Most psychology departments offer a course in the psychology of learning and memory. Most students who take it are either majoring or minoring in psychology or working on a degree in education. Yet all students and their instructors can benefit from some of the insights offered in the course. The results of memory research in particular suggest some ways to enhance classroom presentation and student retention of both conceptual relations and factual information.

In my learning and memory course, in addition to explaining the research behind theories of memory, I try to emphasize its relevance to the students by offering study tips that are directly supported by research in the field. Many of these study tips are not yet common knowledge among students in general, or their professors. Although studying memory research is beneficial, I think it is hardly necessary to require students from all disciplines to take such a course to derive its practical benefits. I discuss below some of those benefits, and offer a very brief description of the underlying research from some classic studies in the field.

A key to improving memory for any material is increasing the quantity or quality of retrieval cues for it. A retrieval cue is anything in the present that reminds you of something in the past. For example, to remind you of a particular actor, I might give you the following prompts until you come up with the answer: he is also a popular singer; he was once the "Fresh Prince of Bel Air"; he starred in the films Independence Day and Men in Black. Each of these clues is a retrieval cue (for the name Will Smith). Some of the cues are better than others, but in general, the more cues I give the more likely you are to retrieve the memory. As effective educators, we must not only provide many memorable retrieval cues to our students, but teach them to produce their own as well.

**Elaborative Rehearsal**

A classic study in cognitive psychology is the Craik and Tulving (1975) study on "depth of processing." This ten-experiment study demonstrated that human memory improves when the learner considers the meaning of information rather than how it sounds or what it’s made of.

From that finding emerged the key role of "elaborative rehearsal" in memory improvement. Elaborative rehearsal involves relating new information to something you already know. In simple algebra, for example, \(2a + b = c\) is not as easy to understand as \(2\) nickels + \(1\) dime = \(c\). All of us benefit from experience, and we use that benefit whenever we realize that new experiences are often nothing more than new arrangements of information that we already possess.

Mnemonic devices, such as an **acronym**, are also considered examples of elaborative rehearsal. Students appreciate that "Roy G. Biv" is a fine way to remember the colors of a rainbow. They
are less likely to understand that a definition written in their own words is far more likely to be recalled than one fed to them by a teacher. Yet a similar process underlies both examples.

In both cases, deeper processing of the information leads to its incorporation into your existing knowledge base. Once this occurs, you are more likely to retain the information for the long term. Elaborative processing increases the number of retrieval cues for any given memory. And since we often don't know when or in what context we will need a given memory, having multiple and diverse retrieval cues is always better than having just one.

We professors should involve our students in elaborative rehearsal as much as possible. A good way to do this is by presenting everyday examples in which our topic is made relevant to their contemporary experience. But an even better way to do this is by having students generate their own examples. Active participation in class is effective because it usually requires elaborative rehearsal.

Questions

1. Why did the author write this article?

2. In your own words, what are retrieval cues? Why are they helpful in recalling memories?

3. How does putting something in your own words help you remember it better? Put this answer in, um, your own words 😊.

4. Consider this quote from the reading -- “All of us benefit from experience, and we use that benefit whenever we realize that new experiences are often nothing more than new arrangements of information that we already possess.” What does that mean in your own words? Give an example where that is true.

5. Give at least one specific example of how you can use what you learned today in your academic career, starting right now.