

## Through the Shadow of the Valley How to Retain Attention in the Classroom

by Larry M. Robbins

A syllogism: Human attention tends to wander; students are human; therefore, students' attention will wander. Here are some strategies to prevent wandering and to increase student interest.

Most teachers are well aware when student attention wanders, and they apply various strategies to maintain interest. Careful planning of each section or time "module" of a class will focus students on the task at hand. One of the primary causes of wandering attention and even boredom is density of material—too many major topics, too many complex PowerPoint slides and too many examples result in information overload. Students then tend to disengage; and even after they finish the crossword puzzle, they don't tune back in.

For teachers and students, poor preparation creates a bad connection in the learning process. Students who have finished the assigned readings and homework will often have something to say. Those who aren't prepared can certainly listen attentively (we hope), but they will have much more information to process than if they have read primary or supporting material in advance.

In all fairness, and recognizing the human condition, the time of day can also contribute to wandering attention. Most teachers whose classes begin after lunch cannot help but notice the number of glazed eyes or count the heads on desks. Metabolism dominates here, but students should still make an effort to stay engaged, and teachers should employ a variety of strategies to create and maintain a high level of interest. Early classes can also be soporific. (The definition of "early" can range from nine a.m. to noon or beyond.) However, students who sign up for early classes usually know what they are getting into. Whatever the time, after the initial invigoration of starting a new class day, interest wanes, especially if the only thing students have to do is listen.

Research on cognition and retention has shown that any class period or "learning episode" has periods of "prime-time" and "down-time" (Sousa, *How the Brain Learns*, 1995, Bligh, *What's the Use of Lectures?*, 2000). Prime-time, when students are at their sharpest (usually the first ten to fifteen minutes of a class), is appropriate for introducing new information or coming to closure on old material.

According to Sousa, "practice is appropriate for the down-time segment"—the valley that occurs after the introduction of new material. Practice can include analytical or evaluative questions such as: "How do the medical malpractice laws affect health care?" "Will the Governor's new proposals improve health care?" Or practice can mean simulations, case analyses, class presentations, etc. Questions and answers are also appropriate for the "down-time" segment of a class because they enable students to demonstrate their knowledge and their ability to apply knowledge to a new situation.

Not all questions need to be answered immediately. A rhetorical question can stimulate thinking by causing students to formulate an answer and focusing them on a particular topic. However, teachers who ask too many rhetorical questions can create barriers to learning because students are prevented from answering. Turning a rhetorical question into an *actu-*

*al* question is an effective way to test comprehension or to encourage interactive discussion.

Effective questions of any variety encourage collaboration in the learning process. Confusing questions can, of course, demotivate. When asked the following double question—"What led to the stock market crash, and how can we prevent this from happening again?"—students could respond, "which question do you want us to answer?"

Taken one at a time, each of these questions can stimulate the critical thinking skills of analysis, synthesis and evaluation.

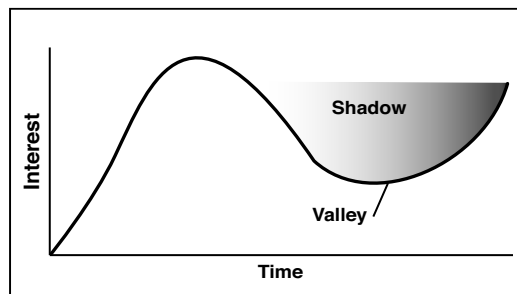
Another way of engaging students is to facilitate a discussion that enables all students to participate. Discussion may not be the best strategy in a Statistics course, but in other courses a discussion on a general topic will call on students to demonstrate knowledge, while enabling them to achieve a sense of "personal discovery." Discussions might be stimulated by a question: "What should the priorities of the new president be?" or a statement, "The war in . . . (fill in the blank) is just and moral." A danger of discussions, however, is that they often become lectures in disguise if teachers dominate by implying their own bias or giving too much information.

Discussions can also take the form of a debate. When students prepare to debate, they sharpen their own critical abilities and stimulate critical response from those who are only observers. Again, not all courses are appropriate for debate, but in the realm of academic discourse much is and should be debatable. Bringing the students into "the debate" enriches learning by causing them to test and defend their assertions.

Student activity in general can make the journey through the shadow of the valley proceed more directly. Strategies such as dyads, small group discussion in class or short and well-prepared reports by students will create a context for learning that is student-centered. The teacher still retains the responsibility of determining the general learning outcome and of preventing student activities from being a waste of time, but strategies other than or in addition to lecturing can promote learning.

If a teacher determines that a "standard lecture" is still the best strategy, student interest can be stimulated in at least three ways. First, change your voice—emphasize verbs when you want to *emphasize* action; emphasize nouns when you want to emphasize the *result* of an action. Second, give a concrete example that everyone can understand—"let me explain what a 'dent-puller' is." Third, and most important, provide internal summaries. When you distill a discussion—"so we have covered the three main methods of controlling stage fright: preparation, eye contact, breathing"—students will pay close attention, often writing down the summary.

Both teaching and learning require strategies. For the teacher, building-in the concept of "practice" (encouraging students to verbalize and support their ideas) is a strategy for maintaining interest and attention. Students who develop the skills of personal discovery are more likely to retain their knowledge because they will gain a sense of intellectual ownership. When the process of learning becomes collaborative, students and teachers proceed together on a well-defined course through the "shadow of the valley."



Dr. Larry M. Robbins is the Director of the SAS Center for Teaching and Learning.

This essay continues the series that was revived earlier this semester and had initially begun in the fall of 1994 as the joint creation of the College of Arts and Sciences and the Lindback Society for Distinguished Teaching.

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