# Want to ace an exam? Tell a friend what you learned, researcher suggests

January 17 2017, by Terry Goodrich

Re-telling information shortly after receiving it enhances memory of the details and theme, the study found.

Students who are given information and tell someone about it shortly afterward recall the details better and longer—a strategy which could be a plus come test time, says a Baylor University researcher.

"This has to be actively replaying or re-generating the information—for example, by telling someone the particulars, as opposed to just simply re-reading the textbook or class notes and studying it again later," said Baylor psychologist Melanie Sekeres, Ph.D. She is lead author of the study, published in the journal *Learning & Memory*.

"A week later, the memory was just as good," she said. "Telling someone else about what you've learned is a really effective way for students to study instead of just re-reading the textbook or class notes."

In the study, students were shown 24-second clips from 40 films over a period of about half an hour. The study focused on their retention of both the general plot of the films as well as such details as sounds, colors, gestures, background details and other peripheral information that allow a person to re-experience an event in rich and vivid detail, said Sekeres, assistant professor of psychology and neuroscience in Baylor's College of Arts & Sciences.

Researchers also found that giving students a brief visual cue from the movie later—even a simple glimpse of the title and a sliver of a screenshot taken from the film—seemed to jog the memory.

"With a cue, suddenly, a lot of those details will come back," Sekeres said. "We don't permanently forget them, which would indicate lack of storage—we just can't immediately access them. And that's good. That means our memories aren't as bad as we think."

Much research on memory examines how brain damage or aging affects recall, but "we wanted to look at the normal course of forgetting in

healthy brains—and if anyone should have a good memory, it's healthy young adults," Sekeres said. "While the strategy of re-telling information—known as 'the testing effect'—has been shown to be a really effective study technique time and again, this study is novel in looking at how our memories change over time for a specialized group."

Researchers studied three groups of undergraduate students, each with 20 participants, with an average age of 21. After viewing the film clips, researchers asked what they remembered about the films after delays ranging from several minutes after the showings up to seven days later.

"We chose mostly foreign films and somewhat obscure clips that we thought most undergraduates would not have seen," Sekeres said. "The clips all contained brief scenes of normal, everyday events that mimicked the kind of events you might experience in a day, such as a family having dinner or kids playing at a park."

Researchers found that:

- Not surprisingly, all participants recalled less about both the details and the substance of the films over a longer gap of time. But they forgot the perceptual or 'peripheral' details from the films more quickly, and to a greater degree, than the films' central themes.
- Significantly, the second group of students, who were given cues before being asked to recall the films, did better at retrieving the faded memory of the peripheral details. However, their retention of central information was not much different from the first group, who did not have such cues.
- Most noteworthy was that the third group—who retrieved the memory of the films by telling someone about them soon after viewing—remembered both central and peripheral information better over time.

The "replaying" method takes considerable effort, but it can be worth it, Sekeres said.

"We tell students to test yourself, force yourself to tell someone about the lecture. Even by writing out some questions for yourself about the information, then later answering them yourself, you are more likely to remember the information. Unfortunately, simply re-reading or passively listening to a recording of your lecture in the hopes of remembering the information isn't a great study strategy by comparison."

Sekeres noted that forgetting some details is to be expected—and that's not necessarily a bad thing.

"The brain is adaptive," Sekeres said. "We remember the important things, for the most part, and we forget the unimportant details. You don't want your brain to search through tons of useless information."

But in certain situations—such as giving eyewitness testimony or taking a test—details and context can be vital for more accurate memory, she said. And on a personal level, details make for a richer store of such memories as treasured family times.

While researchers focused on how cuing and active retrieval of memories affected students, those actions also could be helpful to others in reactivating memories, Sekeres said.

"If there's something you really want to remember, test yourself—like saying names and recalling, for example, that Jim had the green cap and Susan wore the red dress and brought a casserole," she said.

Sekeres said further research would be valuable to determine how the effects of cuing and active retrieval hold up over a period of months or years.

Her research team currently is using functional magnetic resonance imaging (fMRI) to look into how brain activity changes over time as memories age and lose those peripheral details.

"Identifying changes in patterns of brain activity that accompany normal forgetting in the healthy brain will help us to understand differences between normal and abnormal memory processing," Sekeres said. "As researchers, we have to first understand how something normally works before we can try to fix it."

Provided by Baylor University