

# Essays on Teaching Excellence

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## Integrating Learning Strategies into Teaching

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*"Not another thing you want me to add to my teaching! I am already trying to stuff ten pounds of content into a five pound class period."*

This is often the response I receive when I talk with faculty about the need to teach students the learning strategies that can best help them learn the skills and content of their courses. I have to say that I understand the concern—education is known to have its "fads". However, helping students develop the learning strategies that best fit a specific content will result in more effective and efficient teaching and learning. As Nobel laureate Herbert Simon (1996) wisely stated, the meaning of "knowing" has shifted from being able to remember and repeat information to being able to find and use it. The goal of education is better conceived as helping students develop the intellectual tools and learning strategies needed to acquire the knowledge necessary to think productively.

Yet a great deal of our time and energy goes into the preparation of class and course content. Since the goal of any class is for students to learn the material, factors which impede that learning serve only to diminish the efforts of the instructor. The degree to which students learn the course content and/or skills depends a great deal on their repertoire of learning behaviors. If our students do not understand the learning process, they are not going to learn very much in our courses no matter what we do (Gardiner, 1996).

**Importance of Learning Strategies** Many students behave like what my college mentor fondly referred to as "one trick ponies." They have a strategy or two (trying to memorize everything being the most common strategy); and, if that strategy does not work or is inefficient, they have nothing else in their repertoire. If instructors teach students learning strategies that best fit the structure of the knowledge of course content, they are creating a win-win situation. Their preparation and delivery efforts are better rewarded because more students are able to learn the course material, which is the goal of teaching. The students win because their learning becomes more efficient and effective, often resulting in greater academic success and a larger repertoire of learning strategies to use elsewhere.

**Seven Questions for Ourselves** The process of integrating learning strategies into content teaching begins with deciding what kinds of thinking, learning, and studying students need to do to be successful in a particular course. This process takes place before the course begins and can be accomplished by answering the seven questions listed below. Each question is designed to assist instructors in determining what strategies are needed for students to learn the course content. Once an instructor answers these important questions, it is a relative easy task to pick an appropriate strategy, such as a note taking method or using summary writing as a comprehension tool, and to show students how to use it. Academic support persons are also available and often able to help with this process.

So, as we prepare for our classes and give thought to enhancing student learning, asking and answering the following questions can help us..

*Question #1 - Prior Knowledge (three parts):* What background information do my students need to be prepared for my course? How can I best assess their background knowledge? And what resources are available to help students that need background enhancement? The process begins with these questions because the contemporary view of learning is that learners construct new knowledge and understanding based on what they already know and believe (Cobb, 1994).

By letting students know what prior knowledge you are assuming they already have and by suggesting ways to review or fill in missing knowledge, you are increasing the likelihood for learning. In addition, by assessing students' prior knowledge with a background questionnaire, a pre-test, or other method (Angelo & Cross, 1993), you are taking a learner centered approach to your teaching (National Research Council, 1999). If you know what they know, you are much better able to connect the course content to their prior knowledge.

*Question #2 - Levels of Thinking:* What cognitive level do my students need to operate at in order to be successful in my course? This question invites the instructor to think about the levels of thinking students need to learn the course material. If much of the course is just factual learning, then students will probably need little assistance. If, however, students will be required to apply, evaluate, or synthesize information, then teaching them ways to do this may be vital to their learning success.

*Question #3 - Thinking Skills:* What types of thinking skills and strategies do my students need to use to be successful in my course? If an instructor expects students to be able to summarize, use mind maps, or use a specific problem solving system, these may all need to be taught. An instructor needs to determine what strategies students will need and whether or not most students will have these strategies when they enroll in the course. If these strategies are important to the students' ability to learn the course content, then showing them how to use these strategies is a needed step toward reaching the goal of student learning.

*Question #4 - Research Skills:* What information gathering skills do my students need to be successful in my course? It is not safe to assume all students know how to use search engines or databases. If you are going to assume that all students have these skills, you need to indicate that and give resources for students to review or learn these skills if they do not have them. Otherwise, include information-gathering skills as part of what you will show the students how to do when you make assignments that require these skills.

*Question #5 - Repair Strategies:* What types of fix-up strategies do

my students need to be successful in my course? Fix-up strategies are learning behaviors that help students to know what to do when they do not understand something. Students' ability to know that they do not understand is a metacognitive skill, meaning that they are aware of the learning strategies available to them and have the ability to monitor the effectiveness of each strategy (Brown, 1987). These metacognitive skills help students determine when to switch from one strategy to another or even when to stop and ask for help. If the course content is difficult and presents many situations where students may get lost or not understand, it may be necessary to teach them the steps to take, the questions to ask, and the resources to use that can lead to understanding. This situation is common in math, the sciences, and other numbers-based courses such as economics and statistics,

As experts in our content areas we rarely need fix-up strategies. It is easy to forget that our students are novices and may not know what to do when they get lost or fail to understand.

*Question #6 - Study Skills:* What study skills do my students need to be successful in my course? Will they need to organize large amounts of information, summarize information, use rote memory techniques, or prepare for essay exams? Assisting students in developing study strategies which fit the type of testing (or other forms of assessment) used in the course and which reflect the amount and nature of the information that must be learned will go a long way to promoting academic success.

*Question #7 - Learning Strategies:* What types of learning strategies do my students need? Will they need to collaborate with others in small or large groups? Will students need to listen, maintain their attention for long periods of time, or take extensive notes? Students often need to be shown how to learn in class, how to work effectively in a group, how to engage in a discussion or debate, how to take notes, or even how to ask questions. Do not simply assume students know how to learn in your class.

**Conclusion** Students will benefit from our assistance in helping them expand their learning strategies. As we do so, it is important to remember that their failure to engage actively in the learning process

might be attributed to their not knowing how to learn or feeling uncomfortable in the learning environment. Consequently, it might not have to do with their being lazy or unprepared.

Having thought about these seven questions, you will find yourself much better prepared to focus students on the important strategies that can really aid learning.

## **References**

Angelo, T., & Cross, K.P. (1993). *Classroom assessment techniques*. San Francisco: Jossey-Bass.

Brown, A. L. (1987). Metacognition, executive control, self-regulation, and other more mysterious mechanisms. In F. E. Weinert & R. H. Kluwe (Eds.), *Metacognition, motivation, and understanding* (pp. 65-116). Hillsdale, NJ: Lawrence Erlbaum Associates.

Cobb, P. (1994) *Theories of mathematical learning and constructivism: A personal view*. Paper presented at the Symposium on Trends and Perspectives in Mathematics Education, Institute for Mathematics, University of Klagenfurt, Austria.

Gardiner, L. (1994). Redesigning higher education: Producing dramatic gains in student learning. *ASHE- ERIC Higher Education Report Series 94-7*, (Volume 23-7), San Francisco: Jossey-Bass.

National Research Council. (1999). In Bransford, J., A. Brown, R. Cocking, (Eds.), *How people learn: Brain, mind, experience and school* {p. 121}. Washington: National Academy Press.

Simon, H.A. (1996) *Observations on the sciences of science learning*. Paper prepared for the Committee on Developments in the Science of Learning for the Sciences of Science Learning: An Interdisciplinary Discussion. Department of Psychology, Carnegie Mellon University