The Sinclair Community College Newsletter
designed to heighten the understanding of the integrated relationship between curriculum, general education, and assessment
Spring 2006

Notes from the VPI Office

By Tom Huguley, Assistant Vice President for Instruction

This edition of *Building the Collective Responsibility for Student Learning* is a good reminder of how important it is to consider the basics of curriculum design at the course and program levels; to assign tasks and performance criteria in assessing learning outcomes; and to use a variety of rubrics to measure general education outcomes. Bloom's taxonomy is a clear way to illustrate how the depth and breadth of student learning is rooted in the clear articulation of outcomes and perhaps more importantly, how we assess those outcomes across the curriculum. What level of learning is appropriate for outcomes in your particular course -- application, analysis, synthesis? What are the tasks you can use to assess performance at these levels and what criteria will you use in that assessment? What set of tools or rubrics will allow you to assess student performance and knowledge in communication, critical thinking, citizenship, information literacy, and computer literacy?

Curriculum

By Sue Merrell, Director of Curriculum, Assessment, and Continuous Improvement

Bloomin' (Bloom In) Basics

To enjoy my favorite Happy Face pansies in bright bloom this spring, I must first cultivate the soil in my containers on the deck, hollow a space, nest the seedling in that space, and cover the roots. With some Miracle Gro Quick Start and TLC from Mother Nature, the Happy Face pansies smile a vivid purple and yellow for many months.

Here's some background to help make the connection between outcomes and Bloom's taxonomy. Course-level outcomes (what we intend for a student to know and be able to do at the end of a course) set the stage for what needs to happen within the various course activities. Essentially, the course outcome is a measurable manifestation of the student's knowledge and skills at course conclusion.

Similarly, program-level outcomes (what students need to know or do at the end of the program) supply the infrastructure and the interdependencies for the entire curriculum. Specifically, program outcomes correlate to courses. Students demonstrate program outcome attainment throughout their curricular experience. Although course and program outcomes include affective (thinking and feeling) and psychomotor (doing) domains, this bloomin' discussion addresses only the cognitive aspects of outcomes.

How do outcomes bloom?

Outcomes bloom when they encourage learners to achieve at least an application (level 3) or analysis (level 4) learning. Course-level outcomes, not to be confused with unit level outcomes or chapter objectives, integrate and draw closure to previous more incremental learning (level 1 or level 2).

Outcomes bloom when they deepen and broaden learner's knowledge and skills in the next course in a sequence or on the job. Applicability beyond the course is a key indicator that outcomes have been calibrated at the right level.

Outcomes bloom when learning lasts.

First Bloom
Level 1 = Knowledge (retain facts)
Level 2 = Comprehension (explain/paraphrase)
Level 3 = Application (use information concretely)
Level 4 = Analysis (break down knowledge into components)
Level 5 = Synthesis (put together old knowledge in new ways)
Level 6 = Evaluation (make judgments based on knowledge)

Revised Bloom (see table p. 9)
Bloom's revised taxonomy is depicted in a table on page 9 of this newsletter (Anderson and Krathwohl, 2001). Building on the work of Bloom, the revised taxonomy combines both the cognitive dimensions (horizontal captions) and the knowledge dimensions (vertical captions). As we design our courses (and build in assessment!), the taxonomy helps us ensure alignment of assessment techniques with intended outcomes. See more specific examples of this in Assessment's "Bloomin' (Bloom In) Outcomes."

Assessment

By Teresa Prosser, Chairperson of the Assessment Committee

Bloomin' (Bloom In) Outcomes

Bloom's taxonomy is also clearly reflected in Sinclair's Curriculum Management Tool (CMT) with its reference to course outcomes. The formulation of these outcomes requires that faculty identify what it is that students should have learned at the conclusion of the course. In order for faculty to assess these outcomes, they need to be stated in "measurable" language at the level appropriate for the course. This speaks directly to Bloom's taxonomy. The taxonomy (see below) is arranged in such a way that faculty can use the appropriate action verb to illustrate the level of competency for the outcome and the expected performance level of the students in the course. This helps faculty to develop courses and outcomes and assessments that are appropriate to both students and the course.

Bloomin' Action Verbs for Knowledge, Comprehension and Application

I. KNOWLEDGE: retention of facts
arrange, define, describe, duplicate, identify, label, list, name, order, outline, present, quote, recall, recognize, record, relate, repeat, reproduce, show, state, tabulate

II. COMPREHENSION: explain and/or paraphrase knowledge
associate, clarify, classify, contrast, describe, discuss, estimate, explain, express, extend, classify, identify, indicate, interpret, locate, predict, recognize, report, restate, review, select, summarize, translate

III. APPLICATION: Use of information in come concrete form

apply, calculate, choose, complete, classify, demonstrate, dramatize, employ, examine, experiment, illustrate, interpret, modify, operate, practice, relate, schedule, show, sketch, solve, use, write

Bloomin' Action Verbs for Higher Level/Critical Thinking: Analysis, Synthesis and Evaluation

IV. ANALYSIS: break down knowledge into its components to clearly show relationships

analyze, appraise, calculate, categorize, compare, connect, contrast, criticize, debate, differentiate, discriminate, distinguish, examine, experiment, explain, inspect, investigate, order, question, relate, separate, solve, test

V. SYNTHESIS: put together old knowledge in new ways

associate, clarify, classify, contrast, describe, discuss, estimate, explain, express, extend, classify, identify, indicate, interpret, locate, predict, recognize, report, restate, review, select, summarize, translate

VI. EVALUATION: making judgments based upon knowledge

appraise, argue, assess, attach, compare, conclude, choose, defend, discriminate, estimate, evaluate, judge, measure, predict, recommend, rate, revise, score, select, summarize, support

(Bloomin' Action Verbs synthesized from: http://www.ncgia.ucsb.edu/educaiton/curriula/gisc/units/format/outcomes.html ,http://www.ltu/unsw.edu/au/ref4-21_outcomes.cfm)

Bloomin' Examples

So, what does this look like in text and within the Curriculum Management Tool? The following are examples of course learning outcomes, assessment tasks, and performance criteria based upon Bloom's Taxonomy.

KNOWLEDGE

Outcome: Students will list the steps necessary to access the web from computers in the Teleport.
Assessment Task: Locally developed exam
Performance Criteria: Students will list the steps necessary to access the web from computers in the Teleport with 80% accuracy.

COMPREHENSION

Outcome: Students will explain how to access the web from computers in the Teleport.
Assessment Task: Performance appraisal
Performance Criteria: Students will accurately explain how to access the web from computers in the Teleport while demonstrating the ability to organize ideas in a logical and purposeful way, composing oral messages appropriate to an intended audience, and delivering oral messages appropriate to an intended audience. Students will score "Competent" (3) or better on these Oral Communication outcomes using the General Education Rubric.

APPLICATION:

Outcome: Students will access the web from computers in the Teleport.
Assessment Task: Performance appraisal
Performance Criteria: Students will open web pages and recognize and use hyperlinks with 80% accuracy.

ANALYSIS:

Outcome: Students will compare the steps necessary to access the web from their personal computer at home with the steps necessary to access the web from computers in the Teleport.
Assessment Task: Locally developed exam
Performance Criteria: Students will compare three differences or similarities between the steps necessary to access the web from their personal computer at home with the steps necessary to access the web from computers in the Teleport.

SYNTHESIS:

Outcome: Students will design a handout to help new users access the web from computers in the Teleport.
Assessment Task: Performance appraisal
Performance Criteria: Students will design a handout to help new users access the web from computers in the Teleport and score "Competent" (3) or better on appropriate outcomes from the Written Communication General Education Rubric.

EVALUATION:
Outcome: Students will evaluate the differences between access to the web from their home computer and access to the web with computers in the Teleport.
Assessment Task: Locally developed exam
Performance Criteria: Students will evaluate the differences between access to the web from their home computer and access to the web with computers in the Teleport with 80% accuracy.

Yes, Bloom's Taxonomy can be an educator's best friend! It helps faculty to develop measurable outcomes at the appropriate level for students and courses….and helps students to know (and for faculty to remember) that learning is a progressive experience!

General Education

By Lori E. Zakel, Chairperson of the General Education Committee

Bloomin' (Bloom In) Rubrics

Bloom's taxonomy is clearly reflected in Sinclair's General Education Rubrics. In fact, when the faculty developed the rubrics, they referred to one of the action verbs lists that are available on the web (many good sites about Bloom's taxonomy are found as links on our general education and assessment web sites (http://www.sinclair.edu/about/assessment/resources/index.cfm). The General Education rubrics are available for assessment and/or evaluation purposes for any and all classes (http://www.sinclair.edu/about/gened/genedrubrics/index.cfm).

Just as flowers bloom differently, the rubrics, for classroom use, are able to bloom in many different ways and for different purposes. The rubrics may be used in their pure, heirloom state; i.e., an entire rubric may be used to assess or evaluation a particular task or assignment. Or the rubrics may become hybrids, by using only some of the items from one or more of the rubrics. Another hybridization could be that of adapting the items so that they are more usable for a particular class or assignment. They are simply tools that can be used in a variety of ways to accomplish a variety of goals.

Bloomin' rubrics are one exciting thing that is growing at Sinclair.

General Education: Bloomin' on many Levels
Perhaps the most exciting news for General Education this quarter is how our outcomes are blooming. This is the first time ever that students across all college divisions are being asked about their ability to accomplish some of the college's general education outcomes.

The plan (formulated through the college's AQIP Assessment Action Project and the General Education Committee) is to assess students' general education outcomes at an entry point and at an exit point. The assessment will cover one of the general education areas each year (this year is computer and information literacy).

IPR developed a student survey instrument that is based on the general education rubrics for information and computer literacy. Students enrolled in the Student Success courses will be asked to complete the survey, thereby providing Sinclair with data regarding general education outcomes of a set of incoming students. Likewise, students enrolled in capstone courses (or exit experiences) will be asked to complete a similar survey, asking about their perceived abilities with regard to the same information and computer literacy outcomes.

As a result, for the first time the college will have quantitative data about student perceptions of their general education outcomes. Over a five year period, all general education outcomes areas will have been assessed via similar student surveys.

These quantitative data will bloom and will allow us the ability to continue to improve student learning. Some students might need a little more water, or a little fertilizer, or better soil to begin with. More data will allow us to keep working on our bloomin' students and their learning!

The Learning Liaisons

Many Sinclair faculty have indicated an interest in learning about assessment processes and systems as they are used throughout the college. In this issue the Learning Liaisons are sharing an example of assessment from each of their divisions.

Gloria Goldman, Learning Liaison for Allied Health

All students enrolled in the Nursing program engage in weekly reflective journaling throughout each clinical course. Students write about their clinical experiences, identify strengths and weaknesses and discuss insights into their practice. Faculty read the journal entries and respond to the students in writing. Faculty responses include questions to stimulate further reflection and critiques with helpful formative feedback designed to correct misinformation and enhance learning.

Lori Zakel, Learning Liaison for Fine and Performing Arts

Over 22 sections of Effective Public Speaking (COM 211) are offered each quarter. Most students enrolled in COM 211 are completing the course as part of their General Education core requirement. To offer a more consistent outcome for all students across all sections, faculty in the department utilize a common set of PowerPoint slides, common exams, and a common evaluation rubric for all student speeches. The results of the exams and the speeches also serve as assessment tools--results are examined by faculty to determine areas in the curriculum requiring additional focus.

Another assessment opportunity is our quarterly speech meet, at which the top student speakers from all COM 211 sections are invited to participate. COM 211 faculty serve as judges. This is a good opportunity for students, but perhaps the best benefit is to our faculty, who are able to see "best" speeches across all sections of COM 211. Comments from faculty support the worthwhile nature of this event for assessment purposes. This is contributing to inter-rater reliability across sections of COM 211.

Steve Wendel, Learning Liaison for Engineering and Industrial Technologies

Each course in the Engineering & Industrial Technologies Division has a course coordinator. A course coordinator is a full-time faculty member who is the primary instructor for the course and also responsible for maintaining the "tool box" that provide quality and consistency among different instructors and different course sections. The course coordinators are responsible for recommending revisions to the courses, including the recommendation of new texts or other supporting materials, recommendation of changes to the master course syllabi, upgrading software and other changes. Course coordinators complete the "Course Update Form" and submit it to department chairperson's office by May 15 every year with all supporting documents such as proposed new course syllabi, student work examples, collected data, surveys, etc. Course coordinators also conduct and coordinate assessment, collect all data, student work examples, etc. and submit this assessment data to the department chairperson's office on a quarterly basis. When part-time faculty are used, the course coordinator provides the instructional materials of the course to the instructor to help insure consistency of instruction.

If a faculty member is teaching a course for the first time, the department provides the following material(s) in order to help ensure instructional quality and instructor success. This is especially true for first year faculty, who may be teaching a large part of their workload for the first time. This "Tool Box" will probably vary from class to class depending on the material to be presented, lab space and resources and a variety of other reasons. The faculty member is entitled by Sinclair policy the privilege of "academic freedom" to delete, change, modify and/or develop additional resources as needed to fit the instructor's classroom environment and teaching style.

The contents of the "Tool Box" may include:

1. Master Syllabus with Learning Outcomes
2. Textbook
3. Location of available AV materials
4. Power Point Presentations available
5. Working class outline and lecture notes
6. Sample homework assignments

7. Sample quizzes and examinations
8. Sample class projects
9. Grading criteria that has been traditionally used in the course for homework, presentations, or papers
10. Any other materials needed to teach the course

Linda Pastore, Learning Liaison for Extended Learning and Human Services

The reading area, like the other areas in Developmental Studies and other areas across campus, is continually assessing students.

The reading faculty pretest students to show them what they know and what they need to work on; this practice continues to dominate the faculty's assessment tools. Having students review their mistakes on practice tests and quizzes assesses the course material as well as the presentation of the material.

Reading faculty are also looking at additional ways to assess the students, material, and methods. For example, one requests students to anonymously complete surveys following each module, providing students with the opportunity to reflect upon the activity itself as well as the students' performance on the activity. Asking them about the clarity of the directions, the fairness of the grading, and the appropriateness of the assignment provides feedback for revision or confirmation that the activity is meaningful and appropriate.

Additionally, having students practice on textbook material they will be facing after reading class helps students evaluate their skills and attitude towards reading class as well as college classes in general. Recently, the area added a new textbook to apply all the reading skills reviewed to college-level textbook chapters. After students complete these tests, some faculty review the studying process with the class to affirm the study techniques needed in upper-level classes.

SPRING 2006 Workshops

Workshops related to assessment, general education, and curriculum development will be offered at Spring 2006 workshops. You may register online at: http://our.sinclair.edu/sites/dlis/profdev/ .

Understanding, Creating and Using Rubrics to Determine Student Learning
Monday, May 15
1:00 p.m. – 2:00 p.m.
Linda Pastore and Mary Connolly
Utilizing rubrics as an assessment tool will be featured in this workshop. Participants will learn about the advantages and common features of rubrics We will also create rubrics using templates and online resources.

Embedding General Education into Your Class
Wednesday, May 24
12:00 p.m. – 1:00 p.m.
Lori Zakel
This workshop will help faculty to incorporate course specific general education outcomes into any course. We will explore the utilization of the General Education Rubrics.

Using the Integrated Curriculum/Gen ED/Assessment Website
Wednesday, May 24
1:00 – 2:00 P.M.
Mary Connolly
In this workshop participants will be exploring and locating resources for curriculum general education and assessment using Sinclair's Integrated Curriculum General Education and Assessment website.

Summer Institute 2006

Sessions related to assessment, general education, and curriculum development will be offered at the 2006 Summer Institute. Register online at http://our.sinclair.edu/sites/dlis/profdev/ .

Incorporating and Measuring General Education Outcomes in Any Class

Tuesday, June 20
9:00 a.m.-12:00 noon
Lori Zakel

At this workshop, participants will learn how and when to use general education rubrics in their classes. General education outcomes occur throughout all of the classes, and should be assessed periodically throughout a student's program of study for purposes of evaluation and improvement. By the end of the workshop participants will have a plan to incorporate at least one general education outcomes rubric into at least one class.

Program Outcomes Mapping: Answering Program Level Questions through Course-Level Outcomes

Tuesday, June 20
1:00 p.m. – 4:00 p.m.
Gloria Goldman ALH Learning Liaison
Ned Young BUS Learning Liaison
Linda Pastore ELHS Learning Liaison
Lori Zakel FPA Learning Liaison
Art Ross LAS Learning Liaison

Monday, July 10
9:00 a.m. – 12:00 p.m.
Steve Wendel -EGR Learning Liaison

Meet with other faculty members in your department and division to learn more about program outcomes assessment strategies. Through interactive and lively analysis, participants will (1) identify course-level priority learning outcomes by mapping program outcomes to courses, (2) categorize course-level outcomes by General Education competency area and measurable outcomes and (3) fine tune plans to assess program outcomes.

Additional Resources

Sinclair's websites

CMT: http://cmt.sinclair.edu/security/login.cfm
*click on guest login at bottom on page

AQIP: http://www.sinclair.edu/about/aqip/index.cfm

Assessment: http://www.sinclair.edu/about/assessment/index.cfm

General Education: http://www.sinclair.edu/about/gened/index.cfm

Contacts

Mary Connolly	512-2362	mary.connolly@sinclair.edu	Editor/Communications
Sue Merrell	512-2921	sue.merrell@sinclair.edu	Curriculum
Lori Zakel	512-2812	lori.zakel@sinclair.edu	General Education
Teresa Prosser	512-2885	teresa.prosser@sinclair.edu	Assessment

Bloom's Revised Taxonomy

The table below shows the revised taxonomy (Anderson and Krathwohl, 2001). Building on the work of Bloom, the revised taxonomy combines both the cognitive dimensions (horizontal captions) and the knowledge dimensions (vertical captions). As we design our courses (and build in assessment!), the taxonomy helps us ensure alignment of assessment techniques with intended outcomes. See more specific examples of this in Assessment's "Bloomin' Outcomes" on pages 3-4 of this newsletter.

The Knowledge Dimension	**The Cognitive Process Dimensions (Revised Taxonomy)**					
	Level 1 Remember	Level 2 Understand	Level 3 Apply	Level 4 Analyze	Level 5 Evaluate	Level 6 Create
Factual Knowledge						
Conceptual Knowledge						
Procedural Knowledge						
Meta-cognitive Knowledge						