Enhancing Motivation to Learn
Practical, Research-based Strategies

A keynote session at the Suffolk University
2017 Symposium on Innovation in Teaching and Learning
Tuesday 16 May 2017 – 9:00 to 10:30 AM

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UNC Eshelman School of Pharmacy
University of North Carolina at Chapel Hill

______________________________________

On the lines below, jot down 2 or 3 educational/professional/personal values you hold that motivate you to invest time and energy in efforts like today’s Symposium.

________________________________________________
________________________________________________
________________________________________________

What specifically do you hope to learn/gain through participating in today’s Symposium sessions? On the lines below, please list two or three specific learning goals you hope to achieve and/or questions you hope to answer through participating today.

Your Learning Goals/Burning Questions for the 2017 Symposium on T&L Innovation

________________________________________________
________________________________________________
________________________________________________
________________________________________________

A First ‘Balcony’ Question
Are there any ways in which having assessment data on your students’ learning-related values and/or goals could possibly help you and your colleagues promote motivation?
III. Assessing Interests – Instant Polling [1 & 3]
Please circle only the two or three questions below which most interest you.

1. What is motivation? Is there more than one kind?
2. Why do some students seem much more motivated than others?
3. To what extent are teachers responsible for enhancing motivation to learn?
4. What might learners do to enhance their own motivation?
5. What kinds of teaching might enhance motivation?
6. What kinds of assessment and feedback might enhance motivation?
7. What kinds of grading practices might enhance motivation to learn?
8. Write in your own question(s): ________________________________

IV. Assessing Prior Knowledge – Plus-Minus-Question Mark [1 & 3]

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

- Intrinsic and extrinsic motivation
- Self-efficacy vs. Self-esteem
- Stereotype threat
- Confirmation bias
- Academic mindset
- Volition
- *Bus Test, Parrot Test, and Parking Lot Test*
- Cognitive load
- Metacognition
- Self-regulation
- *The Dance Floor and The Balcony*

A Second ‘Balcony’ Question
Are there any ways in which having assessment data on your students’ learning-related interests and/or prior knowledge could help you and your colleagues promote authentic learning?
V. SIX DIMENSIONS OF HIGHER LEARNING OUTCOMES [ 1, 2 & 4 ]

Approximate percentage of the assessment & feedback you received during your own undergraduate degree program that focused on . . .

What percentage of assessment & feedback your future students will need during their degree programs 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%

Third ‘Balcony’ Question
VI. Bloom's Cognitive Domain Taxonomy (Revised) [1, 3 & 4] 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


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 Boston, USA what season is it in Belo Horizonte, Brazil?
___E. Where on Earth would you predict the greatest seasonal variation occurs? 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 Boston 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.
### VII. Bondy’s Clinical Performance (Skills) Rating Scale


<table>
<thead>
<tr>
<th>Bondy Levels</th>
<th>My Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert Instructor (6)</td>
<td></td>
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<tr>
<td>Independent (5)</td>
<td></td>
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<tr>
<td>Supervised (4)</td>
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<tr>
<td>Assisted (3)</td>
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<tr>
<td>Marginal (2)</td>
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<tr>
<td>Dependent (1)</td>
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</tbody>
</table>

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

**Skills Self-Assessment Exercise – [1, 3 & 4]**

Using the Bondy Scale above, and thinking of skills you already possess and your current 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.
Please note: In the text below, the terms “learner” and “learners” will be used to signify any and all of the specific intended “target audiences” – e.g., students, patients, residents, preceptors, pharmacists and/or other health professionals – for whom Significant Learning Experience Designs (SLED) have been developed.

### VIII. Sample Self- and Peer Assessment and Grading Rubric [4, 6 & 7]

**UNC Eshelman School of Pharmacy – Spring 2017**

**PACE 809.2 – Effective Teaching Strategies for Health Sciences Education – Tom Angelo**

<table>
<thead>
<tr>
<th>32-35 Points [High Pass or A]</th>
<th>□ Fully meets all the criteria for “Pass/B” listed below – and at least 3 of the 5 criteria below:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>□ Goes beyond Pass-level expectations in integrating relevant current research and practice literature</td>
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<td></td>
<td>□ Goes beyond Pass-level expectations in integrating effective strategies and techniques</td>
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<td></td>
<td>□ Demonstrates notable creativity and/or innovative thinking in content, execution and/or presentation</td>
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<td></td>
<td>□ Contributes new information/ideas/concepts that, when shared, will contribute significantly to the learning, health, well-being and/or success of the intended “target audience”</td>
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<tr>
<td></td>
<td>□ Has already been accepted for inclusion and use in a course, patient ed., continuing ed. program, etc.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>28-31 Points [Pass or B]</th>
<th>□ Presents a well-polished, highly readable document that could be shared, as is, with and benefit that “target audience(s)”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>□ Presents a well-integrated final document that contains both a text (prose) explanation and elaboration of the SLED and a detailed agenda, running sheet or storyboard – complete with timings – to serve as a guide for successful implementation of the SLED</td>
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<tr>
<td></td>
<td>□ Provides a complete, concise overview and introduction to the SLED, explaining: who the “target audience(s) is/are; what the overall purpose is; why and how it is likely to be significant and beneficial to that audience(s); where, when, and how it could be implemented; what the key design assumptions are; and, what the author’s motivations were in proposing and developing it</td>
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<td></td>
<td>□ Provides an appropriate number (+/- 3-7) of well-framed, levelled (i.e., using Bloom’s and/or Bondy’s scale) and assessable intended learning outcomes (ILOs)</td>
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<tr>
<td></td>
<td>□ Explains what will motivate the “target audience(s)” to participate and how the audience(s) will be engaged and activated – including appropriate strategies and/or techniques</td>
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<td></td>
<td>□ Provides a teaching and learning plan for presenting the SLE, including appropriate strategies and techniques – all clearly aligned with the ILOs</td>
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<td></td>
<td>□ Provides an assessment and feedback plan, including appropriate strategies and techniques – all clearly aligned with the ILOs</td>
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<td></td>
<td>□ Integrates a minimum of five research-based, demonstrably effective, appropriately referenced teaching, learning, assessment and/or feedback strategies overall – aligned with the ILOs</td>
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<td>□ Explains succinctly how each strategy and technique aligns with the relevant ILO and why it is appropriate and likely to be effective in promoting that ILO</td>
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<td></td>
<td>□ Explains succinctly what the appropriate criteria would be for SLED success/effectiveness and how the degree of success/effectiveness in an actual implementation might be determined and/or measured</td>
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<td></td>
<td>□ Includes a brief reflection on the lessons learned from the SLED exercise and from feedback on it that are likely to be relevant and useful in future coursework, experiential learning, and/or practice</td>
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<td></td>
<td>□ Provides relevant references from the literature that support all key SLED elements</td>
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<td></td>
<td>□ Cites and references correctly 95%-100% of the time, using AMA citation &amp; referencing style</td>
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<tr>
<td></td>
<td>□ Is written clearly, coherently and appropriately, with no significant errors in grammar, spelling, or usage</td>
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</tbody>
</table>

| 24-30 Points [Low Pass or C] | □ Responds to all the requirements for “Pass/B” listed above, but displays some non-critical shortcomings in quality and/or execution. Essentially, a Low Pass or C-level SLED would require at least one additional revision cycle to meet the “Pass/B” criteria. |

| 0-23 Points [Fail ] | □ Fails to respond fully to all the requirements because it is incomplete or, if complete, because some elements are of poor/unacceptable quality |

Why Give Learners Feedback?

- To improve performance & academic success
- To increase interest & motivation to learn
- To illuminate and undermine misconceptions and biases
- To promote self-assessment & self-regulation
- To develop independence as lifelong learners

To Use Feedback Well, Learners Need M.O.M.

- Motivation – Reasons to use the feedback
- Opportunities – For safe, guided, productive practice
- Means – Knowledge & skills required for self-improvement, and metacognitive skills are critical in this regard

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
X. Effective, authentic feedback for motivation and deep learning . . .

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

XI. The GIFT – Gathering Informal Feedback on Teaching

A Mid-Semester/Mid-Quarter Feedback Technique

1. Please give two or three examples of specific things your instructor does that help you learn effectively 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 suggest two or three specific, practical and constructive changes your instructor could make to 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.

3. Please suggest two or three specific, practical and constructive changes you and/or your classmates could make to help you learn more effectively.

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?
### XII. Draft Questions for a Course/Teaching Feedback Form

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

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

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

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>NA</th>
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<tr>
<td>8. The course was well-organized to help students learn</td>
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<td>9. The objectives and criteria for meeting them were made clear</td>
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<td>10. The assignments contributed to my learning</td>
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<td>11. The assessments/evaluations were clearly connected to the objectives</td>
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<td>12. The amount of work required was appropriate to the objectives</td>
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<td>13. The level of intellectual challenge was high</td>
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**Questions about the instructor**  
(1= Always, 2=Usually, 3=Sometimes, 4=Rarely, 5=Never, NA= Not Applicable)

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

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

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>NA</th>
</tr>
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<tbody>
<tr>
<td>23. Overall, I would rate the instructor’s effectiveness as a teacher as</td>
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<td>24. Overall, I would rate the amount I learned in this course as</td>
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<td>25. Overall, I would rate the value of what I learned in this course as</td>
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<td>26. Overall, I would rate the quality of this course as</td>
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<td>27. My motivation to continue learning about this material in the future is</td>
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<td>28. The likelihood I’d recommend this course to a good friend is</td>
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**Another ‘Balcony’ Question**

Are there any sections and/or items in the form above that either differ significantly from or are entirely absent from your current course and teaching feedback form?
XIII. Applications Card [5]

<table>
<thead>
<tr>
<th>Interesting or promising IDEAS/TECHNIQUES from this session</th>
<th>Some possible, potential APPLICATIONS of those ideas/techniques to my work</th>
</tr>
</thead>
</table>


XIV. Seven Levers for Deeper, More Authentic Learning

Research-based Guidelines for 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 unlearn, as needed
2. Set and maintain realistically high and personally meaningful learning goals and expectations for academic success
3. Learn how 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 personally meaningful real-world applications of the facts, concepts and skills they are learning in and through the curriculum and co-curriculum
6. Collaborate regularly and effectively with other learners, staff and teachers to achieve meaningful, shared learning goals
7. Invest as much actively engaged time and high-quality effort as possible in their academic work

Tom Angelo - thomas.a.angelo@gmail.com – 16 May 2017
XV. A Few Useful References on Teaching, Assessment and Learning


Dweck, C.C. (2012). Mindsets and human nature: Promoting change in the Middle East, the schoolyard, the racial divide, and willpower. American Psychologist 67(8), 614-622.


