

Thriving in Academe

THRIVING SUBJECT

Thriving in Academe is a joint project of NEA and the Professional and Organizational Development Network in Higher Education (www.podnetwork.org). For more information, contact the editor, Douglas Robertson (drobert@fiu.edu) at Florida International University or Mary Ellen Flannery (mflannery@nea.org) at NEA.

■ Successful Strategies for Teaching for Deep Learning

Yes, you understand the importance of deep learning, and you want your students to become deep learners, but you're not sure how. Here are some surefire strategies to accomplish your goal.

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In September of 2015, we published “Teaching for Deep Learning” in these pages [33(4), pp. 12-15], an article that focused on the overall theory of how to utilize the four Rs—Receive, Retrieve, Rate, and Reflect—to inculcate deep learning in students. Since then, we’ve been asked repeatedly if we have specific strategies to accomplish that goal.

Actually, we published a book, *Transforming Your Students into Deep Learners* (2016), and several articles on that very subject. Deep learning has come to permeate every one of our campus endeavors, including the motto of our unit, “Helping Teachers Help Students Learn Deeply,” our student learning outcomes, and even an online faculty development system we created called DEEP (Developing Excellence in Eastern’s Professors). Perhaps our greatest accomplishment was making deep learning part of our university’s strategic plan.

What follows are summary and synthesis of the most effective strategies to turn both faculty and students into deep learners. We’re sure you will be able to utilize, even adapt them, in your course objectives, syllabi, and daily classes.



Meet Charlie Sweet, Hal Blythe, and Rusty Carpenter



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Once you have explained Bloom's learning pyramid, give an example of how the skills work. For instance, if you were teaching *Intro to Poetry*, you might show Shakespeare's famous sonnet #73 ("That time of

Deep Learning Strategies

Our definition of deep learning comes from *Achieving Excellence in Teaching: A Self-Help Guide* (2014): "deep learning students synthesize (rather than memorize) ideas in order to develop a conceptual understanding—i.e., the new information takes root in their basic apparatuses for apprehending the world—and to make meaning out of material under consideration (p. 11)."

Follow these strategies, and watch your students learn deeply.

STRATEGY #1: Begin each semester by teaching (not merely mentioning) the

Revised Bloom's Taxonomy (Anderson & Krathwohl, 2001), and emphasize that its six stages will inform your teaching and students' learning. Explain that deep learning necessitates lower-order skills (i.e., remembering and understanding) and higher-order skills (i.e., applying, analyzing, evaluating, creating). Students who do not learn the basics in a field—i.e., lower-order knowledge—cannot hope to utilize the higher-order skills.

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TALES FROM REAL LIFE > DEEP LEARNING APPLICATIONS

In a recent course—ENG 101 Reading, Writing, and Rhetoric—students focused on developing critical reading, academic writing, and rhetorical practices. Students are first year, and many are first time in college. In this course, students are learning academic

writing, along with how to think about and reflect on related processes. Thus, Rusty teaches students to learn deeply about critical reading, writing, and rhetoric. Students learn strategies and approaches they can apply in this course and in other academic

experiences. To help students learn deeply, I follow a broad-based plan in each class meeting. Students receive information either through our campus Learning Management System (LMS) or through in-class mini-lectures (no longer than 15 minutes). During

that time, I cover theoretical or foundational material, often fundamental and powerful concepts students must know or learn to be successful. In the next segment of class, students learn by doing. Students employ the strategy or concept, retrieving the information

they have received and drawing from previous information. My class sessions involve a reflective exercise, given at various times, encouraging students to evaluate their process and progress.

year . . . “). Define a sonnet as well as the parts of a metaphor, and provide a definition of both the English and Italian sonnet. Now give a quiz that includes paraphrasing the poem, discussing the function of metaphors in the poem, and creating an image that looks like the one Shakespeare could have used in this poem.

Compare what you have just accomplished to a student memorizing the 14 lines. Which assignment allows students to transfer even a rudimentary awareness of the sonnet to other poetry or analytic strategies to other disciplines?

In *Transforming Your Students into Deep Learners* (2016) and other places, we offer some additional strategies for using the Revised Bloom’s Taxonomy (RBT) (Anderson & Krathwohl, 2001), including:

1. Iterate: use the RBT language throughout the semester, not just at the end. Demand that your students use it during classroom discussion or in five-minute reflection papers.
2. Define: explain what the RBT means in your discipline.
3. Create many exercises using RBT. On daily quizzes, you might use your last question to ask your students to classify a previous quiz as requiring they use one of the six RBT levels.
4. Focus, where possible, on higher-order RBT skills. Essay questions afford such opportunities at any level.

STRATEGY #2: Teach your students metacognitive skills. Metacognition often is defined as reflection or thinking about thinking, but what distinguishes it from mere musing is intention. Metacogs ask themselves questions, probe the material they take in, and take responsibility not just for what they learn but how they learn it.

“STUDENTS WHO DO NOT LEARN THE BASICS IN A FIELD—I.E., ITS **LOWER-ORDER KNOWLEDGE**—CANNOT HOPE TO UTILIZE THE HIGHER-ORDER SKILLS.”

The following tactics are effective for developing metacognition in students:

- Explain how to “Nosich” their reading and notes to achieve focus: Nosich (2009) explains that all fields have fundamental and powerful concepts “that can be used to explain or think out a huge body of questions, problems, information, and situations” (p. 105).
- Teach students to mind map: Have them circle the “fundamental and powerful concepts” (FPC) in a text or lecture notes. Then have them create radii from each FPC to supporting concepts or examples.

- Use five-minute reflections for your students at the beginning of class (in place of a quiz), in the middle after complex mini-lectures/discussions, and at the end (e.g., I had trouble with concept X...).
- Make certain your student learning outcomes/objectives specify the importance of metacognition.

STRATEGY #3: Emphasize critical thinking.

One thing that most educators agree on is the importance of students becoming critical thinkers. Bok (2006) asserts that critical thinking is “The ability to think critically—to ask pertinent questions, recognize and define problems, identify the arguments on all sides of an issue, search for and use relevant data, and arrive in the end at carefully reasoned judgments” (p. 109). Because it demands higher-order RBT skills, critical thinking promotes deep learning.

Perhaps the best overall approach comes from Paul and Elder’s *Analytic Thinking* (2007) and *Guide to Critical Thinking* (2009). Unfortunately, their 25 Intellectual Standards, Traits, and Elements of Thought are unnecessarily complex, so we have “Nosiched” them into six standards we call PASSOR:

- **Perspective.** Identify all the counter claims on the issue. Prepare to argue both sides by making a list of pros and cons.
- **Accuracy.** Check out the evidence you have collected. Newspapers use the two-source standard to verify a fact.

■ BEST PRACTICES > TWO TERRIFIC STRATEGIES

Remember those happy days when one way to cement ideas into your ever-growing reserve of knowledge was the **acronym**? (Think **HOMES** to rattle off the Great Lakes!) Well, we’ve learned that your old buddy can come in handy when helping students learn deeply. One of the most effective strategies we have come across is a technique

we label **S3P**. After introducing a new concept or idea, have students write out four sentences:

- State the new concept.
- Paraphrase the concept.
- Provide an example of the concept.
- Prepare a similar metaphor that embodies the concept.

This strategy will help your students get the concept clear in their mind, allow them to communicate the concept to others, and embed the concept deeply. And while we’re on an acronymic roll, we’ll mention a strategy we’ve used in every class over the years to help our students condition themselves to learn deeply. Simply practice the **ARTS**.



- Attend every class.
- Read every assignment carefully.
- Take notes *by hand*.
- Study later in the day, making an effort to reorganize and prioritize items in your notes.

- **Sufficiency.** Make certain you have collected sufficient information to analyze. One fact is usually not enough.
- **Specificity.** Start with the four Ws of Who, What, Where, and When. Examine the credentials of sources. Check to see you have the most up-to-date info.
- **Objectivity.** Take your and your sources' biases into account. Examine the entire spectrum of the claim, not just the "for" or the "against."
- **Relevance.** Make certain the evidence aligns with the claim. Be willing to cut irrelevant information.

To use PASSOR as a lens to analyze an argument is to think deeply. The strength of PASSOR is its versatility: it can be applied to any argument in any field.

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ISSUES TO CONSIDER

PULLING IT OFF

At this point, we know what you're thinking: how do I pull this off given the practical realities of today's students?

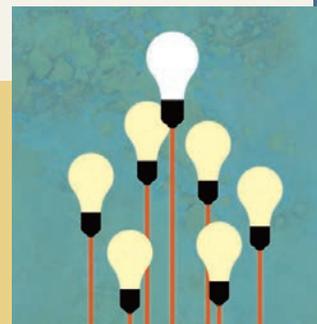
An essential step in readying your students to learn deeply is to provide the proper environment. An important question you must ask is what exactly you wish your students to accomplish through your teaching since that goal will dictate your preparation of the learning space. Consider how classroom furniture configurations can enhance deep learning. (See the box below for what research tells us about the effects of various classroom configurations.)

As opposed to the traditional classroom arrangement of rows and columns of chairs that promote learner passivity, a thoughtful space design reinforces teaching that allows students to learn deeply as engaged participants.

Still in a suspicious mood, you might paraphrase the gadfly poet Dorothy Parker's comment: You can lead students to the classroom, but you can't make them learn deeply. Indeed, we've become increasingly aware that if students aren't motivated to learn, even the best practices will fail or produce minimal returns.

In short, your students must **want** to learn; they must change from being extrinsically motivated by grades and recognition to being intrinsically motivated. To accomplish this transformation:

- Students **must believe** they can learn.
- Students **must believe that you can help them**. As McGuire (2015) claims, "When students become aware that their instructors have provided criticism in order to help them improve rather than as a judgment of their ostensibly fixed abilities, they are likelier to use that criticism constructively" (p. 64).



- You **must use proven tactics** to motivate your students.
- You **must possess the proper attitudes** to foster deep learning, such as passion and rapport (see our *Achieving Excellence in Teaching* for a fuller explanation). Lubin (2003), for instance, stresses, "a most potent way to encourage enthusiasm and interest in subjects is to demonstrate your own enthusiasm and interest in the subject" (p. 25), and Walsh and Maffei (1996) believe that instructor-student rapport increases motivation and performance.
- You **must provide a clear explanation** of the rationale for your approach to the material.

With these suggestions, you should be able to "pull off" the goal of fostering deep learning in your students.

Space Design Enhancement of Deep Learning

Circular seating	Promotes student class participation through large-group discussion
Cluster seating (groups of three-five)	Promotes interaction through problem-based activities
Visual Spaces	Encourages students to make learning visible while sharing with others.

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