Plans (Method) for Assessment Development and Implementation at Bullis

A. Processes to follow for the development and implementation of assessments

The nine steps below, compiled from various resources, represent basic steps to follow for the development and implementation of assessments. Among the resources, the connections to UbD and our scope and sequence work were readily apparent.

Step 1--Define **measurable learning outcomes** at the student, course, program and/or institution level.

Step 2—Determine and describe **the data collection cycle** (student, course, program and/or institution level)

Step 3—Design assessments to measure learning outcomes.

- General considerations in this step:
  - Determine the outcomes to measure
  - Determine the purpose for the assessment
  - Determine the assessment method to employ
  - Determine the kind of assessment data to collect
- Specifics in this step: **develop an *assessment "blueprint"*** as well as the *actual assessment*
  - Assessment **"blueprint"**
    - Decide what item types will be included in the assessment, and (where necessary) in what proportion
    - Select or develop assessment items. If high quality items exist and are available, it is almost always best to use them rather than create new items. Access to released items and/or test item banks is of immeasurable value. However, it is often necessary to create test items to meet individual needs.
      - ✓ Set standards for levels of performance on each item

- ✓ Identify observable factors that provide the basis for assessing which level of performance has been achieved on each item
- ✓ Conduct norming sessions to assure acceptable inter-rater reliability, where indicated
- ✓ Set benchmarks for successful student, course, program and/or institution level outcomes
    - Field test the items. Field testing items allows you to see how the item actually behaves with students and provides item statistics that can inform decisions as to which items to include in the assessment. **Because you may have more items in the blueprint than you will use, you may give subsets of items to different students.** There are several statistics to judge the appropriateness of items and a few include: item difficulty, item discrimination, bias, reliability, validity, etc.
- o Develop the assessment
    - Hopefully, the blueprint process generated a sufficient set of strong items. Use this blueprint information to construct the assessment.
    - Be careful not to select all very difficult or all very easy items. Use the item difficulty and item discrimination data to build a balanced assessment, having already eliminated those items that do not work.
    - Another check on item balance is cognitive complexity. This is referred to as "depth of knowledge" as outlined by Webb, 2002. See the [Karin Hess Depth of Knowledge](#) reference included in this report for details.

Step 4—Design learning events based upon learning outcomes. Include assessment activities within the learning designs.

- Ask what knowledge and skills are necessary to meet those objectives
    - o Next, it's important to ask what are the knowledge and skills required to comprehend those concepts and use them.

- From the answers to," What are the knowledge and skills required to comprehend those concepts and use them?" answer, the teacher can establish the topic structure to define the knowledge, skills, abilities and attitudes required to meet the objectives. (*This information is reflected in our current 3-12 scope and sequence products).*
- The next steps are recommended in some examples, but use of these steps when planning learning events will be evaluated by teachers:
  - Conduct a needs analysis survey or skills gap survey. Here, people take a needs-assessment to reveal the knowledge and skills they already have as well as what they still need. A gap analysis can be derived from the difference between what is required and the knowledge and skills that people currently have.
  - Develop a learning plan. That plan will include the learning objectives as well as how the plan will be administered. The learning objectives will guide the production of learning materials and assessments.
  - Next conduct a pre-learning assessment. The pre-learning assessment will have two purposes: to create intrigue so that students stay awake during the course and second, to guide each student to the right learning experience. Some students will be advanced while others are novices. The pre-learning assessment guides the student to an appropriate learning experience.

Step 5—Deliver learning

Step 6—Assess learning and learning events

Step 7—Gather and format data generated from assessment activities

Step 8—Interpret the assessment data

Step 9—Use assessment data to make decisions at the student, course, program and institution level

Primary source for the nine steps outlined above: An Assessment Framework for Community College, Measuring Student Learning and Achievement as a Means of Demonstrating Institutional Effectiveness, v1.0, August 2004. Development of white paper sponsored by QuestionMark. League for innovation in the community college.org at http://www.league.org/publication/whitepapers/0804.html