

## **Study Centers on Student Brains**

*By Jackie Jadrnak Journal Staff Writer*

We've all been there: A teacher drones at the front of the room while students nod off at their desks.

There are plenty of ways learning can be interesting, though, and neuroscience is lending a hand by detecting how new information can make a durable impression on a student's brain.

Michael Weisend, a research scientist at the Mind Research Network in Albuquerque, is outlining some of those findings to New Mexico educators in a three-part series of talks.

"If (teachers) can incorporate a laundry list of things in the classroom, it's likely education outcomes will improve," said Weisand, who has a National Institutes of Health grant to study the neuropsychology of learning.

Some items on that laundry list may look familiar to teachers, but they come with brain imaging studies to back them up.

"The field is changing pretty rapidly," said Mary Jo Daniel, a science specialist with the state Public Education Department. Teachers should be encouraged to become aware of that research and find ways to apply it in the classroom, she said.

So what's on Weisand's list?

One concept is "overshadowing," he said. Simply put, that means if you're surrounded by many stimuli, you choose to pay attention to what is most relevant or most important for you to attain your goal.

Suppose, he said, a student has a cell phone in her pocket, a close friend on either side, and a teacher explaining square roots. Where is she going to put her energy?

Probably her friends or her cell phone, unless the teacher finds a way to make square roots important to her, he said.

Similar thinking can apply to the "dreaded word problem" in math, Weisend said. A student might yawn at a question of how soon two hypothetical characters would meet if they started walking from points A and B. More interest might come from figuring out how quickly a student could meet his dad carrying a forgotten lunch if they left school and home at the same time.

Other findings? Rewards for performance are more effective if their size and frequency are unpredictable, Weisend said.

Facts can be crammed into working memory for a test, but they're soon forgotten if they aren't used very often in a person's life. Quick feedback on a person's performance helps mold behavior. And positive reinforcement is more effective than negative.

The series of talks result from a collaboration between the Mind Research Network and MESA (a group that encourages Mathematics, Engineering and Science Achievement in the schools).

"It benefits educators to get these opportunities to learn more about cutting-edge research," Daniel said.

Last Lecture in Series

"Neuroscience Theory in Education," the final in Michael Weisend's three-lecture series, will be from 5:30-8:30 p.m. April 17 at The Mind Research Network, 1101 Yale NE, on UNM's North Campus. There is no cost, but call 366-2510 or e-mail [jcervantes@nmmesa.org](mailto:jcervantes@nmmesa.org) to sign up.