The ToolBox

Organizing Teaching to Promote Learning

In higher education, there are several mantras that are often invoked as an indication of our intent to challenge our students to lofty levels of thought, analysis, and creativity. It is not unusual to hear faculty conversations peppered with terms such as "critical thinking," "higher order learning," and the ever popular references to Bloom's taxonomy. These claims, as well intentioned as they may be, are worthy of additional investigation and assessment. Some reflective questions that each of us can ask ourselves in regard to our classroom practices include:

- When thinking about the desired outcomes for student learning, what and how much am I really expecting from my students?
- Does the course content require students to think critically and apply the knowledge and information that they are acquiring?
- Does my lesson design provide opportunities for students to wrestle with newly learned information, process content, engage in problem solving, and communicate with one another on topical issues?
- Are there tools that I can provide to my students that will assist their comprehension and understanding of course concepts?

In this edition of *The ToolBox*, we will examine these questions from the perspective of some easy-to-use strategies that can be applied to the content of any discipline. The goal for these techniques is to provide a template that students can use to organize their thinking about the topics presented over the journey of a semester.

The Bookshelf Strategy

To assure that class presentations give students an opportunity to process their new learning and engage in critical thinking, the "Bookshelf Strategy" provides a strategy for thinking about lesson design (Smith, Sheppard, Johnson, & Johnson, 2005):

- As a starting point, visualize a collection of assorted texts arranged on a bookshelf.
- The first volume that we select, and the beginning of our classroom teaching session, is an "Advance Organizer." This activity (e.g., an outline of key topics, partial copy of PowerPoint slides, introductory video clip) sets the tone for the class and introduces the topics of the day.
- The next volume on the bookshelf is a 10-12 minute lecture, video, or demonstration focused on the learning outcomes for the day.
- Volume 3 is a 3-5 minute learning activity specifically designed to assist students in processing this information through guided discussion in small groups or with a learning partner.
- Subsequent volumes on the bookshelf are interchanged periods of lecture/video/demonstration and guided discussion.
- The final phase of the class is a "Cohesion Builder" (e.g., application activity, simulation, problem-based learning activity) designed to help students bring together the key points of the day's class and summarize their newly acquired knowledge, skills, and dispositions.

Smith, K. A., Sheppard, S. D., Johnson, D. W., & Johnson, R. T. (2005). Pedagogies of engagement: Classroom-based practices, *Journal of Engineering Education*, 94(1), 87-101.

# Easy Ways to Help Students Organize Their Learning

Graphic Organizers

Can a picture really be worth 1000 words? Are there learners in your classrooms who connect better with visual symbols than verbal descriptions? Yes and Yes! A strategy for helping students to remember important concepts and organize their thinking about varied interrelated concepts is to create graphic organizers (or provide an opportunity for them to create an organizer in the company of their classmates).

Below you will find samples of graphic organizers that can be used to illustrate and organize student thinking and understanding:
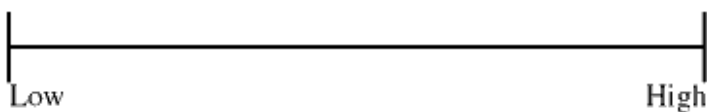
The connection between the steps in a process:
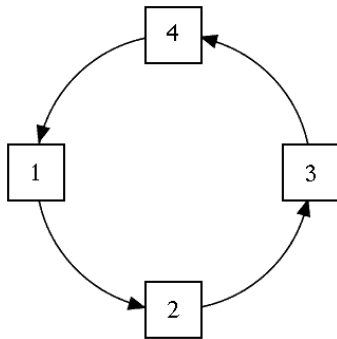
The interconnection between a series of events, principles, or concepts
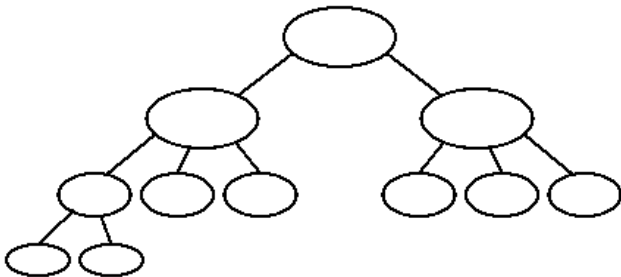
A continuum of values, ideas, or beliefs

Make these tools available to your students as a means for "connecting the dots." To see the variety of graphic organizers that can be created, do a quick Google search for "graphic organizers."

Advance Organizers

Advance organizers are a collection of strategies that set the stage for instruction by advising learners of the topics, content, and focus of a class presentation. Based upon the early work of David Ausabel in the 1960s, a body of research has revealed that student learning increases dramatically when they are provided with a scaffold or framework that defines the nature of the learning experience. Advance organizers might include:

- A provocative question
- A jointly developed "K-W-L" chart (i.e., What we know [K], What we want to learn [W], What we have learned [L])
- A video clip, news article, picture, song, or quotation
- Any inviting, thought/energy provoking introduction that hooks the learner and encourages them to want to know more about the topic of discussion.

Try one of these strategies today in your class!

Ausabel, D.P. (1963). *The psychology of meaningful learning*. New York: Grune & Stratton.

Acrostics

We often require students to memorize and recall various (seemingly important) bodies of information. Frequently, lists of information are remembered for the purpose of test-taking and then forgotten. If these bits of information are important enough to learn/memorize in the first place, then they should be significant enough to recall and use at a later date in other contexts and circumstances.

An acrostic is poem or series of lines in which certain letters, usually the first in each line, form a name, motto, or message when read in sequence (e.g., Great Lakes = HOMES, the colors in a rainbow = ROY G. BIV). These acrostics helped you retain this information. Provide your students with the opportunity to collaboratively create their own acrostics as organizational and learning aids.