display this through involvement or commitment.	Students determine a new value or behavior as important or a priority.	Students integrate consistent behavior as a naturalized value in spite of discomfort or cost. The value is recognized as a part of the person's character.
Accept Attend Describe Explain Locate Observe Realize Receive Recognize	Behave Comply Cooperate Discuss Examine Follow Model Present Respond Show Studies	Accept Adapt Balance Choose Differentiate Defend Influence Prefer Recognize Seek Value	Adapt Adjust Alter Change Customize Develop Improve Manipulate Modify Practice Revise	Authenticate Characterize Defend Display Embody Habituate Internalize Produce Represent Validate Verify

Sample Student Learning Outcomes

Here are sample outcomes written by faculty from different colleges. Note the verbs and how they reflect higher level thinking skills, making them SLOs rather than objectives. Some of these are the only outcomes for the course, while others are one of several.

Forensic Anthropology

-Using the basic principles of forensic anthropology, **analyze** skeletonized human remains to determine sex, age at death, height and genetic ancestry.

Biology

-**Utilize** the scientific method and **evaluate** the scientific validity of information presented by the media and other sources.

Chemistry 1A

- **Solve** quantitative chemistry problems and demonstrate reasoning clearly and completely. **Integrate** multiple ideas in the problem solving process. Check results to make sure they are physically reasonable.

- **Analyze** the results of laboratory experiments, evaluate sources of error, synthesize this information, and express it clearly in written laboratory reports.

Child Development

-Given a description of an infant with a particular disability, **analyze** ways to provide support and education to parents including; on-site, in-home, and community services available.

Construction Fundamentals: Principles and Practices (lab)

-**Construct** a building applying the skills and knowledge obtained in this class.

Dance: Street Dance and Hip Hop

-**Perform**, with an increasing degree of proficiency, simple Hip Hop movements, **demonstrating** increasing control of skills pertaining to memorization, physical safety, body awareness, alignment, and aesthetic valuing.

Labor Studies - Collective Bargaining

-**Apply** collective bargaining theories from both management and labor perspectives.

-**Analyze** and apply the principles of collective bargaining and labor law during negotiations.

-**Utilize** negotiation skills in labor and employer relations.

Nutrition

-**Analyze** a documented nutritional problem, **determine** a strategy to correct the problem, and **write** a draft nutritional policy addressing the broader scope of the problem

Theatre Art (a series of courses)

Intro to Acting

-**Select, analyze, and perform** selections from dramatic texts **utilizing** the performance skills of memorization, vocal projection, spatial awareness, stage directions and physical expression.

Beginning Acting

-**Select, analyze, and perform** selections from dramatic texts **demonstrating increasing control** over the skills of memorization, vocal projection, spatial awareness, stage directions and physical expression.

Intermediate Acting

-**Select, analyze, and perform** selections from dramatic texts **demonstrating consistent control** and use of the performance consistent skills of memorization, vocal projection, spatial awareness, stage directions and physical expression.

Advanced Acting

-**Select, analyze, and perform** selections from dramatic texts **demonstrating a mastery** of the performance skills of memorization, vocal projection, spatial awareness, stage directions and physical expression.

English Composition series

Basic Writing (2 levels below transfer)

-**Write** paragraphs and short essays **demonstrating** basic sentence-level competency and culminating in a portfolio.

-**Comment** on ideas and writing strategies in reading assignments.

Elements of Writing (1 level below transfer)

-**Write essays demonstrating** sustained clarity of intention, awareness of audience, and various writing techniques.

-**Articulate** responses to readings in various genres.

1A – College Composition (transfer level)

- **Write essays**, including research-based writing, **demonstrating** academic rhetorical strategies and documentation.

-**Analyze** and evaluate assigned and researched texts.

1B – Composition and Literature (transfer level)

-**Write literary analysis**, interpretation, and research-based essays.

-**Demonstrate** close readings of literary texts for analysis and interpretation.

2 – Critical Thinking (transfer level)

- **Write evidence-based essays demonstrating** logical reasoning and argumentative skills.

- **Evaluate** logical reasoning and argument in assigned and researched texts.

Guide to Writing SLOs

Beginning is often the most difficult step. Remember that you have been doing this all along. Now is your chance to put what you know intuitively as a professional into words. Use the Worksheet below and:

- 1) In one sentence, describe one **major** piece of knowledge, skill, ability or attitude that a student will have gained by the end of your class. Describe what students will **do** -- not content, activities or hours.
- 2) Use action verbs. See the previous pages for examples.
- 3) Write it in language that a student will understand.
- 4) Make sure that the outcome is something that can be assessed or tested.
- 5) Hint: Sometimes it's easier to start backwards by thinking about the major assessments you use in the course. These would be the products or demonstrations of your outcomes. Make a list of your major assignments for this course. Then try to describe in one sentence what the students are being asked to demonstrate in those assignments.
- 6) A word of warning: Be careful when describing attitudes in a learning outcome. They are hard to assess. Ask yourself if the attitude is crucial to success in your course. If a student doesn't have a certain attitude, but possesses the knowledge and skills being taught, is that satisfactory?

Some Dos and Don'ts:

1. Don't use the words "understand" - go for higher level thinking skills.
2. Do distinguish the difference between an A and B courses of the same number.
3. Keep the number of outcomes short – no more than four or five at most . Use the outcomes to describe the **major** skills or knowledge students will take away from the course and what they will **produce** to show you that they have mastered those skills.

Writing Student Learning Outcomes Worksheet

Course Name and Number _____

Outcome 1 sentence that describes a major piece of knowledge, skill, ability or attitude that students can demonstrate by the end of the course	Assessment Major Assignment, Project or test used to demonstrate or apply outcome
Outcome 1 sentence that describes a major piece of knowledge, skill, ability or attitude that students can demonstrate by the end of the course	Assessment Major Assignment, Project or test used to demonstrate or apply outcome

Student Learning Outcome Checklist	Yes	No
Do the SLOs include active verbs?		
Do the SLOs suggest or identify an assessment?		
Do the SLOs address the expected level of learning for the course using Bloom's Taxonomy as a guideline?		
Are the SLOs written as outcomes rather than as objectives? 1. Language indicates an important overarching concept versus small lesson or chapter objectives. 2. Outcomes address what a student will be able to do at the completion of the course.		

3. SLOs address student competency rather than content coverage.		
<p>Are the SLOs appropriate for the course?</p> <ul style="list-style-type: none"> • Consistent with the curriculum document of record • Represents a fundamental result of the course • Aligns with other courses in a sequence, if applicable • Represents collegiate level work 		
Will students understand the SLOs?		
Comments or suggestions:		

SLOs and Accreditation

Once SLOs are written, where should they live? Since the advent of the 2002 ACCJC Accreditation Standards, some have argued that the SLOs should be on the Course Outline of Record. The COR is an official document required in California to use for articulation agreements between community colleges and transfer institutions. Some colleges fear that they cannot get agreements if their SLOs do not match the SLOs of nearby transfer institutions. In addition, since SLOs are not static or fixed, some colleges are reluctant to attach them to their official CORs. Others feel that, like course objectives, the regular curriculum process is sufficient for making needed changes. Why go to the trouble of creating another place to officially list SLOs, they argue, when the Course Outline of Record is already available. A 2007 survey by the statewide Academic Senate revealed the state is evenly split in half, with 50% of colleges keeping their SLOs as addenda to the official Course Outlines of Record or in a separate place, while the other 50% insert them directly into the document.

A discussion has also arisen about SLOs being in the syllabi for all courses. Standard IIA6a of the 2002 ACCJC Accreditation Standards, states that “in every class section, students receive a course syllabus that specifies learning objectives consistent with those in the institutional officially approved course outline.” Since the official Course Outlines of Record have course objectives which all faculty teaching a particular course need to meet, it makes sense to provide students with those objectives. However, since students and the public should be apprised of what the expected outcomes for a course should be, then it is also reasonable to put the SLOs that have been agreed upon by the faculty in a discipline into course syllabi.

The ACCJC rubric that outlines the requirements for Student Learning Outcomes implementation is attached.

Rubric for Evaluating Institutional Effectiveness – Part III: Student Learning Outcomes

Levels of Implementation	Characteristics of Institutional Effectiveness in Student Learning Outcomes <i>(Sample institutional behaviors)</i>
Awareness	<ul style="list-style-type: none"> • There is preliminary, investigative dialogue about student learning outcomes. • There is recognition of existing practices such as course objectives and how they relate to student learning outcomes. • There is exploration of models, definitions, and issues taking place by a few people. • Pilot projects and efforts may be in progress. • The college has discussed whether to define student learning outcomes at the level of some courses or programs or degrees; where to begin.
Development	<ul style="list-style-type: none"> • College has established an institutional framework for definition of student learning outcomes (where to start), how to extend, and timeline. • College has established authentic assessment strategies for assessing student learning outcomes as appropriate to intended course, program, and degree learning outcomes. • Existing organizational structures (e.g. Senate, Curriculum Committee) are supporting strategies for student learning outcomes definition and assessment. • Leadership groups (e.g. Academic Senate and administration), have accepted responsibility for student learning outcomes implementation. • Appropriate resources are being allocated to support student learning outcomes and assessment. • Faculty and staff are fully engaged in student learning outcomes development.
Proficiency	<ul style="list-style-type: none"> • Student learning outcomes and authentic assessment are in place for courses, programs and degrees. • Results of assessment are being used for improvement and further alignment of institution-wide practices. • There is widespread institutional dialogue about the results. • Decision-making includes dialogue on the results of assessment and is purposefully directed toward improving student learning. • Appropriate resources continue to be allocated and fine-tuned. • Comprehensive assessment reports exist and are completed on a regular basis. • Course student learning outcomes are aligned with degree student learning outcomes. • Students demonstrate awareness of goals and purposes of courses and programs in which they are enrolled.
Sustainable Continuous Quality Improvement	<ul style="list-style-type: none"> • Student learning outcomes and assessment are ongoing, systematic and used for continuous quality improvement. • Dialogue about student learning is ongoing, pervasive and robust. • Evaluation and fine-tuning of organizational structures to support student learning is ongoing. • Student learning improvement is a visible priority in all practices and structures across the college. • Learning outcomes are specifically linked to program reviews.

JP;DB: cg 8/2007

De Anza SLO Recording Form

- All outcomes written for a course must be recorded electronically.
- The electronic form is available for download at:
(separate downloads for MAC or PC versions available).
- The completed form should be sent via email to
with a cc to your dean.

De Anza Assessment Workshop—Flight 3 November 16 and 20, 2009

Let's look at the Student Learning Outcomes Process in light of your course.

1. Consider the link of course to Institutional Core Competencies (see appendix, p.9)
What Institutional Core Outcomes does your course address?
2. Specify intended learning outcomes (SLO's).
What learning comes of completing the course? What will students be able to do at the end of the course?
3. Identify means of assessment and criteria for success.
*Can you utilize an assignment or exam that you are currently using to assess if your students can do what you claim they will be able to do in your student learning outcome?
Wouldn't it be great to have to opportunity to explore possibilities with your colleagues?

How good is good enough? By what criteria are you going to define "proficiency" . . . define that the students have did well enough? Set a benchmark?*
3. Determine how you will share your expectations with your students.
*Will you show them a rubric that defines criteria for success on your "capstone" assignment?
Will you place your SLO(s) on your syllabus?
Or will you create your own transparency?*
5. Implement your assessment
6. Assemble the results
*How well did the students do relative to your benchmark?
How well did the students do relative to each other?*
7. Using the results and derive meaning from them—Reflection and Enhancement
What shall we do with these results?
8. Document, document, document
*Your data will be stored on the ECMS system soon. In the meantime, please use the documentation form, deanza.edu/slo, SLOP recording form.
Phase one, Outcome Statement. Please send phase one to the outcomes website until further notice.
Phase two, your assessment—Keep copies of your assessment tool
Phase three, Reflect and Enhancement—please keep your own reflection and enhancement data on the SLOP form. You will take it to a larger group discussion in the future and a group reflection and enhancement report will be created and submitted at that time.*

The data ideally will be used as foundations for

- Department/program plans
- Resource Allocation

Step One—Linking your course to an ICC, (appendix, p.9 of this handout)

What core competencies does your course link to?

an example

- College or GE Outcome/ ICC
Students will be able to speak and write effectively.
- Academic Program Outcome (Psychology)
Students can speak and write effectively using the principles and concepts of the discipline.
Note: De Anza has not defined/identify program outcomes yet...but, we will be in the future.
- Course Outcome (Psychology)
The student will prepare a written summary and interpretation of standardized test results.

Step Two—Review your outcome statement. Is it:

- Student-focused, not teacher focused?
- Focused on learning resulting from an activity, not the activity itself?
- Focused on important, non-trivial aspects of learning?
- Focused on skills & abilities central to the discipline, based on professional standards of excellence or does it address an ICC?
- General enough to capture important learning but clear and specific enough to be measurable?
- Focused on aspects of learning that will develop and endure but that can be assessed in some form now?

Step Three--Selecting your Assessment Method

Consider an exam or capstone assignment you are currently using?

- Does it develop/ foster your primary outcomes?
- Can you readjust your exam, the current criteria by which you evaluate the exam/performance, to elicit or provide evidence of desired student outcomes?
- Perhaps you want to explore other options and create something new? This would be a good opportunity to work with other colleagues to see what they are doing.

We've always done this, but now we can systematically work to improve student learning rather than just test the student and assign a grade.

Types of Assessments

(see "resource list of assessments" handout)

Embedded Narrative Assignments

- Case study
- Portfolio (paper or electronic)
- Capstone project
- Senior exit essay

Performances

- Critical situation scenario
- Debate
- Demonstration

- Oral presentation

Tests

- Standardized test
- Homegrown test
- In class objective test
- In class essay

Student Centered

- Exit interview

EXAMPLE A: Grading and SLO Assessment by *James Nichols (with some edits by Coleen Lee-Wheat)*

SLO: Student will demonstrate all components of a well written persuasive essay.

Note: This example shows one section of a rubric used to assess the SLO.

The instructor chose 4 criteria which he felt were key components to critiquing assignment. He gave a performance scale of one to five; then gave a sum score and a grade for each individual. The SLO assessment aspect of the example is the averaging of the results of the groups' performance relative to each "criteria"; thus answering the question: "How did they do?"

What is missing? How do you know what the numbers mean? How could this instructor make the numbering scale more transparent to the students? *KEEP THESE QUESTIONS ON YOUR BACK BURNER*

Criteria	Tim	Jane	Mary	Joe	Dave	Average
Spelling	3	4	1	2	3	2.6
Grammar	2	5	3	2	5	3.4
Punctuation	4	5	3	2	5	3.6
Structure	3	2	3	5	3	3.8
Total	13	17	10	12	15	
Grade	C	A	D	C	B	

Now let's discuss.

What are the findings?

The **down the column total** was used for individual grading. **Across the row** average was used for assessment of intended outcomes from the group.

Reflection

What do the averages on the right reveal?

Did the assessment yield information that was informative?

Does the "outcome statement" need to be changed?

How do you as an instructor/expert define "proficient performance"? In this example, because "3" is in the middle of the performance scale, does that mean proficient performance?

Does averaging scores in the vertical column really show that a student is going to be a successful writer in the future?

Is it good enough? These are the discussions you might have with other colleagues.

Enhancement

What kind of changes could be implemented in the class to improve the students' scores in spelling?

What kind of resource request could he attach to these findings if any?

DEANZA Faculty--Where would you record all of this information? Remember?

Use the www.deanza.edu/slo/ website or contact Coleen Lee-Wheat at leewheatcoleen@deanza.edu or your division assessment liaison.

NEED HELP CREATING A GRADING/ ASSESSMENT RUBRIC USED IN EXAMPLE A?

- Step one: Consider your SLO and what assignment best represents the components of the SLO that you would like to assess.
- Step two: Consider what questions or characteristics of the assignment that you feel will yield assessment results that show that your students “can do, know/understand, performance shows knowledge gained . . . Hint: these may be criteria that you already use to assess your students.
- Step 3 : Create an assessment rubric using your portal class list. Turn it into an excel document and create formulas to do the work.

Starting from the VERY beginning, these instructions are for you after leaving the workshop to create your document using the De Anza portal.

- 1. Go to the portal. Log in**
- 2. Select my classes**
- 3. Select a class roster**
- 4. Left side “filter” pull down screen what students do you want on your list? This example I used “enrolled students”**
- 5. Select Export Excel**
- 6. Save doc and name**
- 7. Open Document**
- 8. Delete unwanted columns and format by adding blank rows above the name of the first student**
- 9. Calculate the number of columns you will need, don’t forget to add “sum and ave” columns.**
- 10. Create grid lines, use the format pull down or border selection on the tool bar**
- 11. Label columns**
- 12. Create formula for C28**
 - Select the last cell of the first blank column that matches one cell below your last student’s name**
 - Select the sum sign from the tools bar at the top of the screen then press enter**
 - Copy that cell and its contents into all of cells to the right that correspond to the columns you are using**

LASTLY CONSIDER before you use your own rubric. Run a beta test. In this way you can modify your rubric before you collect data for a whole class!

A second example follows on the next page.

EXAMPLE B:

Using specific course exam questions that you feel represent student learning relative to your SLO, you can:

- Monitor student responses to identify topics of weakness
- Item analysis to discern what groups are having difficulty with selected items
- Revisit teaching approach to the topic
- And you can use the Grading Assessment Rubric Concept from Example A

Example: SLO: Students will apply fundamental concepts of physical fitness they apply to a healthful lifestyle.

The De Anza College Physical Education department decided on three categories of fitness that all students should be able to use in their daily lives. The instructors can create their own questions or they can use the questions we created during Opening Days as a group. The questions will be interspersed amongst 40 other short answer questions or multiple-choice questions on a final tennis exam. The rest of the exam will deal with rules of the sport.

- Question 1: Aerobic vs Anaerobic Energy Systems
- Question 2: Aerobic vs Anaerobic Energy Systems
- Question 3: Strength Development vs Muscular Endurance
- Question 15: Strength Development vs Muscular Endurance
- Question 25: Nutrition
- Question 35: Nutrition

Key

Score of one = answered correctly

Score of zero = answered incorrectly

Student ID	Q1	Q2	Q3	Q15	Q25	Q35	Individual sums	Individual scores
1	1	1	1	1	1	1	6	A
2	0	0	1	0	0	1	2	F
3	1	0	1	1	0	0	3	C
4	1	1	0	1	1	0	4	B
5	1	1	1	1	1	0	4	B
Sum	4	3	4	4	3	2		
Averages/Question	Q1, Q2	.70	Q3 Q4	.80	Q5 Q6	.50		

What does this grid tell you?

What are the findings?

- I would immediately say they were not able to apply nutritional concepts.
- I would look at the pattern of zeros and see where they fell. Student 2 either didn't study or does not take exams well.
- I would talk to my colleagues and discuss whether they feel that an average group score of .70 is "good enough" or a benchmark that defines "proficiency".

What kind of enhancements can be made to improve student learning based on this data? For example,

Obviously it is too small of a sample to use to make any decisions, however

If I had a history of five assessments over a two year period or

If I had a collection of instructor assessment results,

I might make a valid case for raising the discussion about changing the textbook or purchasing an interactive software package about nutrition that could be used by all the instructors in the department for an online homework assignment.

We have a tool on campus, CATALYST that can assess your data in a similar way and more. Two, two hour workshops through the Distance Learning Center, April Qian, x5399

Assessment –Using Rubrics WHAT IS A RUBRIC?

- Key Questions
 - What essential elements must be present in student work to ensure high quality?
 - What does student work look like at each level of mastery?
- You can create a grid format or linear format
- Commentary describing features of work at each level of mastery (the cells)
- Build from strengths and weaknesses teachers see in student work over the year

Rubrics help you refine your teaching. How do you know you need a rubric?

- *If you can check off more than three items from the following list:*
- *You are getting carpal tunnel syndrome from writing the same comments on almost every student paper.*
- *It's 3 a.m. The stack of papers on your desk is fast approaching the ceiling. You're already 4 weeks behind in your grading, and it's clear that you won't be finishing it tonight either.*
- *Students often complain that they cannot read the notes you labored so long to produce.*
- *You have graded all your papers and worry that the last ones were graded slightly differently from the first ones.*
- *You want students to complete a complex assignment that integrates all the work over the term and are not sure how to communicate all the varied expectations easily and clearly.*
- *You want students to develop the ability to reflect on ill-structured problems but you aren't sure how to clearly communicate that to them.*
- *You give a carefully planned assignment that you never used before and to your surprise, it takes the whole class period to explain it to students.*
- *You give a long narrative description of the assignment in the syllabus, but the students continually ask you three questions per class about your expectations.*
- *You are spending long periods of time on the phone with the Writing Center or other tutorial services because the students you sent there are unable to explain the assignments or expectations clearly.*
- *You work with your colleagues and collaborate on designing the same assignments for program courses, yet you wonder if your grading scales are different.*
- *You've sometimes been disappointed by whole assignments because all or most of your class turned out to be unaware of academic expectations so basic that you neglected to mention them (e.g., the need for citations or page numbers).*
- *You have worked very hard to explain the complex end-of-term paper; yet students are starting to regard you as an enemy out to trick them with incomprehensible assignments.*
- *You're starting to wonder if they're right. ("What is a Rubric," [Introduction to Rubrics](#) by D. Stevens and A. Levi)*

RUBRIC SAMPLES

Linear formatted Sample Rubric for Assessing Photographs

1. Concept, idea, visualization:

- | | |
|--------|--|
| 10 pts | Shows coherency of the concept with a high degree of originality and sophistication. The idea is well stated with visual elements and cues. |
| 9 pts | Shows coherency of the concept with some originality and sophistication. The idea is stated with visual elements and cues but needs to be more clear or more strongly evident. |
| 8 pts | Shows some coherency of the concept with commonly used, cliché or stereotyped imagery. The idea is obtuse, and requires greater clarity through the use of visual elements and cues. |
| 7 pts | Lacks general coherency of the concept. Many of the visual elements and cues do not lead the viewer to the intended idea. |
| 6 pts | Lacks any coherency of the concept. Visual elements and cues do not lead the viewer to the intended idea. |
| 0 pts | The work was not presented to me. |

2. Composition & design:

- | | |
|--------|---|
| 10 pts | Shows strong internal integrity of the visual elements. Nothing needs to be added or removed – framing is superb. |
| 9 pts | Shows internal integrity of the visual elements. A visual element needs to be added, moved or removed – framing needs some slight adjustment. |

- 8 pts Shows obvious weaknesses in the internal integrity of the visual elements. Many visual elements need to be added, moved or removed – framing needs definite adjustments.
- 7 pts Image is breaking apart – there is very little internal integrity of the visual elements. Most visual elements need to be rethought – framing needs major readjustment.
- 6 pts Visual integrity is nonexistent and image has broken apart. All of the visual elements need to be rethought – framing needs a complete overhaul.
- 0 pts The work was not presented to me.

3. Technical:

- 10 pts Shows master in the use of photographic equipment and techniques to attain the assignment parameters.
- 9 pts Shows a good command of the use of photographic equipment and techniques to attain most of the assignment parameters.
- 8 pts Shows some command of the use of photographic equipment and techniques to attain some of the assignment parameters.
- 7 pts Shows limited command of the use of photographic equipment and techniques to attain a few of the assignment parameters.
- 6 pts Shows little or no command of the use of photographic equipment and techniques to attain a few or none of the assignment parameters.
- 0 pts The work was not presented to me.

Developed by Susan Hoisington, Photography. Cabrillo College

Linear Rubric Example with a cleverly created grading rubric

Developed by Marcy Alan Craig, Cabrillo, English.

English1A Essay Rubric

WOW!!! (90-100 Points - Grade A)

- Begins with an introduction that shows your understanding of the issues, grabs your readers' attention, and presents a strong and insightful thesis or point of view.
- Engages the topic in a thoughtful and individual way, showing originality, elegance and clear thinking.
- Develops the topic using a strong detail, quotes from other sources, and a unique synthesis of ideas.
- Utilizes library research and quotes from outside sources, always properly citing them using the MLA format.
- Possesses a fully explained and logical progression of ideas that indicates the writer's sensitivity to different ways of looking at the topic with an awareness of key counter arguments and a consideration of how those alternate positions shape your understanding of the topic.
- Ends with a strong conclusion that clarifies the significance of the paper's lessons
- Chooses words aptly and sometimes inventively.
- Demonstrates mastery of most of the grammar and usage conventions of Standard English.
- Uses phrasing, tone, and expression that reflects a unique personal voice.

Good! Almost There (80-89 Points - Grade B)

- Begins with an introduction that shows some understanding of the issues, gives some background and has an adequate thesis or point of view.
- Presents a thoughtful response to the topic, using appropriate reasoning and a partially realized analysis that is accurate.
- Develops the topic showing appropriate details, a sense of orderly progress between ideas, and use of references that reveal a familiarity with the topic.
- Uses words precisely if not creatively.

- Varies sentence structure enough to read smoothly.
- Utilizes library research and quotes from outside sources, usually properly citing them using the MLA format.
- Uses competently the conventions of written English, containing few, if any, errors in sentence structure, punctuation and capitalization or usage.
- Uses mostly consistent phrasing, tone and expression that reflects a personal world view and style.

Getting there (70-79 Points - Grade C)

- Presents an adequate response to the topic, using superficial analysis and weak point of view.
- Uses logical reasoning, but the supporting evidence is general and imprecise with few examples. There may be some small factual errors.
- Uses a less precise vocabulary and may contain awkwardness of expression.
- Utilizes library research and quotes from outside sources, with fairly consistent use of the MLA citation format. May make some errors.
- Contains minor errors in mechanics and usage, and perhaps one or two more distracting errors in sentence structure.
- Uses fairly consistent phrasing, tone and expression that reflect a personal world view and style with occasional inconsistencies.

Try Again (60-69 Points - Grade D)

- Responds to the topic illogically, without a coherent structure or focus.
- Has no point of view, uses mostly summary and lacks evidence and support.
- Makes several large, factual errors.
- Makes enough errors in usage and sentence structure to cause a reader serious, if occasional, distraction.
- Improperly uses the MLA format for citations. Makes major errors in quoting and uses few sources.
- Uses frequently inconsistent phrasing, tone and expression, often formulaic and imitative; lacks evidence of a personal worldview and style.

Let's not even go there (50-59 Points - Grade F)

- Doesn't attempt the task or distorts it
- Lacks organization or detail.
- Contains many distracting errors in sentence structure, simplistic or inaccurate word choice, many repeated errors in grammar and usage.
- Not enough is written to get a sense of personal worldview and style.

SAMPLE GRADING SHEET THAT CAN ACCOMPANY YOUR RUBRIC

Similar to Example A and B earlier Assessing a group of student's performance can be done with the example on the following page:

Note the format of the Grading sheet.

Dimensions/criteria of rating (the columns)
Levels of mastery (the rows)

English 1A Grading Sheet
Paper #1-7 Grading Sheet

Name: _____ **Total Grade:** _____

This paper is one of the pieces of evidence for Outcomes #3 and 4:

- Use your unique voice to write papers that analyze the ecological, anthropological, historical and literary aspects of the Monterey Bay region.
- Use the library to find information in books, magazines, electronic databases and online sources. Incorporate those sources in your writing, acknowledging them using MLA documentation style

Based on the grading scale listed under Grading Requirements, your grade is divided into the elements listed in the chart below.

Elements of Grade	Wow	Good	Getting There	Try Again	Let's not Go there
Introduction					
Thesis or claim					
Response to topic					
Evidence to support thesis					
MLA citation and documentation					
Awareness of counter arguments					
Flow and Order of Ideas					
Conclusion					
Word Choice					
Grammar and Punctuation					
Personal Voice					

Comments:

The free website: [http:// rubistar.4teachers.org](http://rubistar.4teachers.org) contains a rubric template. Formatting and samples of rubrics can be accessed. Check it out and let us know what you think. Email us at: outcomes@deanza.edu

The SLO website also has a special set of information of that focuses on rubrics. Look for the links from the Assessment Workshop link. Keyword: Rubrics

KEEP IN MIND

The spirit of the SLO process is to develop and enduring, effective and efficient culture of dedication to student learning. Systematic assessment of student learning coupled with “rich” conversation between colleagues and creative classroom enhancements will be a positive enriching process for all participants—students and instructors.

Two Activities:

If I have your outcome statement (or you remember it),

Let’s look at one of your capstone assignments or exams.

1. Critique it as per pages one and two of this hand out.
2. Create a grading assessment rubric.

Or discuss

Let’s talk about assessment tools.

What tools might be more appropriate for your course (s)?

What experience do you personally have with them?

Where can you find premade rubrics for your discipline?

What types of information about student learning are you trying to gather?

Why would it be valuable to you?

PRACTICE PRACTICE PRACTICE

We are all learning at this point in time, do the best you can and ask for help. We can find colleagues in your area who can work with you or you can work with us.

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APPENDIX

DE ANZA COLLEGE INSTITUTIONAL CORE COMPETENCIES

The Institutional Core Competency statements are a promise to the communities that support De Anza College that students graduating with an A.A. or A.S. degree, or who will transfer to a four-year college or university, will be able to demonstrate the knowledge, skills, and attitudes contained within all of the five competency areas, based on general education and discipline-specific courses at the lower division level. Students who earn a certificate, or have taken courses for personal educational development, will be expected to demonstrate the knowledge, skills, and attitudes specified within one (or more) of the five competency areas.

COMMUNICATION AND EXPRESSION Students will communicate clearly, express themselves creatively, interpret thoughtfully and logically, and engage actively in dialogue and discussion, while paying attention to audience, situation, and (inter) cultural context. Communication and expression may be written or oral, verbal or nonverbal, informational or artistic.

INFORMATION LITERACY Students will recognize when information is needed and locate, critically evaluate, synthesize, and communicate information in various formats. They will use appropriate resources and technologies while understanding the social, legal, and ethical issues for information and its use.

PHYSICAL/MENTAL WELLNESS AND PERSONAL RESPONSIBILITY Students will recognize lifestyles that promote physical and mental well-being, engage in self-reflection and ethical decision-making, explore career choices and life goals, practice effective individual and collaborative work habits, and demonstrate a commitment to ongoing learning.

GLOBAL, CULTURAL, SOCIAL & ENVIRONMENTAL AWARENESS Students will recognize their role as local, national, and global citizens. They will participate in a democratic process, respect social and cultural diversity, appreciate the complexity of the physical world, and understand the significance of both environmental sustainability and social justice.

CRITICAL THINKING Students will analyze arguments, create and test models, solve problems, evaluate ideas, estimate and predict outcomes based on underlying principles relative to a particular discipline, interpret literary, artistic, and scientific works, utilize symbols and symbolic systems, apply qualitative and quantitative analysis, verify the reasonableness of conclusions, explore alternatives, empathize with differing perspectives, and adapt ideas and methods to new situations.

Adopted by the De Anza Academic Senate on March 16, 2009

A Rubric for Rubrics: A Tool for Assessing the Quality and Use of Rubrics in Education
 Downloaded July 9, 2005 from <http://its.monmouth.edu/facultyresourcecenter/Rubrics/A%20Rubric%20for%20Rubrics.htm>

Criteria	1 Unacceptable	2 Acceptable	3 Good/Solid	4 Exemplary
Clarity of criteria	Criteria being assessed are unclear, inappropriate and/or have significant overlap	Criteria being assessed can be identified, but are not clearly differentiated or are inappropriate	Criteria being assessed are clear, appropriate and distinct	Each criteria is distinct, clearly delineated and fully appropriate for the assignment(s)/course
Distinction between Levels	Little/no distinction can be made between levels of achievement	Some distinction between levels is made, but is not totally clear how well	Distinction between levels is apparent	Each level is distinct and progresses in a clear and logical order
Reliability of Scoring	Cross-scoring among faculty and/or students often results in significant differences	Cross-scoring by faculty and/or students occasionally produces inconsistent results	There is general agreement between different scorers when using the rubric (e.g. differs by less than 5-10% or less than 1/2 level)	Cross-scoring of assignments using rubric results in consistent agreement among scorers
Clarity of Expectations/ Guidance to Learners	Rubric is not shared with learners	Rubric is shared and provides some idea of the assignment/ expectations	Rubric is referenced - used to introduce an assignment/guide learners	Rubric serves as primary reference point for discussion and guidance for assignments as well as evaluation of assignment(s),
Support of Metacognition (Awareness of Learning)	Rubric is not shared with learners	Rubric is shared but not discussed/ referenced with respect to what is being learned through the assignment(s)/course	Rubric is shared and identified as a tool for helping learners to understand what they are learning through the assignment/ in the course	Rubric is regularly referenced and used to help learners identify the skills and knowledge they are developing throughout the course/ assignment(s)
Engagement of Learners in Rubric Development/ Use *	Learners are not engaged in either development or use of the rubrics	Learners offered the rubric and may choose to use it for self assessment	Learners discuss the design of the rubric and offer feedback/input and are responsible for use of rubrics in peer and/or self-evaluation	Faculty and learners are jointly responsible for design of rubrics and learners use them in peer and/or self-evaluation

*Considered optional by some educators and a critical component by others

Scoring: 0 - 10 = needs improvement 11 - 15 = workable 16 - 20 = solid/good 21 - 24 = exemplary

Dr. Bonnie B. Mullinix ©

Monmouth University

December 2003

Appendix C

Persuasive Speech Rubric

Speaker: _____
 Class Hour _____

Instructor _____
 Topic _____

Criteria	Exceptional 3	Partially Accomplished 2	Developing 1
Attention Getter	Skillfully uses attention getting strategy (quote, statistic, question, story, etc.) to capture listeners' attention and to introduce topic. Attention getter is relevant and meaningful and seemed to gain the desired response from audience.	Uses relevant attention getting strategy, but did not seem to adequately capture audience attention and/or lead to desired outcome.	No attention getting strategy evident. No clear or relevant connection to topic and/or speech purpose.
Thesis Statement/ Proposition	Speaker clearly formulates and states thesis statement during the speech introduction. Thesis statement identifies position on topic. Speaker previews main points.	Thesis/position clearly implied, although not explicitly stated. Topic is clearly identified, but main points are not clearly previewed.	No thesis statement (implied nor explicit). Position not clearly stated. Main points are not clearly identified. Audience unsure of direction of the message.
Connection w/Audience	Clearly states the relevance of topic to audience needs and interests. Thoughtful audience analysis reflected through choice of topic, supporting evidence, and audience messages. Speaker makes direct personal connection to topic.	Topic seems somewhat relevant to audience, but not explicitly stated. Vague reference to audience needs and/or interests. Limited personal connection to topic.	Topic seems irrelevant to audience needs and interests. No attempt made to connect topic to targeted audience. No direct personal connection to topic.
Subject Knowledge	Depth of content reflects knowledge and understanding of topic. Main points adequately substantiated with timely, relevant and sufficient support. Provides accurate explanation of key concepts.	Provides some support for main points, but needed to elaborate further with explanations, examples, descriptions, etc. Support is relevant, but not timely.	Provides irrelevant or no support. Explanations of concepts are inaccurate or incomplete. Listeners gain little knowledge from presentation.
Organization	Uses organizational pattern appropriate for persuasive speaking. Main points are clearly distinguished from supporting details. Signposts are used for smooth and coherent transitions.	General structure/organization seems adequate but some blurring between main points and supporting details. Logical flow, but no clear signposts for smooth transitions.	Lack of structure or structure inappropriate for persuasive speaking. Ideas are not coherent and transitions are forced or blurred.

			Difficult to identify introduction, body, and conclusion.
Logical appeal	Presents sound arguments to support major claim. Supports arguments with sufficient, relevant and valid evidence. Reasoning is free of fallacies.	Some arguments are sufficiently supported but some unsupported assertions are also present. Has minor reasoning fallacies.	Arguments lack relevant and valid evidence. Information is incorrect and/or outdated. Many fallacies are present in the reasoning.
Emotional appeal	Ethically appeals to audience emotions (anger, fear, compassion, etc.) to achieve persuasive goal. Vivid and emotive language and stories skillfully used to create imagery to engage audience emotionally.	Appeals to audience emotions (anger, fear, compassion, etc.) to achieve the persuasive goal, but fails to observe ethical responsibilities. Creates some effective imagery through language.	Fails to or inappropriately appeals to audience emotions. No attempt to use vivid or descriptive language or stories to capture audience emotions.

Counter-argument	Presents and skillfully refutes at least one counterargument. Balances a variety of perspectives and recognizes opposing views.	Counterargument is evident but needs to be more fully developed.	No counterargument included. One-sided argument, no other perspectives are considered. Some identifiable bias.
Source Credibility	Identifies and correctly cites at least 3 sources of information. Establishes credibility and authority of sources presented.	Most sources are clearly cited, but fails to establish credibility and authority of sources presented.	Fails to identify and cite sources. No attempt is made to establish credibility and authority of sources presented.
Conclusion	Skillfully develops conclusion with a summary, audience appeal, and memorable close.	Conclusion evident but incomplete. Conclusion needs to be more fully developed.	Speech ends abruptly and inconclusively.
Eye contact Extemporaneous/ Engaging Delivery (x2)	Consistently and effectively uses eye contact to establish rapport and engage audience. Extends eye contact throughout the audience. Inconspicuously uses 3x5 note cards.	Conspicuous use of speaker notes. Seems disengaged from audience for noticeable periods of time.	Reads speech from notes/manuscript. Avoids eye contact with audience. Only occasional and sporadic glances.

Body language	Uses expressive, dynamic, and natural gestures, posture and facial expressions to reinforce and enhance meaning. Body language reflects confidence interacting with audience.	Stiff or unnatural nonverbal behaviors. Body language reflects some discomfort interacting with audience. Limited use of gestures to reinforce verbal message.	Body language reflects a reluctance to interact with audience. Distracting movement and/or use of self-adaptive behaviors.
Enthusiasm Vocal Dynamics (x2)	Natural variation of vocal characteristics (rate, pitch, volume, tone) to heighten interest and match message appropriately. Voice projects confidence, enthusiasm, and conviction appropriate to persuasive speaking.	Limited variation of vocal characteristics. Use of rate, pitch, volume and tone seemed inconsistent at times. Voice could project more confidence, enthusiasm, and conviction appropriate to persuasive speaking.	Monotone or inappropriate variation of vocal characteristics. Inconsistent with verbal message. Projects little or no confidence, enthusiasm, or conviction appropriate to persuasive speaking.
Fluency	Practiced, polished delivery. Appropriate pronunciation, enunciation, and articulation. Lack of noticeable vocalized fillers.	Delivery could be more practiced and polished. Few noticeable errors in pronunciation, enunciation and articulation. Minimal use of vocalized fillers.	Much more practice needed. Excessive fluency errors interfered with message comprehension. Excessive use of vocalized fillers.
Stays within a five to seven minute time requirement?: Yes = 2 points, No = 0 points			

Scoring: 0-34 = Developing, 35-39 = Partially Accomplished, 40-44 = Solid/Good, 45-50 = Exceptional

Time _____ Total Score _____/50

(Derived and modified from the California Intersegmental Coordinating Committee on Performance Standards & Assessments Criteria in English-Language Arts (1999), and from William Snider (2009), Professor of Speech at Valencia Community College in Florida.)

Rubric Examples*

Writing Rubric (Johnson Community College)	2
Subject A Scoring Guide (University of CA)	3
Scoring Guide for Writing (CA State University, Fresno)	4
Scoring Guide for Integrative Science (CA State University, Fresno)	5
Writing Rubric (Northeastern Illinois University)	6
Oral Presentation Holistic Scoring Rubric (SE Missouri State U)	7
Holistic Critical Thinking Scoring Guide (Facione & Facione)	10
Holistic Critical Thinking Rubric (Portland State University)	11
Levels of Leadership (Bowling Green)	13
Levels of Connection (Bowling Green)	14
Levels of Participation (Bowling Green)	15
Levels of Presentation (Bowling Green)	16
Levels of Investigation (Bowling Green)	17
Analytical Writing Rubric (CA State University, Long Beach)	18
Social Science Rubric (SUNY Geneseo)	18
Fine Arts Rubric (SUNY Geneseo)	20
Listening (Palomar)	21
Speaking (Palomar)	22
Reading (Palomar)	23
Writing (Palomar)	23
Problem Solving (Palomar)	24
Creative Thinking (Palomar)	24
Quantitative Reasoning (Palomar)	25
Transfer of Knowledge Skills (Palomar)	25
Technological Competency (Palomar)	26
Teamwork (Palomar)	27
Self-Management (Palomar)	27
Respect for Diverse People and Cultures (Palomar)	28
Humanities/Cultural Rubric (University of South Carolina)	29
Math (University of South Carolina)	34
Oral Communications (University of South Carolina)	36
Science (University of South Carolina)	41
Social/Behavioral Science (University of South Carolina)	42
Written Communication (University of South Carolina)	46
Analytical Skills (University of Arkansas, Fort Smith)	51
Creativity (University of Arkansas, Fort Smith)	52
Social Interaction (University of Arkansas, Fort Smith)	55
Critical Thinking (Northeastern Illinois University)	57
Critical Thinking (CA State University, Fresno)	58
Information Competence (CA State University)	59
A Rubric for Rubrics (Monmouth University)	60

*Rubrics were taken *verbatim* from campus websites and were sometimes lightly reformatted to fit the printed page.

Subject A Scoring Guide (University of California)

In holistic reading, raters assign each essay to a scoring category according to its dominant characteristics. The categories below describe the characteristics typical of papers at six different levels of competence. All the descriptions take into account that the papers they categorize represent two hours of reading and writing, not a more extended period of drafting and revision.

Score 6

A 6 paper commands attention because of its insightful development and mature style. It presents a cogent analysis of or response to the text, elaborating that response with well-chosen examples and persuasive reasoning. The 6 paper shows that its writer can usually choose words aptly, use sophisticated sentences effectively, and observe the conventions of written English.

Score 5

A 5 paper is clearly competent. It presents a thoughtful analysis of or response to the text, elaborating that response with appropriate examples and sensible reasoning. A 5 paper typically has a less fluent and complex style than a 6, but does show that its writer can usually choose words accurately, vary sentences effectively, and observe the conventions of written English.

Score 4

A 4 paper is satisfactory, sometimes marginally so. It presents an adequate analysis of or response to the text, elaborating that response with sufficient examples and acceptable reasoning. Just as these examples and this reasoning, will ordinarily be less developed than those in 5 papers, so will the 4 paper's style be less effective. Nevertheless, a 4 paper shows that its writer can usually choose words of sufficient precision, control sentences of reasonable variety, and observe the conventions of written English.

Score 3

A 3 paper is unsatisfactory in one or more of the following ways. It may analyze or respond to the text illogically; it may lack coherent structure or elaboration with examples; it may reflect an incomplete understanding of the text or the topic. Its prose is usually characterized by at least one of the following: frequently imprecise word choice; little sentence variety; occasional major errors in grammar and usage, or frequent minor errors.

Score 2

A 2 paper shows serious weaknesses, ordinarily of several kinds. It frequently presents a simplistic, inappropriate, or incoherent analysis of or response to the text, one that may suggest some significant misunderstanding of the text or the topic. Its prose is usually characterized by at least one of the following: simplistic or inaccurate word choice; monotonous or fragmented sentence structure; many repeated errors in grammar and usage.

Score 1

A 1 paper suggests severe difficulties in reading and writing conventional English. It may disregard the topic's demands, or it may lack any appropriate pattern of structure or development. It may be inappropriately brief. It often has a pervasive pattern of errors in word choice, sentence structure, grammar, and usage.

<http://www.sdcoe.k12.ca.us/score/actbank/subja.htm>

Palomar

Students will interact with individuals and within groups with integrity and awareness of others' opinions, feelings and values.

1. **Teamwork:** Students will participate effectively in teams, committees, task forces, and in other group efforts to make decisions and seek consensus.

Beginner

- Joins a group cooperatively.
- Acknowledge members of the group.
- Listens attentively to members of the group.
- Be prepared and reliable members of the group.
- Contribute to the end product of the group.

Developing

- Give input and/or recommendations confidently.
- Complete assigned tasks in a timely fashion.
- Respect differing points of view.
- Agree on group priorities, goals and procedures.
- Help to build a consensus.

Accomplished

- Take an active position in group by assigning tasks and/or speaking for the group.
- Take responsibility for end product that reflects the minority as well as the majority conclusions of the group.
- Encourage and acknowledge the work of other group members.

F. Personal Development and Responsibility

Students will develop individual responsibility, personal integrity, and respect for diverse people and cultures.

1. **Self-management:** Students will demonstrate habits of intellectual exploration, personal responsibility, and physical well being.

Beginner

- Demonstrates personal responsibility through generally good attendance, punctuality, and performance of required tasks.
- Monitors the quality of his/her own acceptance of responsibility and responds to advice or counseling where appropriate.
- Participates in the development of a personal educational plan by interacting with staff and others in shaping and refining his/her educational goals and strategies for achieving them.

Developed

- Demonstrates an understanding of the role of physical well being in achieving educational and personal goals.
- Participates in the development of a personal academic portfolio to document her/his educational growth and her/his habits of intellectual exploration.

Accomplished

- Develops and maintains an on-line portfolio to document his/her educational growth and habits of intellectual exploration.

Palomar

Selects institutions to which she/he wants to apply for admission, employment, or some other professional consideration.

Identifies appropriate contact within the institution to send portfolio to.

Sends electronic portfolio to institutions, including a cover letter addressed to a specific contact within the institution.

3. Respect for Diverse People and Cultures: Students will interact respectfully in groups whose membership includes such diverse human traits as language, culture, and physical ability.

Beginner

Identifies and describes the aspects of a number of cultures, including their own.

Can work in diverse groups when given the opportunity.

Appreciates the variety of U.S. residents.

Is familiar with the historical struggle for equality and justice in the U.S.

Developed

Identifies many cultural and linguistic backgrounds and reflects upon cultural and linguistic prejudice.

Understands cultural, linguistic and physical differences.

Interacts respectfully with others in the classroom, including his/her instructor.

Accomplished

Strives to be understanding and respectful, when working in groups with people who have diverse cultural and linguistic backgrounds and different physical abilities.

Proactively and compassionately influences others to respect diverse people and cultures.

University of South Carolina
General Education Assessment Criteria—Math
<http://ipr.sc.edu/effectiveness/assessment/criteria/math.htm>

Goal

Students will perform basic mathematical manipulations, display facility with the use of mathematics in framing concepts for mathematical analysis and interpret data intelligently.

Objective A. Students will demonstrate their understanding of the role of quantitative reasoning and its application.

4 OUTSTANDING

Regards quantitative reasoning as essential in understanding both multiple academic areas and domains beyond the academic and career related; can articulate and advocate appropriate applications of quantitative reasoning in various settings.

3 EFFECTIVE

Regards quantitative reasoning as very useful and important to domains beyond the academic; demonstrates and articulates an understanding of its uses and can choose appropriate applications.

2 ADEQUATE

Regards quantitative reasoning as useful and important although primarily academic; recognizes appropriate applications and understands explanations.

1 INEFFECTIVE

Regards quantitative reasoning as irrelevant beyond academic applications.

Objective B. Students will demonstrate an understanding of the language of mathematics and basic mathematical concepts and operations.

4 OUTSTANDING

Demonstrates superior knowledge of the language of mathematics and basic mathematical concepts and operations. Has the ability to teach and explain basic mathematical concepts and operations to others.

3 EFFECTIVE

Demonstrates the appropriate use of the language of mathematics and basic mathematical concepts and operations. Can initiate or contribute to discussions about mathematical concepts and operations.

2 ADEQUATE

Understands the basic language of mathematics and basic mathematical concepts. Can participate in discussions about mathematical concepts and operations and can demonstrate adequate knowledge.

1 INEFFECTIVE

Cannot demonstrate knowledge of the language of mathematics and basic mathematical concepts. Avoids participation in discussions about mathematical concepts and operations.

Objective C. Students will demonstrate the ability to apply basic mathematical operations to problem solving in one's personal and working life. This criterion demonstrates ability

to apply basic mathematical concepts and operations to situations which will be encountered beyond the university and in the "real world".

4 OUTSTANDING

Understands the quantitative frameworks of broad scope, real-world problems; recognizes advantages and disadvantages of several quantitative approaches to a problem and chooses appropriate concepts to describe the problem, accurately performs needed mathematical operations, and articulates the meaning of the solution in terms of the original problem.

3 EFFECTIVE

Once the quantitative framework of real-world problems are clarified, chooses appropriate concepts to describe the problem and accurately performs needed mathematical operations and articulates the meanings of the solution in terms of the original problem.

2 ADEQUATE

Recognizes, -the quantitative framework of real-world problems of limited scope, and independently chooses appropriate concepts to describe the problem; accurately performs basic mathematical operations on problems of personal or work life and applies the solution to the original problem.

1 INEFFECTIVE

Does not see problems in a quantitative framework unassisted; inability to choose appropriate concepts and/or to perform basic mathematical operations on problems in personal or work life limits options to developing solutions..

Objective D. Students will accurately comprehend and draw appropriate Inferences from numeric data assembled in a variety of forms (e.g., graphs, charts, summary statistics, etc.) and in other disciplines.

4 OUTSTANDING

Comprehends complex and sophisticated displays of data and makes inferences consistent with the data. Can construct data displays from a set of data; explains clearly in everyday language the meaning of the data, and relates it to appropriate context.

3 EFFECTIVE

Comprehends some complex and sophisticated displays of data and makes inferences consistent with simple displays of data; explains the meaning of the data in everyday language; relates to appropriate context.

2 ADEQUATE

Comprehends simple displays of data, makes inferences consistent with the displays of data, and explains the inferences within a limited context.

1 INEFFECTIVE

Inconsistently comprehends some simple displays of data; makes inferences inconsistent with simple displays of data or with its context.

University of South Carolina
General Education Assessment Criteria—Science
<http://ipr.sc.edu/effectiveness/assessment/criteria/science.htm>

Goal

Students will understand physical and/or life science phenomena and the uses of scientific methods and theories.

Objective A. Students will understand the role, nature and value of scientific inquiry.

4 OUTSTANDING

Understands in depth the role and limitations of science in addressing contemporary quality of life issues (i.e., improved health, a better environment, increased food production, population control, etc.), articulates multiple aspects of the issues, perceives the relationship of self to issues and seeks additional scientific understanding as a guide to action.

3 EFFECTIVE

Understands the role and limitations of science in addressing contemporary quality of life issues, articulates several aspects of the issues, perceives the relationship of self to issues, acts on basis of understanding.

2 ADEQUATE

Understands in general the role of science in addressing some contemporary quality of life issues; articulates several aspects of at least one issue; perceives the relationship of self to issues, occasionally acts on basis of scientific understanding.

1 INEFFECTIVE

Understands minimally the role of science in contemporary quality of life issues; does not perceive the relationship of self to issues; does not understand the nature of scientific work.

Objective B. Students will demonstrate their understanding of scientific theories and perspectives

4 OUTSTANDING

Uses deep understanding of theoretical frameworks, concepts, terms, and important thinkers and ideas from several science disciplines to explain contemporary scientific phenomena; makes connections between science disciplines and identifies separate contributions of disciplines to understanding.

3 EFFECTIVE

Uses knowledge of theoretical frameworks, concepts, terms, and important thinkers and ideas from two sciences to discuss contemporary scientific phenomena; identifies perspectives of each discipline in explaining a particular process or phenomenon.

2 ADEQUATE

Uses basic understanding of concepts, descriptive terms, and important thinkers and ideas from at least one of the sciences to explain contemporary scientific phenomena; recognizes perspectives of other disciplines.

1 INEFFECTIVE

Lacks understanding of relationship of concepts, terms and important ideas to each other or to a science perspective; uses beliefs, applies ideas inaccurately, or uses irrelevant facts to explain scientific phenomena.

CLASSROOM ASSESSMENT TECHNIQUES

*A Handbook for
College Teachers*

SECOND EDITION

Thomas A. Angelo
K. Patricia Cross



JOSSEY-BASS PUBLISHERS

San Francisco

Table 6.2. CATs Indexed by Disciplines in the Brief Examples.

<i>Discipline</i>	<i>Technique</i>	<i>CAT Number</i>	<i>Chapter Number</i>	
Education	Annotated Portfolios	18	7	
	Audio- and Videotaped Protocols	22	7	
	Course-Related Self-Confidence Surveys	32	8	
	Directed Paraphrasing	23	7	
	Group-Work Evaluations	47	5	
	Interest/Knowledge/Skills Checklists	34	8	
	Punctuated Lectures	38	8	
	What's the Principle?	20	7	
	Engineering	Approximate Analogies	15	7
		Background Knowledge Probe	1	7
Pro and Con Grid		10	7	
Student-Generated Test Questions		25	7	
English/Writing	Approximate Analogies	15	7	
	Chain Notes	41	9	
	Goal Ranking and Matching	35	8	
	Group-Work Evaluations	47	9	
	Pro and Con Grid	10	7	
	Process Analysis	39	8	
English as a Second Language	Muddiest Point	7	7	
	Reading Rating Sheets	48	9	
Environmental Studies	Analytic Memos	12	7	
	Classroom Opinion Polls	28	8	
Finance/Management	Focused Listing	2	7	
Fine Arts	Annotated Portfolios	18	7	
	Human Tableau or Class Modeling	26	7	
	Invented Dialogues	17	7	
Foreign Languages	Approximate Analogies	15	7	
	Memory Matrix	5	7	
	RSQC2	46	9	
	History	Classroom Assessment Quality Circles	45	9
Classroom Opinion Polls		28	8	
Exam Evaluations		50	9	
Minute Paper		6	7	
Misconception/Preconception Check		3	7	
Profiles of Admirable Individuals		30	8	
Concept Maps		16	7	
Minute Paper		6	7	
History of Science	Content, Form, and Function Outlines	11	7	
Journalism	Defining Features Matrix	9	7	
Linguistics	Documented Problem Solutions	21	7	
	Approximate Analogies	15	7	
Literature	Background Knowledge Probe	1	7	
	Word Journal	14	7	
	Everyday Ethical Dilemmas	31	8	
Management	Audio- and Videotaped Protocols	22	7	
	Course-Related Self-Confidence Surveys	32	8	
	Documented Problem Solutions	21	5, 7	
	RSQC2	46	9	
Medicine	One-Sentence Summary	13	7	
Music	Focused Listing	2	4	
	Process Analysis	39	8	
Nursing	Course-Related Self-Confidence Surveys	32	5	
	Directed Paraphrasing	23	7	
	Empty Outlines	4	7	
	Human Tableau or Class Modeling	26	7	
	Memory Matrix	5	7	
	One-Sentence Summary	13	4, 7	