Seven Levers for Deeper Learning

Research-based Guidelines and Strategies for Improving Teaching, Assessment & Learning

An Interactive Keynote in the 2016 Assessment Forum on Enhancing Innovation in Learning, Teaching and Assessment: Using Research-Based Strategies

Sponsored by The Office of Academic Assessment at The University of Oklahoma

9:00-10:15 AM – Friday 16 September 2016

Tom Angelo
Values Affirmation

Jot down 2 or 3 educational/professional values you hold that motivate you to invest time and energy in this Assessment Forum.

_________________________________________

_________________________________________

_________________________________________
Which value(s) did you mention?

A. Promoting equity
B. Improving teaching effectiveness
C. Improving student learning
D. Promoting innovation
E. Making assessment less burdensome
Why Might We Assess Learning? - I

Summative purposes

- To compare learners against each other
- To compare learning against criteria
- To certify competency
- To award qualifications
- To ration resources
- To provide accountability
Why Might We Assess Learning? - II

Formative purposes

• To focus learners’ attention
• To illuminate and undermine misconceptions
• To increase motivation to learn
• To provide learners with feedback
• To improve performance
• To promote self-assessment & monitoring
• To develop independent, lifelong learning skills
In other words, virtually all of our core liberal learning values are expressed through formative assessment.

Yet the greater part of our time and effort is spent on summative assessment.
To do assessment as if deep learning matters most, we must privilege formative purposes . . .
... and make our summative assessments seamlessly aligned means to achieve our most valued educational end – deep learning.
Goal Ranking & Matching Exercise

What are your Learning Goals and/or Burning Questions for this Forum?

_________________________________________
_________________________________________
_________________________________________
My Intended Learning Outcomes (ILOs) for this Session

By the end of this brief session, you will have:

1. Identified at least two or three (2-3) strategies or techniques to improve teaching, assessment, feedback, and/or grading in your work

2. Identified at least two (2) useful resources and/or references for follow up

3. Committed to experimenting with at least one small change in your practice, and

4. Decided whether to attend my afternoon session
A First “Balcony” Question

Could there be advantages to knowing something about your students’ goals? values?
Applications Card

Ideas/Techniques  Possible Applications
1. Of FY students in 4Y US colleges, what percentage graduated from:

A. A traditional public school? ____ %
B. A charter/magnet public school? ____%
C. A private religious/parochial school? ____% 
D. A private independent prep school? ____%
E. Were home schooled? ____%
2. Of those same students, what %-age rated the following as “very important” reasons to go to college:

A. To be able to get a better job?  ___ %
B. To learn more about things that interest me?  ___%
C. To get training for a specific career?  ___ %
D. To gain a general ed. & appreciation for ideas?  ___%
E. To be able to make more money?  ___%
F. To prepare myself for grad/prof school?  ___%
G. To make me a more cultured person  ___%
3. Of those same students, what %-age thought they had a “very good chance of doing the following in college:

A. Socializing w/different racial/ethnic person? ___ %
B. Earning at least a ‘B’ average? ___%
C. Communicating regularly with profs? ___ %
D. Protesting or demonstrating? ___%
4. About what % of the 2015 FYs had:

A. First parent with at least a 4-year degree? ___ %

B. Second parent with at least a 4-year degree? ___ %
A “Balcony” Question

If you followed directions:
Are you more interested in learning the answers to questions on p. 2 than you would have been if I’d simply told that information to you?
1. Of FY students in 4Y US colleges, what percentage graduated from:

A. A traditional public school? 74%
B. A charter/magnet public school? 8%
C. A private religious/parochial school? 10%
D. A private independent prep school? 7%
E. Were home schooled? 1%
2. Of those same students, what % of age rated the following as “very important” reasons to go to college:

A. To be able to get a better job? 85%
B. To learn more about things that interest me? 82%
C. To get training for a specific career? 76%
D. To gain a general ed. & appreciation for ideas? 71%
E. To be able to make more money? 70%
F. To prepare myself for grad/prof school? 59%
G. To make me a more cultured person 49%
3. Of those same students, what %-age thought they had a “very good chance of doing the following in college:

A. Socializing w/different racial/ethnic person? 71%
B. Earning at least a ‘B’ average? 68%
C. Communicating regularly with profs? 44%
D. Protesting or demonstrating? 9%*

* College presidents all over the US ordered their Admissions Offices to identify this 9%.
4. About what %-age of the 2015 FYs had:

A. First parent with at least a 4-year degree? 61%
B. Second parent with at least a 4-year degree? 60%
More “Balcony” Questions

Imagine that your first-year students had similar responses:

Could you see any implications for your courses? For the curriculum? For campus assessment efforts?
### Six Dimensions of Higher Learning Outcomes

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<th>% Your Past?</th>
<th>% Their Future?</th>
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<tr>
<td>___</td>
<td><strong>Factual Learning</strong></td>
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<td><strong>Conceptual Learning</strong></td>
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<td><strong>Metacognitive Learning</strong></td>
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<td>___</td>
<td><strong>Reflective Learning</strong></td>
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<td><strong>100%</strong></td>
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Balcony Question

Which of those six dimensions needs and deserves the most focus if we aim to foster:

Creative thinking?
Problem-solving?
Innovation?
Life-long learning?
HOT HIPs!

Higher Order Thinking can be promoted effectively through High-Impact Practices
HIPs – High-Impact Educational Practices

• First-Year Seminars and Experiences
• Learning Communities
• Collaborative Assignments and Projects
• Undergraduate Research
• Diversity/Global Learning
• Service Learning/Community-Based Learning
• Clinical Placements/Internships/Co-ops
• Capstone Courses and Projects
• Writing-Intensive Courses
What makes these HIPs so HOT?

- High expectations
- Explicit direct instruction
- Metacognitive scaffolding
- Deliberate practice
- Effective feedback
- Focused collaboration
The Teaching & Learning Pyramid
The Teaching & Learning Pyramid

- %-age Students can learn independently
- %-age Students can learn cooperatively
- %-age Students can learn from more advanced Ss
- %-age Ss can learn only from faculty
“It’s not what we do, but what students do that’s the important thing.”

Seven Levers for Deeper Learning

1. Become aware of prior knowledge, beliefs & values
2. Set high, meaningful goals and expectations
3. Learn how to learn effectively
4. Understand assessment criteria and standards
5. Seek and find connections and applications
6. Collaborate effectively
7. Invest actively engaged time and effort
Bloom’s Taxonomy (revised)
Anderson & Krathwohl, 2001

Developed to explain what terms like “understanding” actually translate to in action (learning).
“Blooming” – Categorizing Questions
The Parrot Test
Categorizing Questions by Bloom’s Taxonomy Levels (Blooming)

By systematically varying the elements of the task, we can better assess and promote transfer and deep learning.
The Bondy Scale
Bondy’s Clinical Performance (Skills) Rating Scale

1. DEPENDENT
   - Unsafe, Unaware & Unskilled

2. MARGINAL
   - Safe only when supervised, Unskilled, Requires continuous support and direction

3. ASSISTED
   - Safe, Mostly proficient, Requires frequent support and direction

4. SUPERVISED
   - Safe, Proficient, Requires only occasional support and direction

5. INDEPENDENT
   - Independent plus capable of assessing, instructing and supporting
   - Safe, Very proficient, Requires no support or direction

6. EXPERT
   - Independent plus capable of assessing, instructing and supporting
Effective Assessment is often just

Gap Analysis

• Find the gaps
• Mind the gaps
• Narrow the gaps
A Detailed Assessment/Grading Rubric

What matters most in this course?
How do you know?
“From the student’s point of view, the assessment is the curriculum.”

Paul Ramsden
FEEDBACK
A Course/Teaching Feedback Form

What values do our course and teaching assessment systems convey to students? To faculty?
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Lessons Learned in the Past 30 Years
“The effectiveness of teaching is best evaluated by what the students do when the teacher is not present.”

T.A., 2012
| Interesting IDEAS/TECHNIQUES | Possible APPLICATIONS |
“A well-designed course is a clever learning trap, from which students cannot escape without demonstrating they have fully mastered the intended learning outcomes at the required high standard.”

T.A.