Doing Assessment as if Teaching and Learning Matter Most

A Half-Day Workshop for Faculty and Guests of

Syracuse University

Friday 14 October 2016

Tom Angelo

Clinical Professor of Educational Innovation & Research in
The Division of Practice Advancement and Clinical Practice
UNC Eshelman School of Pharmacy
University of North Carolina at Chapel Hill

thomas.a.angelo@gmail.com

_____

Values Affirmation – [I, III, VI]   *Schnabel, et al. (2013); Steele (2010); Yeager (2014)*

On the lines below, jot down 2 or 3 educational/professional values you hold that motivate you
  to invest your time and energy in assessment efforts at Syracuse.

  _____

  _____

  _____

_____

Goal Ranking & Matching – [I, III, VI] *Morisano, D., et al. (2010); Oettingen, G. (2014)*

What specifically do <u>you</u> hope to learn/gain through participating in this workshop?

On the lines below, please list three or four <u>specific learning goals</u> you hope to achieve –
things you hope to learn – and/or <u>questions</u> you hope to answer through participating actively.

  Your <u>Learning Goals/Burning Questions</u> for the *2016 Assessment Institute*

  _____

  _____

  _____

  _____

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.

Background Knowledge Probe – [VI, VII]   *Chronicle of Higher Education* (2016)

Please do __not__ attempt to answer these until you receive verbal directions.

 1. **Of 1st-year students at 4-year US colleges in Fall __2015__, what percentage . . .**

    A. **Graduated from a public school (not charter or magnet)?**   ___ %

    B. **Graduated from a charter/magnet public school?**   ___ %

    C. **Graduated from a private religious/parochial school?**   ___ %

2. **Of those same students, about what percentage rated the following reasons as "very important" in deciding 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 education and appreciation for ideas?**   ___ %

    E. **To be able to make more money?**   ___ %

    F. **To prepare myself for graduate/professional school?**   ___ %

    G. **To make me a more cultured person?**   ___ %

3. **Of those same students, what percentage thought they had a "very good chance" of doing the following in college . . .**

    A. **Socializing w/someone of different racial/ethnic group**   ___ %

    B. **Earning at least a B average?**   ___ %

    C. **Communicating regularly with professors?**   ___ %

    D. **Participating in student protests or demonstrations?**   ___%

4. **About what percentage of those 2015 FYs had a . . .**

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

    B. **Second parent with at least a 4-year degree?**   ___ %

Six Dimensions of Higher Learning Outcomes – [II, III, IV, VII]

Approximate percentage of the total assessment, grading & feedback *you* received during *your* own undergraduate degree program focused on . . .

What percentage of *their* total assessment, grading & feedback *your students* will need during 2016-2020 that focuses on . . .

FACTUAL LEARNING
Learning *What (Level 1)*
Learning facts and principles

CONCEPTUAL LEARNING
Learning *What (Level 2)*
Learning concepts and theories

PROCEDURAL LEARNING
Learning *How*
Learning skills and procedures

CONDITIONAL LEARNING
Learning *When and Where*
Learning applications

METACOGNITIVE LEARNING
Learning *How to Learn*
Learning to direct and manage one's own learning

REFLECTIVE LEARNING
Learning *Why (and Why Not)*
Developing self-knowledge, cultural awareness, ethics, etc.

100%   **100%**

Nearly 30 years ago, we had these powerful guidelines . . .

Arthur Chickering & Zelda Gamson's (1987)

Seven Principles for Good Practice in Undergraduate Education

Good practice in undergraduate education:

1. Encourages contact between students and faculty

2. Develops reciprocity and cooperation among students.

3. Encourages active learning.

4. Gives prompt feedback.

5. Emphasizes time on task.

6. Communicates high expectations.

7. Respects diverse talents and ways of learning.

Twenty years later, we had powerful evidence supporting . . .

High Impact Practices (Kuh, 2008)

- **First-Year Seminars and Experiences**
- **Learning Communities**
- **Writing-Intensive Courses**
- **Collaborative Assignments and Projects**
- **Undergraduate Research**
- **Diversity/Global Learning**
- **Service Learning/Community-Based Learning/Internships**
- **Capstone Courses and Projects**

By 2016, I'd argue we've learned that . . .

I. What learners do matters much more than who they are

II. What learners do in college matters much more than where they go to college

III. What we believe about learning can powerfully promote or impede learning

IV. The less skilled one is, the less self-aware and more confident one is likely to be

V. Developing high levels of skill takes great amounts of time, effort, assessment and feedback

VI. How a learner practices/studies can powerfully promote or impede learning

VII. Our stated higher-order learning outcomes – e.g., critical thinking – require the explicit development of effective metacognitive and reflective thinking skills and habits

"Backward" Course (Re)Design – A Simple Self-Assessment   Angelo, T.A. (2012)

Step Number	Sequential Steps in an Ideal 'Backward' Course (Re)Design Process *Develop or revise . . .*	Column 2 **Observed Sequence**	Column 3 **Preferred Sequence**
1	**Program-Level Intended Learning Outcomes**		
2	**Course-Level Intended Learning Outcomes/Goals**		
3	**Standards for Assessing and Grading Performance**		
4	**Summative Assessments**		
5	**Diagnostic and Formative Assessments**		
6	**Learning Activities, Assignments & Resources**		
7	**Teaching Strategies, Techniques & Resources**		
8	**Program Review, Course & Teaching Evaluation**		

"Backward" Course (Re)Design – An Alignment Grid

	Step One Program-Level Intended Learning Outcomes	**Step Two** Course-Level Intended Learning Outcomes	**Step Three** Standards for Assessing and Grading Performance	**Step Four** Summative Assessments	**Step Five** Diagnostic and Formative Assessments	**Step Six** Learning Activities, Assignments & Resources	**Step Seven** Teaching Strategies, Techniques & Resources	**Step Eight** Program Review, Course & Teaching Evaluation
Focus of Learning								
Factual								
Conceptual								
Procedural [Skills]								
Conditional [Applications]								
Metacognitive								
Reflective								

Also see: Wiggins, G. & McTighe, J. (2005).

Plus-Minus-Question Mark Technique – [II, VII]

Some key terms and concepts that *might* be of use . . .

- **Formative and summative assessment**
- **Backward design**
- **Constructive alignment**
- **Gap analysis**
- **Motivated reasoning**
- **Implicit bias**
- *Bus Test, Parrot Test,* and *Parking Lot Test*
- **Cognitive load**
- **Metacognition**
- *The Dance Floor* and *The Balcony*
- **Deliberate practice**
- **Novice-Expert differences**

_____

Seven Research-based Guidelines for Assessment to Improve Teaching & Learning

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

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

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

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

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

VI. **Take a scholarly approach.** *Apply what has already been learned about individual and organizational learning, change and assessment to inform, explain, and examine your plans and strategies.*

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

Bloom's Cognitive Domain Taxonomy *(Revised)*   Anderson & Krathwohl (2001)

(6) CREATE
Generate, Plan, Synthesize, Produce the New

(5) EVALUATE
Critique or Judge based on Explicit Standards/Criteria

(4) ANALYSE
Break Down, Relate Parts and Whole, Organize

(3) APPLY
Follow Procedures to Solve Problems or Carry Out Tasks

(2) UNDERSTAND
Connect New Learning to Prior Knowledge by Interpreting, Classifying, Comparing, Summarizing, etc.

(1) REMEMBER
Elaborate, Encode, and Retrieve Information from Long-term Memory

---

"Blooming" - Categorizing Questions by Bloom's Taxonomy – [II, IV, VI] Cook, E., et al. (2013)

Directions: Using the numbers 1-6 to represent the levels of Bloom's revised taxonomy (above), please identify the level of each question below.

___A. Give an example of "seasonal change"

___B. Why do the Earth's seasons change?

___C. What causes the Earth's seasons to change? (Explain how it works.)

___D. When it is winter in Syracuse, NY, USA, what season is it in Sydney, NSW, Australia?

___E. Where on Earth would you predict the greatest seasonal variation? Why?

___F. What contribution, if any, will global warming likely make to seasonal change? Explain your reasoning.

___G. What would happen to seasonal change in Syracuse, NY, if the Earth's degree of tilt on its axis
changed to:
  i. 45 degrees?
  ii. 90 degrees?
  iii. 180 degrees?
  iv. 0 degrees?

___H. If the Earth's orbit moved it significantly further away from the Sun, what difference, if any,
would you predict that increased distance would make to seasonal change? Explain your answer.

___I. If you were teaching how and why the seasons change to a 5-year-old, how would you explain it?

___J. If astronomers discovered an Earth-like planet with no seasonal variation, what would you predict
about that planet's orbit, etc.? Explain your reasoning.

Bondy's Clinical Performance (Skills) Rating Scale   Bondy, K.N. (1983)

(6) EXPERT INSTRUCTOR *
Safe – Very Proficient – Capable of assessing, demonstrating, instructing & supporting learners in levels 1-5

(5) INDEPENDENT
Safe – Very Proficient – Requires no support

(4) SUPERVISED
Safe – Proficient – Requires only occasional support and direction

(3) ASSISTED
Safe – Mostly Proficient – Requires frequent support and direction

(2) MARGINAL
Safe only when supervised – Unskilled – Requires continuous support and direction

(1) DEPENDENT
Unsafe & Unaware – Unable to demonstrate skill – Requires direct instruction and continuous support

---

* Level Six is not included in the original Bondy Scale, but is implicit in its use as a criterion-based assessment tool.

Skills Self-Assessment Exercise – [II, IV, VI]

Using the Bondy Scale above, and thinking of skills you <u>already</u> possess and your <u>current</u> levels of competence, confidence and independence in those skills: Identify at least one of your skills in which you are currently "Dependent," another skill(s) in which you are "Marginal," and so on all the way up.

Bondy Levels	*My Skills at each Bondy level*
Expert Instructor (6)	_____
Independent (5)	_____
Supervised (4)	_____
Assisted (3)	_____
Marginal (2)	_____
Dependent (1)	_____

A Detailed Assessment/Grading Rubric
Macroeconomics Essay Grading Grid – [I, IV, V]   *Rhodes, T.L. (2010)*

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.

Making Groupwork Work: A Design Checklist

o   **How does groupwork relate to the course/program's stated outcomes?**
    Are you convinced groupwork will help students achieve any/all of
    the relevant course learning outcomes? (If yes, which?)

o   **How authentic is the groupwork assignment or task?**
    Is it something that typically requires groupwork in the "real world"?
    Is the assignment/task one that can only/best be done by a group?
    (Or can well-prepared individual students do it as well or better on their own?)

o   **How challenging is the groupwork assignment/task?**
    Is the combination of challenge level of the assignment/task and time available to complete it high enough to justify groupwork?
    (Or might students view it as busywork?)

o   **How appropriate are the group structures, group size, and composition?**
    Are the size and composition of the group appropriate for the task/assignment?
    Is the group structure (e.g., strategy or technique) appropriate?

o   **Have you built in obvious 'positive interdependence'?**
    Will students understand immediately that they need each other's cooperation and best efforts to succeed in the task/assignment?
    Do the assessment and grading processes make these obvious and consequential?

o   **Have you built in explicit individual and group accountability?**
     Will students understand immediately that they each are responsible and accountable individually for making the group's work succeed?
    Do your assessment & grading processes make that explicit and consequential?

o   **How well prepared are students to carry out the groupwork?**
    Do all students already have the skills & knowledge required to succeed?
    Are the interpersonal "rules of engagement" clear and understood by students?
    If not, how and where can they get training, help and/or support?

Groupwork Feedback Form

1. **Overall, <u>how effectively</u> did your group work together on this assignment?**
   (circle the most appropriate response)

1	**2**	**3**	**4**	**5**
not at all	poorly	adequately	well	extremely well

2. **<u>How many</u> of the five group members <u>participated actively</u> most of the time?**
   (circle the appropriate number)

   0   1   2   3   4   5

3. **<u>How many of you were fully prepared</u> for the groupwork most of the time?**
   (circle the appropriate number)

   0   1   2   3   4   5

4. **Give one specific example of <u>something you learned from the group</u> that you probably wouldn't have learned on your own.**

5. **Give one specific example of <u>something the other group members learned from you</u> that they probably wouldn't have learned without you.**

6. **Suggest <u>one specific, practical change</u> the group could make that could help improve everyone's learning.**

Reference: Angelo, T.A. & Cross, K.P. (1993). *Classroom Assessment Techniques: A Handbook for College Teachers*, *2nd edition*. San Francisco: Jossey-Bass, pp. 349-351.

The GIFT – Gathering Informal Feedback on Teaching
A Mid-Semester Feedback Technique

1. Please give two or three examples of specific things your instructor does that <u>help you learn</u> in this course.

   At the end of each example, please indicate whether that specific thing is:
   (1) Very important; (2) Somewhat important; or (3) Not very important in helping you learn.

2. Please give two or three examples of specific things your instructor does that <u>hinder your learning</u> in this course.

   At the end of each example, please indicate whether that specific thing is:
   (1) Very important; (2) Somewhat important; or (3) Not very important in hindering your learning.

3. Please suggest two or three specific, practical and constructive changes your instructor could make that would help you learn more effectively in this course.

   At the end of each suggestion, please indicate whether that specific change is likely to be:
   (1) Very important; (2) Somewhat important; or (3) Not very important in improving your learning.

4. Any further comments?

_____

The Pro-Con-Question Technique   [ ]

Pros – Quickly list potential pros/benefits/advantages of *The GIFT Technique*.

Cons – Now, list potential cons/costs/disadvantages of *The GIFT.*

Questions – What remaining questions do you have about *The GIFT*?

Draft Questions for a Course/Teaching <u>Feedback</u> Form – [I, V, VI]

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

	1	2	3	4	5	NA
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)

	1	2	3	4	5	NA
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)

	1	2	3	4	5	NA
14. The instructor clearly connected the course objectives/outcomes 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/instructors: (1=extremely high, 2=high, 3=adequate, 4=low, 5=very low)

	1	2	3	4	5	NA
23. Overall, I would rate the instructor's effectiveness as a teacher as	1	2	3	4	5	NA
24. Overall, I would rate the amount I learned in this course as	1	2	3	4	5	NA
25. Overall, I would rate the value of what I learned in this course as	1	2	3	4	5	NA
26. Overall, I would rate the quality of this course as	1	2	3	4	5	NA
27. My motivation to continue learning about this material in the future is	1	2	3	4	5	NA
28. The likelihood I'd recommend this course to a good friend is	1	2	3	4	5	NA

FEEDBACK – *Some Initial Discussion Points*

WHY GIVE LEARNERS FEEDBACK?

- To IMPROVE PERFORMANCE **&** ACADEMIC SUCCESS
- To INCREASE INTEREST **&** MOTIVATION TO LEARN
- To ILLUMINATE AND UNDERMINE MISCONCEPTIONS
- To PROMOTE SELF-ASSESSMENT
- To DEVELOP INDEPENDENCE

TO USE FEEDBACK WELL, LEARNERS NEED M.O.M.

- MOTIVATION – *REASONS TO USE IT*
- OPPORTUNITIES – *FOR SAFE, GUIDED PRACTICE*
- MEANS – *KNOWLEDGE & SKILLS FOR IMPROVEMENT*

THE ORDER IN WHICH WE GIVE FEEDBACK MATTERS

CONSIDER THE FOLLOWING FIVE STEPS:

1ST - GOOD NEWS: WHAT WAS DONE *WELL*

2ND - BAD NEWS: WHAT STILL NEEDS *IMPROVEMENT*

3RD - OPTIONS: WHAT *CAN BE DONE* TO IMPROVE IT

4TH - PLANS: WHAT THE LEARNER INTENDS TO DO

5TH - COMMITMENTS: WHAT BOTH PARTIES AGREE TO DO,
    HOW, TO WHAT STANDARD, AND BY WHEN

Effective <u>assessment</u> for learning . . .

- Uses language and examples that are equally familiar to all those undergoing the assessment
- Focuses only on what learning goals/outcomes specify
- Predicts relevant future behavior accurately
- Is relevant to real world performance demands
- Elicits consistent performance from learners & teachers
- Promotes and ensures academic integrity
- Is efficient for learners and assessors
- Provides meaningful feedback (is educative)

Effective <u>feedback</u> for learning . . .

- Feeds forward: Focuses on improving future performance
- Is iterative – part of a robust, regular process
- Is consequential and intrinsically valued
- Comes from multiple, credible and trusted sources
- Focuses on outcomes &/or behaviors, <u>not</u> on the person
- Is criteria and standards referenced, not norm-referenced
- Is specific and limited to what matters most
- Provides enough and strong enough evidence
  to support judgments and decisions made
- Can be implemented, given skills and time available
- Offers some choices regarding follow up
- Encourages and involves self-assessment, as well

Seven Common Objections against 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're already doing
  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 whether and how well
  students are succeeding in learning these most important things.*

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

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

6. **They'll use the results against us.**

- *They just 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 in advance from stakeholders to use the results.*

_____

What other common objections have you heard? How do you respond?

Applications Card – [III, IV, V]   Angelo, T.A. & Cross, K.P. (1993)

Interesting or promising *IDEAS/TECHNIQUES* *from this session*	*Some possible, potential* *APPLICATIONS of those* *ideas/techniques to my work*

A FEW USEFUL REFERENCES ON TEACHING, ASSESSMENT AND LEARNING – [VI]

Adelman, C. (2015). *To Imagine a Verb: The Language and Syntax of Learning Outcomes Statements*. Occasional Paper #24. National Institute for Learning Outcomes Assessment. Downloaded from learningoutcomesassessment.org on 10/1/15.

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, 93-111.

Angelo, T.A. & Cross, K.P. (1993). *Classroom Assessment Techniques, 2nd Ed*. San Francisco: Jossey-Bass.

Bondy, K.N. (1983). Criterion-referenced definitions for rating scales in clinical evaluation. *Journal of Nursing Evaluation, 22*(9), 376-382.

Chronicle of Higher Education. (2016). *Almanac of Higher Education 2015-16*. Washington, DC: Chronicle of Higher Education.

Cook, E., Kennedy, E. & McGuire, S.Y. (2013). Effect of teaching metacognitive learning strategies on performance in general chemistry courses. *J. Chem. Educ. 90* (8), 961-967. DOI: 10.1021/ed300686h.

Dweck, C. (2000). Self-*theories: Their Role in Motivation, Personality, and Development*. Philadelphia, PA: Taylor Francis.

Dunlosky, J., et al. (2013). Improving students' learning with effective learning techniques: Promising directions from cognitive and educational psychology. *Psychological Science in the Public Interest, 14*(1), 4-58.

Ericsson, K.A., Krampe, R.T. & Tesch-Romer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, *100*(3),363-406.

Ewell, P.T. (2009). *Assessment, Accountability and Improvement: Revisiting the Tension. NILOA Occasional Paper #1*. Bloomington, IL: National Institute for Learning Outcomes Assessment.

Gazzaley, A. & Rosen, L.D. The Distracted Mind: Ancient Brains in a High-Tech World. Cambridge, MA: The MIT Press.

Hattie, J. & Yates, G. (2014). *Visible Learning and the Science of How We Learn.* New York: Routledge.

Kaplan, M., Silver, N., Lavaque-Manty, D., & Meizlish, D. (2013). *Using Reflection and Metacognition to Improve Student Learning*. Sterling, VA: Stylus.

Kruger, J. & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence leads to inflated self-assessments. *Journal of Personality and Social Psychology*, 77(6), 1121-1134.

Kuh, G., et al. (2015). *Using Evidence of Student Learning to Improve Higher Education*. San Francisco: Jossey-Bass.

Kuh, G. (2008). *High-Impact Educational Practices: What They Are, Who Has Access to Them, and Why They Matter.* Washington, DC: American Association of Colleges & Universities.

Maki, P.L. (2010*). Assessing for Learning, 2nd Edition*. Sterling, VA: Stylus.

McGuire, S. Y. (2015). *Teach Students How to Learn: Strategies You Can Incorporate into Any Course to Improve Student Metacognition, Study Skills, and Motivation.* Sterling, VA: Stylus.

Morisano, D, et al. (2010). Setting, elaborating, and reflecting on personal goals improves academic performance. *Journal of Applied Psychology, 95* (2), 255-264. DOI: 10:1037/a0018478

Oettingen, G. (2014). *Rethinking Positive Thinking: Inside the New Science of Motivation.* New York: Penguin.

Rhodes, T.L. (Ed.) (2010). *Assessing Outcomes and Improving Achievement: Tips and Tools for Using Rubrics.* Washington, DC: American Association of Colleges & Universities.

Schnabel, N. et al. (2013). Demystifying values affirmation interventions: Writing about social belonging is a key to buffering against identity threat. *Personality and Social Psychology Bulletin, 39*: 663. DOI: 10.1177/01461672213480816.

Steele, C.M. (2010). *Whistling Vivaldi: How Stereotypes Affect Us and What We Can Do*. New York: Norton.

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

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

Walvoord, B.E. (2010). *Assessment Clear and Simple, 2nd Edition*. San Francisco: Jossey-Bass.

Wehlburg, C. M. (2008). *Promoting Integrated and Transformative Assessment*. San Francisco: Jossey-Bass.

Wiggins, G. & McTighe, J. (2005). *Understanding by Design, Expanded 2nd Edition*. Mahwah, NJ: Merrill-Prentice-Hall.

Yeager, D.S., et al. (2014). Boring but important: A self-transcendent purpose for learning fosters academic self-regulation. *Journal Of Personality And Social Psychology 107*(4), 559-580.

Workshop Feedback Form – [VII]

Overall Feedback – Please circle the rating for each item which best represents your experience and evaluation of this workshop session.

1. Overall, the <u>value</u> of what I learned in this session is

5	4	3	2	1
Very High	High	Adequate	Low	Very Low

2. Overall, the <u>quality</u> of this session is

5	4	3	2	1
Very High	High	Adequate	Low	Very Low

3. Overall, I rate this presenter's <u>effectiveness</u> as

5	4	3	2	1
Very High	High	Adequate	Low	Very Low

Comments on this session

4. Which two or three specific aspects of this session were most useful/helpful?

5. Which specific aspects could have been improved?

6. What follow-up, if any, could Syracuse offer that would be useful to you?