

# Usage of Retrieval Practice As A Learning Strategy Among Pre-Medical Students

## ABSTRACT

### PURPOSE

Retrieval practice has been suggested as an effective learning strategy. However, retrieval practice is not a naturally occurring nor the most popular learning habit. The purpose of the current study is to assess students' adoption of retrieval practice in their learning.

### METHODS

A week before the orientation day, incoming students enrolled in the pre-clinical program were advised to watch a set of online videos that explained retrieval practice as an effective learning strategy and introduced techniques for retrieval practice. After their second set of tests in three courses, a survey regarding their exam scores, knowledge in the retrieval practice-based learning, and their actual usage of retrieval practice techniques was conducted.

### RESULTS

Forty-three out of 52 students participated in the survey. Students responded to the majority of the questionnaire, but only 29 students revealed their test scores. The majority (90%) responded that they practice recall of materials after reading a chapter, rather than re-read the chapter. However, 41% of the students answered that they will remember more in the long term if they repeat the study material rather than practice recall and test their knowledge. Students reported using 2-8 (average of 5) different strategies for practicing recall. Students chose making outlines or reviewing sheets (17.5%), doing practice problems (15%), self-testing (15%), and re-reading notes or textbooks (12.5%) as their preferred studying strategies. Seventy-three percent of students indicated they practice recall; 71% of students responded that they re-read notes or textbooks. Fifty-one percent of students used flashcards, but only 7.5% chose using flashcards as their favorite studying strategy.

### CONCLUSIONS

In conclusion, although most students are aware of retrieval practice strategies, they do not necessarily all agree that retrieval practice will lead to improved long term retention of learning. Furthermore, many students re-read materials and consider it as their favorite studying habits.

## METHODS

An online survey approved by Mercer University's Institutional Review Board was sent out to students. The survey was based on the previous report by Karpicke et al (MEMORY, 2009, 17 (4), 471-479) to assess the students' knowledge in the retrieval practice-based learning and their actual usage of retrieval practice techniques.

## RESULTS

### 1. Re-reading versus Practice recall

After you have read chapter one time, would you rather:

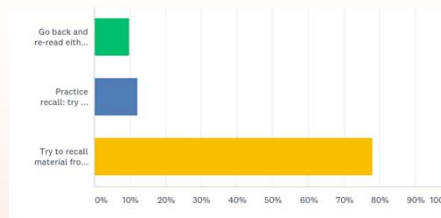


Figure 1. Thirty-two out of 41 students chose "Try to recall material from the chapter with the possibility of restudying afterward" and five students chose "Practice recall: try to recall material from the chapter without the possibility of restudying the material." Only four students chose "Go back and re-read either the entire chapter or certain parts of the chapter."

### 2. Recall practice for long-term retention

I will remember more in the long term if I repeatedly study material rather than try to recall material and test it.

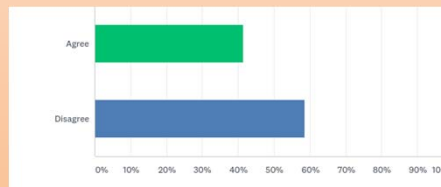


Figure 2. Seventeen out of 41 students agreed that they will remember more in the long term if they repeatedly study material rather than practice recall and test it.

### 3. Studying strategies

Which of the following strategies do you use when you are studying? (Check all that apply.)

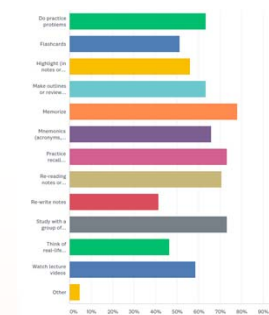


Figure 3. Students reported using 2-8 (average of 5) different strategies for practicing recall. Seventy-three percent of students indicated they practice recall; 71% of students responded that they re-read notes or textbooks.

### 4. Favorite studying strategies

Which of the following strategies do you favor the most when you are studying? (Check only one choice.)



Figure 4. Students chose to make outlines or reviewing sheets (17.5%), doing practice problems (15%), self-testing (15%), and re-reading notes or textbooks (12.5%) as their most favored studying strategies. Fifty-one percent of students used flashcards, but only 7.5% chose using flashcards as their favorite studying strategy.