DOING ASSESSMENT AS IF TEACHING & <u>LEARNING</u> MATTER MOST
ENGAGING FACULTY AND STUDENTS WITH SIMPLE, PRACTICAL, POWERFUL TECHNIQUES

The 2013 Assessment Institute

Materials for a Workshop Session

11:30 AM -12:30 PM on Tuesday 29 October 2013

Tom Angelo

Professor of Higher Education
Assistant Provost and Founding Director
Center for the Advancement of Faculty Excellence
Queens University of Charlotte (NC)
angelot@queens.edu

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2. Build shared language and concepts . . .

Terms and concepts that might be useful

- Backward design
- Constructive alignment
- Bus Test, Parrot Test, Parking Lot Test
- Cognitive load
- Metacognition
- Deliberative practice
- Formative and summative assessment
- Intended learning outcomes
- Novice-Expert differences
- Prior knowledge
- Surface, strategic, and deep learning approaches
- The Dance Floor and The Balcony
- Threshold and core concepts

A QUICK QUIZ -- Please circle the best answer among the alternatives for each question below:

A. Extrinsic and intrinsic motivation can
   A. Cancel each other out
   B. Not co-exist for the same goal
   C. Complement each other

B. Prior knowledge is
   A. Inborn, but fixed
   B. Learned, but alterable
   C. Inborn, but alterable
   D. Learned, but fixed

C. The Tram or Bus Test is a way of gauging:

   A. Marketability
   B. Utility
   C. Sustainability
   D. Feasibility

D. The Parrot Test is a way of gauging level of:

   A. Sustainability
   B. Cognitive load
   C. Taxonomic complexity

E. Cognitive load refers to the amount of _____
   it takes to learn something

   A. time
   B. energy
   C. prior knowledge
   D. intelligence

F. The term "constructive" in "constructive alignment" refers to:
   A. Ontology
   B. Epistemology
   C. Phenomenology

G. The Parking Lot Test is a way of gauging skill in:
   A. Memorizing
   B. Summarising
   C. Analysing
   D. Applying
   E. Evaluating

H. Metacognition is best described as cognitive:
   A. Self-awareness plus self-reflection
   B. Self-awareness plus self-correction
   C. Self-awareness plus self-evaluation
   D. Self-awareness plus self-direction

I. The use of strategic learning approaches is typically prompted by the interaction of:
   A. Low intelligence & context
   B. Differential motivation & context
   C. Low/no motivation & poor study skills
   D. Differential motivation & poor study skills

J. An athletic coach, asked to summarise research on learning, might say:
   A. "Focus on your inner game."
   B. "Focus on this week's game."
   C. "Focus on your strengths."
   D. "Focus on your weaknesses."

K. In terms of lifelong learning and success, rank the following 1 to 4 in terms of relative importance (1=low)
   A. Mastery of a body of content knowledge
   B. Positive self-esteem
   C. Repertoire of learning skills
   D. Grit and perseverance

_____   _____

Once you've answered all 11 questions above, please go back and label each of your responses with one of the numbers below in relation to your level of knowledge regarding that particular item response.

   0. No knowledge – Just guessing
   1. Rote knowledge – Remember this, but don't understand it
   2. Comprehension – Can explain this in my own words
   3. Application – Can use/apply this in my work
   4. Evaluation – Can analyze and critique this
   5. Creation – Can develop new/original concepts or products based on this example

Tom Angelo – thomas.a.angelo@gmail.com --10/28/2013

3. Build shared goals and motivation . . .

Goal Ranking & Matching Exercise

What do you hope to learn through your participation in this Assessment Institute? How can it best address your needs and expectations? This is a Classroom Assessment Technique (CAT) designed to help you identify your goals and expectations and share them with the conference leaders–and each other.

1. On the lines below, please list three or four learning goals you hope to achieve– things you hope to learn or questions you hope to answer–through participating actively in this conference.

List your Learning Goals for this Institute

_____

_____

_____

_____

2. Now, rank your goals in terms of their relative importance to you. Make the most important goal #1, the next most important #2, and so on.

3. Next, working with your group of 3-4 colleagues, determine quickly whether you have any first- or second-ranked goals in common. Determine which one or two key goals are most widely shared.

4. Prepare to report out which goals were shared within your group and to what extent. For example, "Three out of four of us want to learn X."

Reference: Angelo, T. A. & Cross, K. P. (1993). Classroom Assessment Techniques: A Handbook for College Teachers, 2nd edition. San Francisco: Jossey-Bass, pp. 290-294.

1. Build shared trust . . .

Collaborative Learning Technique #1

Buzz Groups

Useful for stimulating engagement in discussions and, and encouraging students to rehearse, express, and compare their ideas, opinions, and/or reactions with others.

Estimated Time and Effort Required for

Faculty to prepare this CoLT	**LOW**
Students to use this CoLT	**LOW**
Faculty to assess/follow up	**LOW**
Complexity	**LOW**
Risk of Failure	**LOW**

Duration & Location	**10-20 minutes/In class or online**
Group Size & Structure	**Triads to Quintets Informal/Little or no pre-organizing**

Description

Buzz groups give students the opportunity to exchange ideas, opinions, and information in a low stress environment. Because buzz groups can build interest in and enthusiasm for a subject, they are useful in introducing a new topic and in assessing students' prior knowledge or beliefs about that topic. Buzz Groups can also serve as in-class lead ins to out-of-class assignments.

Procedure

1. The instructor prepares a list of open-ended discussion questions that will tap students' ideas, prior knowledge, or opinions about the topic at hand. These should be questions for which there is no one correct answer.

2. In the context of a semi-structured, time-limited conversation, small groups of students discuss their responses to the prepared questions. It may be useful to assign roles such as time keeper, summarizer, and reporter.

3. Groups summarize their responses – including the range of agreement and diversity – and report them to the instructor in writing and/or, if useful, to the entire class, orally. Alternately, in a large class, the instructor can sample responses from a few groups.

6. Take a scholarly approach . . .

Seven Transformative Guidelines for
Doing Assessment as if <u>Learning</u> Matters Most

1. **Build shared trust**. *Begin by lowering personal, interpersonal and organizational barriers to risk taking and change.*

2. **Build shared language and concepts**. *Develop a collective understanding of the key concepts (mental models) needed for transformation.*

3. **Build shared goals and motivation**. *Collectively determine goals worth working toward and problems worth solving – and consider the likely costs and benefits.*

4. **Design backward and work forward.** *Design backward from that shared vision and long-term goals to develop coherent outcomes, strategies, and activities.*

5. **Think and act systematically.** *Analyze the opportunities and limitations presented by the larger system(s) within which we operate and seek connections and applications to those larger worlds.*

6. **Take a scholarly approach.** *Consult relevant valid theory and research. Use what has already been learned about individual and organizational learning, change and assessment to inform, explain, and examine your plans and strategies.*

7. **Don't assume, ask.** *Practice what we preach. Make the implicit explicit. Demonstrate the value of assessment by using it ourselves—and on ourselves.*

2. Build shared language and concepts . . .

STATISTICS FOR EVERYDAY LIFE – SPRING 2004 - ANGELO

FIRST CONCEPT REVIEW: STANDARD DEVIATION

Circle the one variable in each row that you would expect to have the <u>largest</u> relative standard deviation:

1. adult humans' heights   adult humans' weights

2. domestic dogs' weights   domestic cats' weights

3. oral language skills of 12-year-olds   mathematics skills of 12-year-olds

4. hours students spend   hours students spend
       <u>in</u> this classroom   studying <u>for</u> this class

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Lever 1
ConcepTest
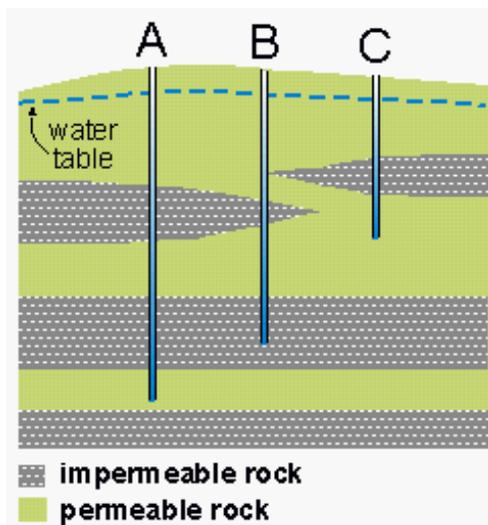
Liquid hazardous waste is disposed of by pumping it down injection wells. Which well location would be the most suitable to use for an injection well?
Why?

A   **B**   **C**

Thanks to Dr. David McConnell for permission to use his Geology Conceptest above.

4. Design backward and work forward . . .

Macroeconomics Essay Grading Grid

Assignment: Write a well-structured, enlightened critical essay about current economic conditions that demonstrates command of existing economic knowledge, appropriate interpretation and application of that knowledge, and demonstrates appropriate use of data and argumentation to support well-reasoned policy recommendations.

Basic Questions: What is the current macroeconomic situation in the U.S.?
What is the likely prognosis for the next 12 to 24 months?
What are your economic policy recommendations?

Criterion	Distinguished	Exceeds Expectations	Meets all Expectations	Meets some Expectations	Unsatisfactory	Missing or fails minimum req.
Structure	10	8	6	4	2	0
Meets all minimum requirements						
Executive summary is effective & concise						
Introduction clearly lays out a roadmap for the paper and places the information in context						
Body addresses all the Basic Questions, includes the argumentation and data						
Conclusion provides summary and closure						
Content						
Knowledge	30	24	18	12	6	0
Command of existing economic knowledge						
Use of terms, theories, and data are						
Informed judgment demonstrated by selection of terms, theories and data (shown by the exclusion irrelevant and inclusion of						
Argumentation	40	32	24	16	8	0
Argument flows logically so that early statements lay the foundation for later statements and the reader is guided through the arguments						
Appropriate application of theory is used to make argument; clearly links theory and data to conclusions						
Arguments are persuasive focuses on key points, does not wonder, uses no unnecessary verbiage						
Alternative policies, arguments, conclusions and generalizations are noted where they exist and addressed; differences of opinion, supported by evidence, are also discussed						
Data used is reliable, valid, and pertinent; it provides effective support; no superficial information or tangential data muddies the argument						
Striving for Excellence and Creativity	20	16	12	8	4	0
Presentation is neat and professional; all visuals used are well labeled, clear, and effective conveying information better than words; text contains no errors and is easy to read & understand						
Creativity – the paper clearly holds the imprint of the author. Original thought is demonstrated by innovative organization, the integration of concepts and ideas, the use of new approaches, the novel use of visuals, or						

Thanks to Dr. Richard Stratton of the University of Akron for permission to use this example.

5. Think and act systematically . . .

Discussion Draft Questions for an
Undergraduate Course/Teaching Feedback (<u>not</u> Evaluation!) Form

Questions about yourself   (1= Always, 2=Usually, 3=Sometimes, 4=Rarely, 5=Never, NA= Not Applicable)

1. I was self-motivated to learn this course material	1	2	3	4	5	NA
2. I was well-prepared for each class session	1	2	3	4	5	NA
3. I asked the instructor for help/guidance when I needed it	1	2	3	4	5	NA
4. I invested enough time and energy to meet/exceed course requirements	1	2	3	4	5	NA
5. I participated actively and contributed thoughtfully in class sessions	1	2	3	4	5	NA
6. I attended class sessions and/or individual appointments	1	2	3	4	5	NA
7. Overall, I gave my best possible effort to learning in this course	1	2	3	4	5	NA

Questions about the course   (1= Always, 2=Usually, 3=Sometimes, 4=Rarely, 5=Never, NA= Not Applicable)

8. The course was well-organized to help students learn	1	2	3	4	5	NA
9. The objectives and criteria for meeting them were made clear	1	2	3	4	5	NA
10. The assignments contributed to my learning	1	2	3	4	5	NA
11. The assessments/evaluations were clearly connected to the objectives	1	2	3	4	5	NA
12. The amount of work required was appropriate to the objectives	1	2	3	4	5	NA
13. The level of intellectual challenge was high	1	2	3	4	5	NA

Questions about the instructor   (1= Always, 2=Usually, 3=Sometimes, 4=Rarely, 5=Never, NA= Not Applicable)

14. The instructor clearly connected the course objectives to course activities, assignments, and assessments	1	2	3	4	5	NA
15. The instructor encouraged me to connect my experience to the course	1	2	3	4	5	NA
16. The instructor provided clear and useful feedback to improve learning	1	2	3	4	5	NA
17. The instructor inspired interest and excitement in the course material	1	2	3	4	5	NA
18. The instructor was available and helpful when asked	1	2	3	4	5	NA
19. The instructor communicated ideas and information clearly and effectively	1	2	3	4	5	NA
20. The instructor evaluated and graded fairly	1	2	3	4	5	NA
21. The instructor treated students and their ideas with respect	1	2	3	4	5	NA
22. The instructor used required texts/other required materials effectively	1	2	3	4	5	NA

Summary Questions: Compared w/ other courses: (1=extremely high, 2=high, 3=adequate, 4=low, 5=very low)

23. This course increased my desire to continue learning about this material	1	2	3	4	5	NA
24. If a friend asked about taking this course, my recommendation would be	1	2	3	4	5	NA
25. Overall, I would rate the quality of this course as	1	2	3	4	5	NA
26. Overall, I would rate the effectiveness of the instructor as	1	2	3	4	5	NA
27. Overall, I would rate the amount I learned in this course as	1	2	3	4	5	NA
28. Overall, I would rate the value of what I learned in this course as	1	2	3	4	5	NA

Tom Angelo – <u>thomas.a.angelo@gmail.com</u> --10/28/2013

6. Take a scholarly approach . . .

Seven Levers for Deeper Learning

Research-based Guidelines for more Effective Teaching and Learning

Overall, research suggests that virtually all students can learn more – and more deeply – when we help them to . . .

1. *Become explicitly aware of their own relevant prior knowledge, beliefs, preconceptions, and values – and <u>un</u>learn, as needed*

2. *Set and maintain realistically high and personally meaningful learning goals and expectations for academic success*

3. *Learn <u>how</u> to learn effectively – given their own individual histories, talents, preferences, and goals – so they become increasingly self-directed and independent learners*

4. *Understand the criteria, standards, and methods used in assessing and evaluating their learning and get useful, timely feedback on their performance against those standards*

5. *Seek and find connections to and real-world applications of concepts and skills they are learning in class*

6. *Collaborate regularly and effectively with other learners and with teachers to achieve meaningful, shared learning goals*

7. *Invest as much actively engaged time and high-quality effort as possible in their academic work*

Seven Common Misperceptions about Assessment and Seven Reasonable Responses

1. We're doing just fine without it.

- *OK, then let's use assessment to find out what works, and to help us document and build on our successes.*

2. We're already doing it.

- *OK, then let's audit all the assessments we already do to discover what we know and what we don't.*

3. We're far too busy to do it.

- *OK, but since we're already doing it, let's use assessment to see where and how we can save time and effort.*

4. The most important things can't/shouldn't be measured.

- *And not everything measurable should be measured, but let's see if we can agree on how we can tell when we're succeeding in these most important things.*

5. We'd need more staff and lots more money.

- *Since we're unlikely to get more resources: how, what, and where can we piggyback, embed, and substitute?*

6. They'll use the results against us.

- *They might. So, let's build in strong safeguards against misuse before we agree to assess.*

7. No one will care about or use what we find.

- *To avoid that, let's agree not to do any assessments without a firm commitment from stakeholders to use the results.*

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7. *Don't assume, ask . . .*

Applications Card

DIRECTIONS: Please take a moment to recall the ideas, techniques, and strategies we've discussed -- and those you've thought up -- to this point in the session. Quickly list as many possible applications as you can. Don't censor yourself! These are merely <u>possibilities</u>. You can always evaluate the desirability and/or feasibility of these application ideas later.

Interesting   *Some possible*
IDEAS/TECHNIQUES   *APPLICATIONS of those*
<u>*from this session*</u>   <u>*ideas/techniques to my work*</u>

Reference: Angelo, T.A. & Cross, K.P. (1993). <u>Classroom Assessment Techniques: A Handbook</u> <u>for College Teachers</u>, 2nd edition. San Francisco: Jossey-Bass, pp. 236-239.

A FEW USEFUL REFERENCES ON FEEDBACK AND ASSESSMENT

Hattie, J. & Temperley, H. (2007). The power of feedback. *Review of Higher Education*, 77(1), 81-112.

Huba, M.E. & Freed, J.E. (2000). *Learner-Centered Assessment on College Campuses: Shifting the Focus from Teaching to Learning.* Needham Heights, MA: Allyn & Bacon.

Li, J. & De Luca, R. (2012). Review of assessment feedback. *Studies in Higher Education*.
      DOI:10.1080/03075079.2012.709494

Light, R. J. (2001). *Making the Most of College: Students Speak Their Minds.* Cambridge, MA: Harvard.

Mentkowski, M. & Associates. (2000). *Learning that Lasts: Integrating Learning, Development, and Performance in College and Beyond.* San Francisco: Jossey-Bass.

Nichol, D.J. & Macfarlane-Dick, D. (2007). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education,* 31(2), 199–218.

Price, M., et al. (2012). *Assessment Literacy: The Foundation for Improving Student Learning.* Oxford: Assessment Standards Knowledge Exchange (ASKe)/Oxford Brookes University.

Suskie, L. (2009). *Assessing Student Learning: A Common Sense Guide, 2nd ed.* San Francisco: Jossey-Bass.

Walvoord, B.E. (2004). *Assessment Clear and Simple: A Practical Guide for Institutions, Departments, and General Education.* San Francisco: Jossey-Bass.

Wiggins, G. (1998). *Educative Assessment: Designing Assessments to Inform and Improve Student Performance.* San Francisco: Jossey-Bass.

. . . AND ON IMPROVING TEACHING AND LEARNING QUALITY

Ambrose, S.A., et al. (2010). *How Learning Works: Seven Research-based Principles for Smart Teaching.* San Francisco: Jossey-Bass.

Anderson, L. & Krathwohl, D.R. (Eds.) (2001). *A Taxonomy for Learning, Teaching, and Assessment: A Revision of Bloom's Taxonomy of Educational Objectives (Abridged Ed.).* New York: Allyn & Bacon.

Angelo, T. (2012). Designing subjects for learning: Practical, research-based principles and guidelines. In Hunt, L. & Chalmers, D. *University Teaching in Focus: A Learning-centred Approach.* London: Routledge, Taylor & Francis, 93-111.

Biggs, J. & Tang, C. (2011). *Teaching for Quality Learning at University: What the Student Does. 4th ed.* Berkshire, England: McGraw-Hill/Open University Press.

Boice, R. (1996). *First-Order Principles for College Teachers: Ten Basic Ways to Improve the Teaching Process.* Bolton, MA: Anker.

Bransford, J.D., Brown, A.L, & Cocking, R.R. (Eds.). (2000). *How People Learn: Brain, Mind, Experience, and School, Expanded ed.* Washington, DC: National Academy Press.

Davis, B.G. (2009). *Tools for Teaching, 2nd ed.* San Francisco, CA: Jossey-Bass.

Hattie, J. A. C. (2009). *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement.* New York: Routledge.

Kuh, G.D. et al. (2006). *What Matters to Student Success: A Review of the Literature.* Washington, DC: National Postsecondary Education Cooperative, U.S. Dept. of Education Institute of Education Sciences.

Pascarella, E. & Terenzini, P. (2005). *How College Affects Students: A Third Decade of Research.* San Francisco, CA: Jossey-Bass.

Ramsden, P. (2003). *Learning to Teach in Higher Education, 2nd ed.* London: RoutledgeFalmer.

Svinicki, M.D. (2004). *Learning and Motivation in the Postsecondary Classroom.* Bolton, MA: Anker.