The Role of Assessment in Furthering Student Engagement, Inclusion, and Achievement

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Assessment

- Develop learning outcomes
- Verify curriculum alignment
- Develop an assessment plan
- Collect assessment evidence
- Assess the evidence
- Close the loop
Let’s focus on each step.

First, the learning outcomes.
AAC&U Suggestions: The Essential Learning Outcomes

• Knowledge of human cultures and the physical and natural world
• Critical and creative thinking
• Quantitative literacy
• Civic knowledge and engagement
• Ethical reasoning and action
Campus Examples
Knowledge of Human Cultures:

• Students can describe and analyze the capacity of race, ethnicity, class, gender, sexuality, disability, age, generation, and/or nationality to inspire, inform, and influence writers, artists and audiences (CSU Monterey Bay)
Quantitative Literacy

• Students can use tables, graphs, charts, and diagrams to explain concepts or ideas (Cabrillo CC)
Ethical Reasoning and Action

• Students can engage questions of ethics and recognize responsibilities to self, community, and society at large (U. of Delaware)
Alignment

Is your curriculum systematically designed to engage all students in achieving your learning outcomes?
A Cohesive Curriculum

• Coherence
• Ongoing Practice of Learned Skills
• Systematically Created Opportunities to Develop Increasing Sophistication and Apply What Is Learned
• Synthesizing Experiences to Integrate Learning
We want to develop deep and lasting learning—not shallow, short-term learning.
<table>
<thead>
<tr>
<th>Requirement</th>
<th>Outcome 1</th>
<th>Outcome 2</th>
<th>Outcome 3</th>
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The Assessment Plan:
Meaningful
Manageable
Sustainable
Some Characteristics of Quality Assessment

- Valid
- Reliable
- Actionable
- Efficient and cost-effective
- Engage students
- Interest us
Common Direct Assessment Strategies

- Published Tests
- Locally-Developed Tests
- Embedded Assignments and Course Activities: Signature Assignments
- Portfolios
- Capstone Projects
Common Indirect Assessment Strategies

• Surveys
• Interviews
• Focus Groups
Assessing the Evidence

• Direct assessment often involves the application of rubrics.
• Raters should be normed/calibrated to achieve reliable results.
• Indirect assessment requires taking an honest look at what people are telling us.
Closing the Loop

You can’t fatten a pig by weighing it.
A thermometer does not cure a fever.
Closing the loop

- requires collegiality and flexibility
- usually requires focusing on our curriculum (vs. my course)
- may require the support and collaboration of faculty, staff, administrators, and faculty and staff development professionals
Some Friendly Suggestions

• Focus on what is important.
• Don’t forget your adjunct faculty.
• Close the loop.
• Learn from your colleagues—both on-campus and external.
Without assistance, each of us will not only reinvent the wheel, we’ll also reinvent the flat tire.
The Role of Assessment in Furthering Student Engagement, Inclusion, and Achievement

Patricia Iannuzzi
Student Engagement

Faculty
- teaching and learning Strategies
- faculty development
- mentoring modeling
- and more…

Curriculum
- academic programs
- general education
- first year experience
- capstone/ culminating and more…

Co-Curriculum
- leadership
- living/learning Communities
- student support advising
- libraries student clubs athletics

Student Learning
Beginning in school, and continuing at successively higher levels across their college studies, students should prepare for twenty-first-century challenges by gaining:

Knowledge Of Human Cultures and The Physical and Natural World

Intellectual And Practical Skills

Personal And Social Responsibility

Integrative Learning

through the application of knowledge, skills, and responsibilities to new settings and complex problems
Intellectual and Practical Skills

- Inquiry
- Creative thinking
- Oral communication
- Information literacy
- Critical thinking
- Written communication
- Quantitative literacy
- Analysis
- Problem solving
- Teamwork

Practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance.
For Example

a. information literacy

b. critical thinking

c. communication
The student…

assesses the quality and relevance of evidence, including: spotting deception and holes in the arguments of others

From Collegiate Learning Assessment - Common Scoring Rubric – Part 1 Critical thinking, analytic reasoning and problem solving

a. information literacy  b. critical thinking  c. communication
The student…

articulates and applies criteria for evaluating both the information and its sources, including: analyzes the structure and logic of supporting arguments or methods; recognizes prejudice, deception, or manipulation

From *Information Literacy Competency Standards for Higher Education*, Standard 3, performance indicator 2

a. information literacy    b. critical thinking    c. communication
The student…

draws valid conclusions based on the information presented

From ETS - Measure of Academic Proficiency and Progress (MAPP) – Users Guide

a. information literacy  b. critical thinking  c. communication
The student…

organizes the content in a manner that supports the purposes and format of the product

From *Information Literacy Competency Standards for Higher Education*, Standard 3, performance indicator 2

a. information literacy    b. critical thinking    c. communication
The student…

presents evidence in an order that contributes to a persuasive and coherent argument

From Collegiate Learning Assessment - Common Scoring Rubric – Part 2  Written Communication

a. information literacy   b. critical thinking   c. communication
• *develops a thesis statement and formulates questions*…

• *identifies the value and differences of potential resources*…

• *selects the most appropriate investigative methods*…

• *constructs and implements effectively designed search strategies*…

• *articulates and applies criteria for evaluating information and sources*…

• *summarizes main ideas, synthesizes to construct new concepts, compares new knowledge with prior*…

• *applies new and prior information to the planning and creation of a product*…

• *follows laws, regulations, policies, etiquette*… *acknowledges sources when communicating product*…
Intellectual and Practical Skills

- inquiry
- creative thinking
- oral communication
- information literacy
- written communication
- critical thinking
- quantitative literacy
- analysis
- problem solving
- teamwork
Integrated Skills

inquiry
creative thinking
oral communication
information literacy
critical thinking
written communication
quantitative literacy
analysis
problem solving
teamwork
Academic Skills

- inquiry
- creative thinking
- oral communication
- information literacy
- critical thinking
- written communication
- quantitative literacy
- analysis
- problem solving
- teamwork
21st Century Literacies

- inquiry
- creative thinking
- oral communication
- information literacy
- critical thinking
- written communication
- quantitative literacy
- analysis
- problem solving
- teamwork
Common Elements

• require articulation of specific learning outcomes
• reflect higher order and lower order cognitive skills
• require application within and across disciplines
• developmental (sequenced over time)
• supported through curriculum content, instructional design, and co-curricular activities
• assessed by demonstration of what students can DO
Articulating Assessable Learning Outcomes

Demonstrates effective written and oral communication (broad)

• Chooses a communication medium and format that best supports the purpose of the product and the intended audience

Applies critical thinking (broad)

• Compares information from various sources in order to evaluate reliability, validity, accuracy, authority, timeliness, point of view, and bias
• Investigates differing viewpoints

Demonstrates academic honesty (broad)

• Selects an appropriate documentation style and uses it consistently to cite sources
Learning outcomes are integrated:

- knowledge
- abilities
- attitudes

What students should be able to do, not what knowledge they possess

Needed to function successfully in society

Mark Battersby and the Learning Outcomes Network, Centre for Curriculum, Transfer, and Technology, Vancouver, BC

So, What’s a Learning Outcome Anyway? 1999  ERIC Document 430-611
• Assessment is the means for learning—not just the method of evaluation

• Learning facilitated by doing, creating and using — assignments are the key to learning

• Situations are simulated in which students integrate and apply knowledge, abilities and values

• Develop “useable knowledge” not “testable knowledge”

Mark Battersby and the Learning Outcomes Network, Centre for Curriculum, Transfer, and Technology, Vancouver, BC

So, What’s a Learning Outcome Anyway? ERIC Document 430-611
Assessment Techniques

Performance-based -- linked to student’s performance

Authentic Assessment

Portfolios
Categorizing Grid
Journals
Checklists
Rubrics
1 Minute Paper
Conferences
Examines and compares information from various sources in order to evaluate reliability, validity, accuracy, authority, timeliness, and point of view or bias.

- **Lower level tasks**
- **Skills**
- **Higher level cognitive skills** - more complex and abstract

analyses the structure and logic of supporting arguments or methods.
Manipulates digital text, images, and data, as needed, transferring them from their original locations and formats to a new context.

Higher level cognitive skills - more complex and abstract.

Organizes the content in a manner that supports the purposes and format of the product.
Responsibility for Assessment

Institution

Major

Course

Library

Information Literacy

e-portfolio or standardized

Senior project or capstone

Authentic Assessment

Performance Based

Library Instruction
Outcomes Assessed by iSkills

1. Define
   - Determine the information need
   - Determine where the information can be found

2. Access
   - Search and access the information from databases, internet, or other
   - Refine search if needed

3. Evaluate
   - Assess relevancy of information
   - Critically evaluate if the information retrieved fulfills the need

4. Manage
   - Organize information [sort emails in folders, org chart, etc.]
   - Document relationships using charts
5. Integrate
   Synthesize, summarize, compare, and draw conclusions from multiple sources
   Compare and contrast information from multiple sources

6. Create
   Generate information by analyzing data
   Create graph, select text or graphics to communicate information

7. Communicate
   Convey information to various audiences using the appropriate medium
   Adapt presentation slides and revise emails
Comparing CLA and ISkills

written communication (mechanics)

Analysis
Synthesis
Drawing conclusions
Acknowledging alternate views
Evaluate
Manage
Integrate
Create
Communicate

Define & Access Information
In Sum

- Identify campus contributors to student learning
- Articulate outcomes - general and in disciplines
- Identify options for integration within and external to curriculum
- Intensify faculty development
- Ensure solid infrastructure of leadership and support for teaching and learning
- Create diagnostic, interim, and capstone assessments to give individual student feedback
- Guide students in plans of study connecting desired outcomes with curricular and co-curricular choices
- Involve all stakeholders in assessment planning
The Role of Assessment in Furthering Student Engagement, Inclusion, and Achievement

Sylvia Hurtado
Goals: Personal and Social Responsibility, Intercultural competence

• Inventory
  o Existing programs that inform these goals
  o Existing data which give insight into these outcomes

• Decide what new information you need
  o Multiple Outcomes = Multiple Measures

• Value-added (longitudinal)

• Milestones (periodic assessment)
Pluralistic Orientation: End of First Year
(N= 29,796 students; Alpha reliability = .85)

Tolerance of others with different beliefs .82
Ability to work cooperatively with diverse people .81
Openness to having my own views challenged .80
Ability to discuss/negotiate controversial issues .77
Ability to see world from someone else’s perspective .76

Now on entering student surveys, end of first year, college senior surveys, ten year followup (CIRP)
## College Experience Effects on Pluralistic Orientation: End of First Year, CIRP

<table>
<thead>
<tr>
<th>Informal</th>
<th>Campus facilitated</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Positive interactions with diverse peers</td>
<td>• Leadership training</td>
</tr>
<tr>
<td>• Taking action on racial issues</td>
<td>• Diversity co-curricular activities</td>
</tr>
<tr>
<td>• Hrs/week working for pay</td>
<td>• Diversity courses</td>
</tr>
<tr>
<td>• Hrs/week studying</td>
<td>• Service learning &amp; community service</td>
</tr>
<tr>
<td>• Hrs/week socializing</td>
<td>• Course opportunities for intensive dialogue</td>
</tr>
</tbody>
</table>
Social Agency Values
(N= 27,288 students; Alpha reliability .76)

- Influencing social values .84
- Helping to promote racial understanding .76
- Influencing the political structure .75
- Helping others who are in difficulty .68
### College Experiences Predicting Social Agency Among College Seniors

<table>
<thead>
<tr>
<th>Informal</th>
<th>Campus programs/opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Positive interactions with diverse peers</td>
<td>• Performed community service as part of a class</td>
</tr>
<tr>
<td>• Negative interactions with diverse peers</td>
<td>• Attended a racial/cultural awareness workshop</td>
</tr>
<tr>
<td>• Voted in a student election</td>
<td>• Took an ethnic studies course</td>
</tr>
</tbody>
</table>

Also related to high ratings on:

- Academic ability
- Understanding of others
- Self-understanding
- Took a women’s studies course
Using Survey Data and Standardized Tests

• How are some survey measures related to cognitive outcomes or moral reasoning?
• Which do we use?
• Study in classrooms: Introductory Courses or Psychology Pool
  o Administer standard tests to random sample, split samples, use sophisticated software to analyze
  o Study in Intro to Psychology, random assignment of 289 students to test relationship between cognitive tests and outcomes on our survey
  o Moral reasoning was administered in three classrooms to compare introductory classes that had similar goals but were different in content. URM composition was 15%.
## CIRP Items and Cognitive Measures

<table>
<thead>
<tr>
<th>Cognitive Measure</th>
<th>SAT V</th>
<th>SAT M</th>
<th>Academic Self-concept</th>
<th>Social Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Thinking Skills Test</td>
<td>.25**</td>
<td>ns</td>
<td>.25*</td>
<td>ns</td>
</tr>
<tr>
<td>Critical Thinking Dispositions</td>
<td>.14*</td>
<td>ns</td>
<td>.42**</td>
<td>.36**</td>
</tr>
<tr>
<td>Open-mindedness</td>
<td>.22**</td>
<td>ns</td>
<td>ns</td>
<td>.39**</td>
</tr>
<tr>
<td>Inquisitiveness</td>
<td>ns</td>
<td>.11**</td>
<td>.28**</td>
<td>.36***</td>
</tr>
<tr>
<td>Reflective Judgment</td>
<td>.24**</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Need for Cognition</td>
<td>.17**</td>
<td>-.16*</td>
<td>.55**</td>
<td>.27**</td>
</tr>
</tbody>
</table>
University Classroom Study
Moral Development

Pre-test DIT2  Post-test DIT2

Diversity Course

Management Course
Predisposition, Diversity Content, and Pedagogy Effects On Moral Reasoning

Moral Reasoning (Time 1) → Diversity Course → Active Learning Environment

Moral Reasoning (Time 2)

Critical Thinking Disposition

Correlation Coefficients:
- .15* (Moral Reasoning (Time 1) → Diversity Course)
- .39*** (Diversity Course → Active Learning Environment)
- .57*** (Moral Reasoning (Time 1) → Moral Reasoning (Time 2))
- .18** (Active Learning Environment → Critical Thinking Disposition)
- .11* (Critical Thinking Disposition → Moral Reasoning (Time 2))

Note: NS indicates non-significant.
What We Learned

• There are multiple ways to measure the common goal of preparing college students to participate in a diverse democracy including:
  o Multiple measures of cognitive outcomes
  o Changes in interests in social issues (e.g. causes of poverty)
  o Moral reasoning tests
  o Leadership behaviors (in college and post college)
  o Cultural awareness

• Colleges can learn more by linking local data with these common measures
Multi-Campus Surveys: Assessing Campus Climate for Diversity

Percentage of Questions

- Overall Average: 14.2
- Multi-Campus Diversity Surveys: 11.8
- National Student Experience Surveys: 3.1
- Institutional Student Surveys: 20.2
- Faculty Surveys: 12.8
Resources
Higher Education Research Institute, UCLA

www.gseis.ucla.edu/heri

News
New national research
Registration for survey instruments
Publications, research reports
Tool kits for assessment

Interactive forum online: Ask questions and get advice from others using data on college students