The Assessment Plan
William Bricken
February 2008

How to Plan

Every program should develop and distribute an *assessment plan*. The assessment plan is a formal public document that identifies program:

  -- learning goals and objectives
          What will a student know and value?
  -- learning processes
          What will a student experience that achieves the goals?
  -- assessment methods
          What measures will identify that a student is meeting objectives?
  -- assessment processes
          How will this measurement be gathered? With what timeline?
  -- status, outcomes, results
          What did the program find out about its behavior?
  -- decisions and changes
          How will the program change?
  -- implementation of change
          How will be program achieve change?

Planning begins with what is currently happening by measuring the connection between current practice and desired goals. Then discrepancies are identified, improvements are identified, and changes are implemented. These changes are then compared to desired goals...

"Programs" include all units, academic and non-academic, that contribute to student outcomes. From the perspective of the theory of assessment, "student outcomes" should be the focus of every unit of the college.

How to Goal

Goals describe broad learning outcomes expressed in general terms.
Objectives are specific skills, values and attitudes.

        -- why does this unit exist?   function
        -- what is it trying to accomplish (be specific)   outcomes
        -- is it succeeding?   assessment
        -- what needs to change?   implementation
        -- what would these changes change?   impact

Here "unit" applies not only to curriculum but also to administrative and student support structures.

What Accreditation Wants

from the Council of Regional Accrediting Commissions

-- centrality of student learning as the institutional mission
-- documentation of student learning
-- compilation of evidence
-- stakeholder involvement
-- capacity building

Appropriate evidence is:
-- directly related to institutional goals
-- institutional processes for evaluating effectiveness
-- effective teaching and learning practices
-- conducive learning environment

Independent Accreditors Under Fire

"...accreditors are increasingly being asked not just about whether they examine student learning outcomes in the light of institutional mission, but also why they don't establish and enforce common standards of learning that all must meet."

--Peter Ewell, Senior Associate at the National Center for Higher Education Management Systems (NCHEMS).

Basically, Congress is usurping the independence of accreditation agencies by requiring them to enforce standardization.

Long ago, accreditation was based on institutional *capability*. It is now based on student learning outcomes. This is part of the "accountability" process (opinion: which is simply a governmental preference for a control role rather than a support role).

Assessment Without and With Three Syllable Words

William Bricken
February 2008

What Is It?

Answer these questions:	reflection
What are we trying to do?	objectives
How well are we doing it?	evaluation
What can we change to improve?	measurement
How are we going to make the change?	implementation
A culture of change!	iterative refinement

How Do We Do It?

Define goals	commitment
Define ways to achieve goals	processes
Measure these ways	assessment
Make changes	modification

What Do We Do It To?

All levels of the college:

students	performance
classes	pedagogy
courses	syllabi
programs	proficiency
support systems	services
admin	governance

Why Is It Hard?

We have to know what we want to do.	motivation
We have to align our actions with our desires.	consistency
We have to measure our actions.	validation
We have to change.	evolution

What Makes It Work?

clear, public goals	transparency
college-wide buy-in	consensus
apply to all levels of the college	comprehensiveness
focus on real problems that can change	realism
measure what is in use	actuality
plan for change	adaptation
make change	transformation

What Is It Not?

student testing	examination
finding stasis	equilibrium
fixing problems that cannot be fixed	futility

Some Assessment Tools and Methods
William Bricken
February 2008

Definitions

Assessment is...an iterative feedback process for continual program improvement.

Assessment is *rational decision making*, that is, making decisions about institutional structure, curricula, teaching behavior, etc. that are based on measurement of goal achievement and iterative refinement of goal achievement techniques.

"The ultimate goal of assessment is to pose questions and gather information to bring about improvement." R. Wallace, Coordinator of Institutional Assessment, U Texas at Austin.

"...no one appears to know how to measure learning outcomes in higher education..." Mathematical Association of America, 2008

Direct Assessment is associated with demonstration of performance, while *Indirect Assessment* measures end results and attitudes.

Quantitative measurement assesses behavior using numeric data.
Qualitative measurement uses descriptions.

Varieties of Assessment

Self-report
      alumni, employers, faculty, entering and exiting students

Exit interview: check list of satisfaction as a student leaves a program.

Focus group: 6-10 people in a group interview using open-ended questions.

Reflective essay: short essay on quality of coursework, collegiate experience,...

Student surveys: check list of satisfaction with aspects of a program

Formal recital/presentation: a public presentation or performance demonstrating skills

Student Academic Work
      tests, exams, standardized instruments

Existing information: tests, assignments, grades

Culminating assignment (capstone project): requires all program skills

Course-embedded assessment: performance on course objectives

Performance assessment: class assignments, tests, projects,...

Portfolios: Collection of student work over several courses.

Pre-post test: Measurement of knowledge/performance at the beginning and end of a course, program, etc.

Scoring rubric: grid of success criteria vs behaviors for each level

Standardized test: nationally standardized test scores

Observation
events, classes, meetings, offices, student services

Student behavior: structured checklist of behaviors to look for

Content analysis: sample of task-related performance products

Participant observer: participants write evaluative impressions of the event

Non-intrusive observation: an observer records activities during performance

Structured observation: an observer uses a check list to identify and record behavior.

Critical incident: a unit is provided with a critical incident to resolve. Usually the critical incident is one that would make a significant difference in assessment of performance quality.

Institutional Documents and Structure
administrative units,departments, programs, syllabi,transcripts

Curriculum analysis: systematic review of syllabi,texts,exams, etc.

Institutional demographic and retention data: routinely collected

Matrices: information grids of objectives of programs, courses, teachers

Syllabus analysis: look at course structure in relation to course goals

Transcript analysis: the sequence of student experiences and grade patterns.

Some Things That Can Be Assessed

Student learning
knowledge, skills, values

Student attitudes about
advising, facilities, scheduling, curriculum, mentoring,
teaching, support, services, climate, activities

Administrative processes
advising, counseling, tutoring, orientation, omsbudsman,
library support, computer support, financial aid, health care

Some Guidelines About Measurement

        -- focus on essentials, on real problems
        -- measure only what already exists and is in use
        -- assess only that which can be changed.
        -- collect only information that will be used
        -- analyze (virtual) data prior to gathering it
        -- specify what the data will change prior to collecting it
        -- package decisions with evidence and measurement.

Demonstrate a complete assessment cycle in the small. Ie install the global plan and test/ refine it in small pieces.

Feedback and Loops

Assessment must be fully integrated into institutional decision making; it is not an add-on. Institutional decisions should be supported by assessment data.

Close the loop: *"Faculty discuss assessment results, reach conclusions about their meaning, determine implications for change, and implement them."*
        -- Allen, 2004, Assessing Academic Programs in Higher Education

Closing the loop means using information to institute change. The general idea is that nothing is ever static, specially in an learning environment. An implication is that there is no "problem" and no "solution", there is just continual modification in pursuit of goals.

Higher Education Assessment Instruments

Many professionally developed and nationally standardized assessment instruments are available, usually free of charge. Some examples:

    Institutional Effectiveness
        Adult Student Priorities Survey (ASPS)
        Community College Student Experiences Questionnaire (CCSEQ)
        Faces of the Future (for community colleges)
        Faculty Survey (workload, job satisfaction,...)
        Institutional Functioning Inventory
        Institutional Performance Survey (IPS)
        National Survey of Student Engagement (NSSE)
        Student Satisfaction Inventory (SSI)

    Basic Skills
        Scholastic Aptitude test
        Academic Proficiency Test
        Learning Style Inventory
        Tasks in Critical Thinking

    Affective Development
        College Student Expectations Questionnaire (CSXQ)
        Defining Issues Test (ethics)
        Myers-Brigg Type Indicator
        Your First College Year Survey (YFCYS)

Exercises for Program Goals

William Bricken
February 2008

Program goals reflect the nature of the departmental discipline. Here are a collection of exercises that may contribute to definition of program goals.

Departmental Discussion Exercise:
>Describe the ideal student and attitudes and skills nurtured by the program
>List the achievements expected of each student
>Identify experiences each student should have
>Describe the ideal alumni

Instructional Materials Exercise:
>Collect and review instructional materials (syllabi,assignments,texts).
>Sort them by type of learning:
>>recognition/recall
>>comprehension/simple application
>>critical thinking/problem-solving

Departmental Documents Exercise:
>Collect and review departmental documents (catalog descriptions, brochures,evaluation reports,committee reports, mission statements).
>Identify those that are particularly accurate, particularly inaccurate.

Comparison Exercise:
>Compare departmental structure to other similar department at other institutions

Pruning Exercise:
>Pretend that you would like to reduce the program content and materials by, say, 20%. What would go and what would stay?

Likert Scale Exercise:
>Have each participant submit the three most important goals in rank order. Have the group assemble these into groups of identical goals and count the total rank ordering. Identify goals with strong agreement, strong variation, little support.

Modified Delphi Exercise:
>Have each participant rank order a collection of goals. Identify goals with strong agreement, strong variation, little support. Rank order the most important goals under the constraint that the final ranking must be consensual.

80% Solution Exercise
Have each participant sort a collection of goals into three piles (very, somewhat, and not important). Throw away all but the very important pile. Have the group sort the remaining goals in three piles, and again throw away the two lower piles. From what is left, identify the most important goal (the 80%), and the second most important goal (the 20%). Throw away all other goals.

I've Got A Secret Exercise:
Each participant makes a list of the program goals that they are aware of.

Face Validity Exercise:
Identify what you would need to produce in order to convince a skeptic that you had achieved your goals.

Connecting Objectives to Goals Exercise:
After identifying the two most important goals, construct a list of student behaviors that when observed would indicate that the goal has been achieved.

Curriculum Mapping Exercise:
Make a matrix of courses by program objectives. Identify strong and weak connections.

Objective Diversity Exercise:
Identify two or three cognitive objectives (What should students know?), affective objectives (What should students care about?), behavioral objectives (What should students be able to do?). Identify curriculum materials that address each of these types of objectives.

Getting Real Exercise (this one is challenging):
Discuss departmental goals and course objective while maintaining these conversational constraints:
Use only "I", never we or you or they.	(limits generalization)
Use only the present tense.	(limits fantasy)
Use only affective verbs.	(limits abstraction)

Multiple Levels of Analysis: Detail and Recommendations
William Bricken
February 2008

General Model

> -- Identify goals and objectives
> -- Specify approaches to achieving objectives (curriculum design)
> -- Specify measurement techniques in terms of objectives
> -- Measure and distribute
> -- Make changes to (one or more of)
> > goals, objectives, approaches, measures

Systematically apply the general model to each of:

> -- Individual student behavior
> -- Individual classes
> -- Individual courses
> -- Individual programs
> -- Non-academic support units
> -- Institutional decision-making

Participation and Striated Sampling

Each type of unit (students, classes, courses, programs, support, admin) should participant directly or indirectly in the general model. A small sample of individual units from each type should participate directly (ie by carrying out each step of the general model). Every unit should submit an assessment plan.

The idea of striated sampling is to select directly participating units so that they represent all of the units in the college, but to limit direct participation to only the representative sample.

Students: select 1% of the student body to answer (nominally) a student questionnaire. Make the questionnaire available also to any other students who wish to participate.

Classes: select 10% of teachers whose classes will be assessed for student learning outcomes.

Courses: select the primary course sequence for each department, for curriculum assessment.

Programs: select the most enrolled subprogram with each department for program assessment.

Support units: select three representative support units for support assessment.

Institution: identify two critical decision-making processes that are currently under discussion and review for assessment of integration into the assessment plan.

Sequence

Assessment can occur in four or five year cycles, with courses, programs, support units, and administrative decision structures varying every two or three cycles.

Within one cycle, each directly participating unit should carry out the full general model, with these substeps:

        Year 1: Planning
        Year 2: Pilot Study
        Year 3: Full Implementation
        Year 4: Implementation of Change

Year 1: Planning

Engage in several of goal definition and delineation exercises. Analyze existing documents, policies, procedures, and communication styles to suitability for assessment. Fill-in missing materials. Discuss and identify methods of measuring goal achievement.

Year 2: Pilot Study

Try out the assessment structures identified in Year 1. Dynamically change and modify instruments and techniques so that they are suitable for indicating what changes need to occur in Year 4.

Year 3: Full Implementation

Carry out the formal assessment during the first quarter, analyze data during the second quarter, interpret results during the third quarter, so that unit structures will be prepared for implementation of change in Year 4.

Year 4: Implementation of Change

Begin the Year with new policies and procedures that reflect the indicated changes. Changes at this point are decisions that have already been made. Concentrate on making the changes work.

This Is Important

The philosophy of outcome assessment rests upon the idea of implementing change. Buy-in to change should be built into each assessment cycle. Buy-in means that measurement instruments will be designed to identify potential areas for change, and their results will be meaningful only in the context of implementing change. Structuring of goals and assessment occurs during the first two years. The third and fourth year focus on the inevitability of using assessment information to implement change.

GLOBAL OBJECTIVES by DEPARTMENT and COURSE
William Bricken
August 2008

I scanned through the departmental course descriptions provided by Tatyana,
compiling the specific global objectives listed for each course, and
summarizing global objectives by departmental code. I also compared existing
documentation to those courses scheduled for Autumn 2008.

Excel files:
      go-rawcourses.xls contains the raw data for all courses.
      go-rawNODOC.xls lists those courses lacking course descriptions.
      go-rawwithobjs.xls contains raw data for courses with objectives.
      go-depttotals.xls contains data summed over department codes.

Caveats:
Due to missing data and possible errors, all counts should be viewed as
indicators rather than as exact numbers. No attempt was made to take size of
department, type of courses, target population, or obsolescence of courses
into account.

===
      106 departmental codes
             33 missing from Documentation folders
             73 department codes with course descriptions

 -- There are no course descriptions in Tatyana's files for about 30% of
department codes that are offering courses in Autumn 2008. These include:

      ADHS -- Academy   (1 code,   6 courses)
      COxx -- many are new courses (13 codes, 56 courses)
      DLxx -- Distance Learning   (15 codes, 181 courses)
      COME, CTMU, FTSTF, MAST -- codes with one undocumented course only

These 247 courses are excluded from further analysis.
===

===
      73 department codes with course descriptions
             24 all courses include global objectives
              9 most courses include global objectives
             10 a few courses include global objectives
              6 one course has a global objective
             24 all courses have descriptions, none have global objectives

-- Nearly one-half (45%) of departmental codes with documentation also
include global objectives for the majority of their courses. About one-third
(33%) do not have any global objectives, and the rest (22%) include one or a
few courses with global objectives.

NOTE: The ratio of total courses to courses-with-global-objectives within
each departmental code was computed only for those courses with descriptions.

RATIO	with objectives	department codes
1	all courses	24 (33%)
.6 -.95	most courses	9 (12%)
.25-.5	a few courses	10 (14%)
.05-.25	one course	6 (8%)
0	no courses	24 (33%)

===

===
    1197 courses
            247 excluded from analysis
     950 remaining courses
             38 with no documentation
            513 with documentation and no global objectives
            399 with global objectives

  -- About 4% of the Autumn 2008 courses do not have descriptions on file. Of
the remaining 912 courses with documentation, over one-half (56%) do not
include global objectives.
===

===
    399 courses with objectives (some multiple, especially nursing)
        147 critical thinking   (29%)
        111 communication   (22%)
        111 technical and information literacy   (22%)
         75 teamwork   (15%)
         61 global and cultural awareness   (12%)

    399 courses with objectives
        327 one global objective   (82%)
         43 two global objectives   (11%)
         29 three or more global objectives   (7%)

  -- About 400 course descriptions include global objectives, with 505
objectives listed in total.

```
      33 NURSING courses
             6  one objective
             3  two objectives
            19  three objectives
             3  four objectives
             2  five objectives
```

-- NURSING interpreted the assignment of global objectives differently than
all other departments, identifying 91 objectives within 33 courses (close to
3 objectives per course). For a clearer description of the College, NURSING
is excluded in the following.
===

===
```
      WITHOUT NURSING
      366 courses with objectives                              departments
            130 critical thinking                  (36%)          37
             87 communication                      (24%)          26
             95 technical and information literacy (26%)          26
             60 teamwork                           (16%)          23
             42 global and cultural awareness      (12%)          21

      366 courses with objectives
            321  one global objective              (88%)
             40  two global objectives             (11%)
              5  three global objectives           ( 1%)
```

-- 366 non-NURSING course descriptions included 414 objectives. 88% of
courses had one objective only.
===

===
Personal Observation:

I'm advocating that Global Objectives must be achieved across all College
structures (courses, departments, management, extra-curricula activities,
advising and placement, facilities, faculty committees, etc.), not solely
within classroom lessons. It seems reasonable the objectives of a particular
course should align with the dominant skill-base of that course. In which
case, we have very few courses focussed on, say, cultural awareness. In my
opinion, the global objective distribution is significantly skewed by several
departments that appear to have spread out the assignment of different
objectives over different courses "for coverage" rather than "for actual
content". This is an artifact of focussing on classroom objectives only.
===