Profiles of Good Practice in Assessing Student Learning Outcomes
Presented at the Symposium on Tertiary Assessment and Student Outcomes at the Victoria University of Wellington Wellington, New Zealand November 17, 2008
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~ Outline ~
1. Outcomes assessment
2. Accountability pressures
3. Alternatives and examples of good practice

Assessment
Is like a dancer’s mirror.
It improves one’s ability to see and improve one’s performance.

Alexander Astin 1993

ASSESSMENT . . .
"a rich conversation about student learning informed by data."
-- Ted Marchese -- AAHE

Key Results of Individual Assessment
- Academic staff can assign marks
- Students learn their own strengths and weaknesses
- Students become self-assessors

A Second Look
- Across students
- Across sections
- Across courses
Group Assessment Activities
- Classroom assignments, tests, projects
- Questionnaires for students, alumni, employers
- Interviews, focus groups
- Programme completion and placement
- Awards/recognition for graduates
- Monitoring of success in post-graduate education
- Monitoring of success on the job

Use of Results of Group Assessment
- Programme improvement
- Institutional and / or state peer review
- Regional and / or national accreditation

Outcomes Assessment
The process of providing credible evidence of resources, implementation processes, and outcomes undertaken for the purpose of improving the effectiveness of teaching and learning, programme design, and support services in tertiary education.

-T.W. Banta

Organizational Levels for Assessment
- National
- Regional
- State
- University
- Department
- Discipline
- Classroom
- Student

Most Academic Staff Are Not Trained as Teachers

PROFESSIONAL DEVELOPMENT
Can Help Instructors:
- Write clear objectives for student learning in courses and programmes
- Individualize instruction using a variety of methods and materials
- Ask questions that make students active learners
- Develop assessment tools that test higher order intellectual skills

Direct Measures of Learning
Assignments, exams, projects, papers

Indirect Measures
- Were these objectives covered?
- How much did your knowledge increase?
- Did the teaching method(s) help you learn?
- Did the assignments help you learn?
Primary Trait Scoring
Assigns scores to attributes (traits) of a task

**STEPS**
- Identify traits necessary for success in assignment
- Compose scale or rubric giving clear definition to each point
- Grade using the rubric

Can Develop a Research Paper
1. Narrows and defines topic
2. Produces bibliography
3. Develops outline
4. Produces first draft
5. Produces final draft
6. Presents oral defense

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<th>Unacceptable</th>
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Bibliography

**Outstanding** – References current, appropriately cited, representative, relevant

**Acceptable** – References mostly current, few citation errors, coverage adequate, mostly relevant

**Unacceptable** – No references or containing many errors in citation format, inadequate coverage or irrelevant

Mapping Course Outcomes to Programme Outcomes

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<tr>
<th>Outcomes</th>
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Assessment of Group Interaction
- Student actively contributed to discussion and listened to others
- Student was willing to alter own opinion and challenged others effectively
- Student effectively explained concepts/insights
- Student summarized/proposed solutions
  - 5 = Consistently excellent
  - 3 = Generally satisfactory
  - 1 = Inconsistent and/or inappropriate

Capstone Course in Business

Comprehensive case study analysis marked using scoring rubric covering
- writing skills
- knowledge of historic and current theories and practice
- ability to integrate tools and techniques from business specialties in analyzing the case

Olney & Menger
St. Mary’s University

Purdue University School of Pharmacy
My History

- Educational psychology
- Programme evaluation & measurement
- Performance funding in Tennessee
- 1990 USDOE effort to build a national test
- 1992 Initiated evidence-based culture at IUPUI

At IUPUI

- Standardized tests in degree programmes
- Course assignments
- Faculty-developed tests
- Projects
- Internships
- Questionnaires, interviews, focus groups

Group Assessment Has Failed to Demonstrate Institutional Accountability

- Focus on improvement at programme level
- Rare aggregation of data centrally
- Too few faculty involved
- Tertiary education scholars focused on K-12 assessment

Now We Have

the

Press to Assess with a Test

2006 Commission on the Future of Higher Education

- We need a simple way to compare institutions
- The results of student learning assessment, including value added measurements (showing skill improvement over time) should be ... reported in the aggregate publicly.

OECD’s AHELO for 10 HEIs from 3-4 countries

1. Generic skills (CLA)
2. Disciplines (Engineering and Economics)
3. Value added
4. Contextual information indicators
Two-Pronged Strategy in Washington
1. Pressure accreditors
2. Voluntary System of Accountability
   - NASULGC
   - AASCU

Voluntary System of Accountability
Report Scores in critical thinking, written communication, analytic reasoning using
CAAP
MAPP
CLA

Collegiate Assessment of Academic Proficiency
(6 independent modules)
- Reading
- Writing Skills
- Writing Essay
- Mathematics
- Science
- Critical Thinking

Measure of Academic Proficiency & Progress
- Humanities
- Social Sciences
- Natural Sciences
- University – Level Reading
- University – Level Writing
- Critical Thinking
- Mathematics
- Total Score

Collegiate Learning Assessment
Performance and Analytic Writing Tasks measuring
- Critical Thinking
- Analytic Reasoning
- Written Communication
- Problem Solving

TN = Most Prescriptive (5.45% of Budget for Instruction)
1. Accredit all accreditable programmes (25)
2. Test all final year students in generic skills (25)
3. Test final year students in 20% of programmes (20)
4. Give an alumni survey (15)
5. Demonstrate use of data to improve (15)

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100
At the University of Tennessee

CAAP

Academic Profile (now MAPP)

COMP (like CLA and withdrawn by 1990)

College BASE

In TN We Learned

1) No test measured 30% of gen ed skills
2) Tests of generic skills measure primarily prior learning
3) Reliability of value added = .1
4) Test scores give few clues to guide improvement actions

An Inconvenient Truth

.9 = the correlation between SAT and CLA scores of institutions thus

81% of the variance in institutions' scores is due to prior learning

How Much of the Variance in Final Year Scores is Due to Tertiary Impact?

• Student motivation to attend that institution (mission differences)
• Student mix based on age, gender
• Socioeconomic status
• Race/ethnicity
• Transfer status
• Major field of study

How Much of the Variance in Final Year Scores is Due to Tertiary Impact? (continued)

• Student motivation to do well
• Sampling error
• Measurement error
• Test anxiety
• Effects of tertiary institution

_______

19 %

Threats to Conclusions Based on Test Scores

1. Measurement error
2. Sampling error
3. Different tests yield different results
4. Different ways of presenting results
5. Test bias
6. Pressure to raise scores

- Daniel Koretz
  "Measuring Up"
  Harvard U. Press - 2008
Student Motivation

- Samples of students are being tested
- Extrinsic motivators (cash, prizes) are used
- Only a requirement and intrinsic motivation will bring final year students in to do their best

Concerns About Value Added

- Student attrition
- Proportion of transfer students
- Different methods of calculating
- Unreliability
- Confounding effects of maturation

Recent University of Texas Experience

- 30 – 40% of final year students at flagships earn highest CLA score (ceiling effect)
- Flagship campuses have lowest value added scores

Word from Measurement Experts

Given the complexity of educational settings, we may never be satisfied that value added models can be used to appropriately partition the causal effects of teacher, school, and student on measured changes in standardized test scores.

- Henry Braun & Howard Wainer

Better Ways to Demonstrate Accountability

1. Performance Indicators
   - Access, social mobility
   - Diversity
   - Workforce development
   - Economic development
   - Engaging student experience

2. Measures of Learning
   - Standardized tests in major fields
   - Internship performance
   - Final year projects
   - Electronic portfolios
   - External examiners
PRINCIPLES OF UNDERGRADUATE LEARNING (PULs)
1. Core communication and quantitative skills
2. Critical thinking
3. Integration and application of knowledge
4. Intellectual depth, breadth, and adaptiveness
5. Understanding society and culture
6. Values and ethics
Approved by IUPUI Faculty Council May 1998

AAC&U Essential Learning Outcomes
- Knowledge of human cultures and physical and natural world
- Intellectual and practical skills (writing, thinking, team work)
- Personal and social responsibility
- Integrative learning

Expensive Alternatives?
- Agreement on outcomes
- Agreement on standards of achievement
- Peer review

Accompanying Benefits
- Teach academic staff how to develop better classroom assessments
- Involve academics in using results to improve learning
- More collaboration across disciplines and institutions
- Closer ties with community

Designing Effective Assessment: Principles & Profiles of Good Practice
Trudy W. Banta
Elizabeth A. Jones
Karen E. Black
Jossey-Bass (Wiley) 2009

Profiles
- Invited over 1000
- Received 146
- Selected 49 for use in full
- Categorized all 146 and published Web sites
Outline for Profiles

- Background and Purpose
- Methods over ? Years
- Resources Required
- Findings
- Use of Findings
- Impact of Using Findings
- Success Factors
- Web sites

~ Organization ~

of

Principles & Profiles

- Planning
- Implementing
  - Improving & Sustaining

- Building a Scholarship of Assessment
  Banta & Associates
  Jossey-Bass 2002

Planning Principles

1. Engaging stakeholders
2. Connecting assessment to valued goals & processes
3. Creating a written plan
4. Timing assessment
5. Building a culture based on evidence

Planning Profiles

- Brigham Young University Campus Wiki for degree learning outcomes
- USMA at West Point Interdisciplinary teams assess 10 mission-related goals for learners
- Kennesaw State University 2008 CHEA Award for linking assessment with planning, programme moderation, faculty development

Implementation Principles

1. Providing leadership
2. Creating professional development
3. Assessing processes as well as outcomes
4. Communicating and using findings

Implementation Categories for Profiles

1. General education (generic skills)
2. Undergrad academic majors (programmes)
3. Professional development
4. Use of technology
5. Programme moderation
6. First year and civic engagement experiences
7. Student support services
8. 2- year tertiary institutions
9. Post-graduate programmes
Implementation Profiles (I)

- Northeastern Illinois University
  Locally developed rubrics for course embedded assessment of 6 skills plus . . .
- Miami University
  Science faculty use rubrics to assess 7 traits of capstone research projects

Implementation Profiles (II)

- SUNY Binghamton
  On-line surveys for faculty and students to evaluate distance courses
- Penn State Pulse Surveys
- San Diego State University
  Reflective learning portfolio for post-graduate students

Improving/Sustaining Principles

1. Providing credible evidence of learning to multiple stakeholders
2. Reviewing assessment reports
3. Ensuring use of results
4. Evaluating the assessment process

Improving/Sustaining Profiles

- San Jose State University
  Specialists in each college, awards, learning outcomes in 5-year plans
- Hocking Technical College
  Annual assessment work day
- Colorado State University
  Integration of learning outcomes in on-line template for program moderation

Some Big Ideas from the Book

- Influence of accreditation is strong
- Engaging academic staff may require extra money
- Standardized tests of generic skills not used alone
- Linking assessment with planning and program moderation works
- Impact not measured in learning gains