Some of the most popular strategies used by students, including highlighting and rereading, don’t show much promise for improving learning or grades, according to new research.

“Schools and parents spend a great deal of money on technology and programs to improve student achievement, even though evidence often isn’t available to firmly establish that they work,” said John Dunlosky, Ph.D., a researcher at Kent State University, who led a team of psychological scientists in a review of the 10 most common learning techniques used by students.

“We wanted to take a comprehensive look at promising strategies now, in order to direct teachers, students and parents to the strategies that are effective, yet underused.”

While the 10 techniques vary widely in effectiveness, two strategies — practice testing and distributed practice — made the grade, receiving the highest overall utility rating, according to the researchers.

Practice testing involves using flash cards or answering questions at the end of a chapter.

Distributed practice involves spreading out studying over time and having students quiz themselves on material before a big test.

According to the researchers, both techniques have been shown to boost students’ performance across many different kinds of tests, and their effectiveness has been repeatedly demonstrated for students of all ages.

In contrast, five of the techniques received a low rating from the researchers. Interestingly, these techniques are some of the most common learning strategies used by students. Such ineffective strategies include: summarization, highlighting and underlining, and rereading.

“I was shocked that some strategies that students use a lot — such as rereading and highlighting — seem to provide minimal benefits to their learning and performance,” Dunlosky said. “By just replacing rereading with delayed retrieval practice, students would benefit.”

So why don’t students and teachers use the strategies that have been shown to be the most effective and inexpensive?

Dunlosky and his colleagues speculate that the answer may have to do with how future teachers are taught.

“These strategies are largely overlooked in the educational psychology textbooks that beginning teachers read, so they don’t get a good introduction to them or how to use them while teaching,” Dunlosky said.

To help address this, the researchers organized their report in modules, so that teachers can decide which
technique could potentially benefit their students.

“The learning techniques described in this monograph will not be a panacea for improving achievement for all students, and perhaps, obviously, they will benefit only students who are motivated and capable of using them,” Dunlosky noted. “Nevertheless, when used properly, we suspect that they will produce meaningful gains in performance in the classroom, on achievement tests, and on many tasks encountered across the life span.”

The report was published in Psychological Science in the Public Interest.  

Source: Association for Psychological Science

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