

# Interpolated Testing Enhances Learning by Changing Test Expectancy



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## Background

When learning, students are required to add new information to what was previously learned.

Taking a test over previously learned material can enhance learning of new material (Chan, Meissner & Davis, 2018). This effect is known as the **forward testing effect**.

We investigated if the forward testing effect persists if students are only tested early compared to always tested.

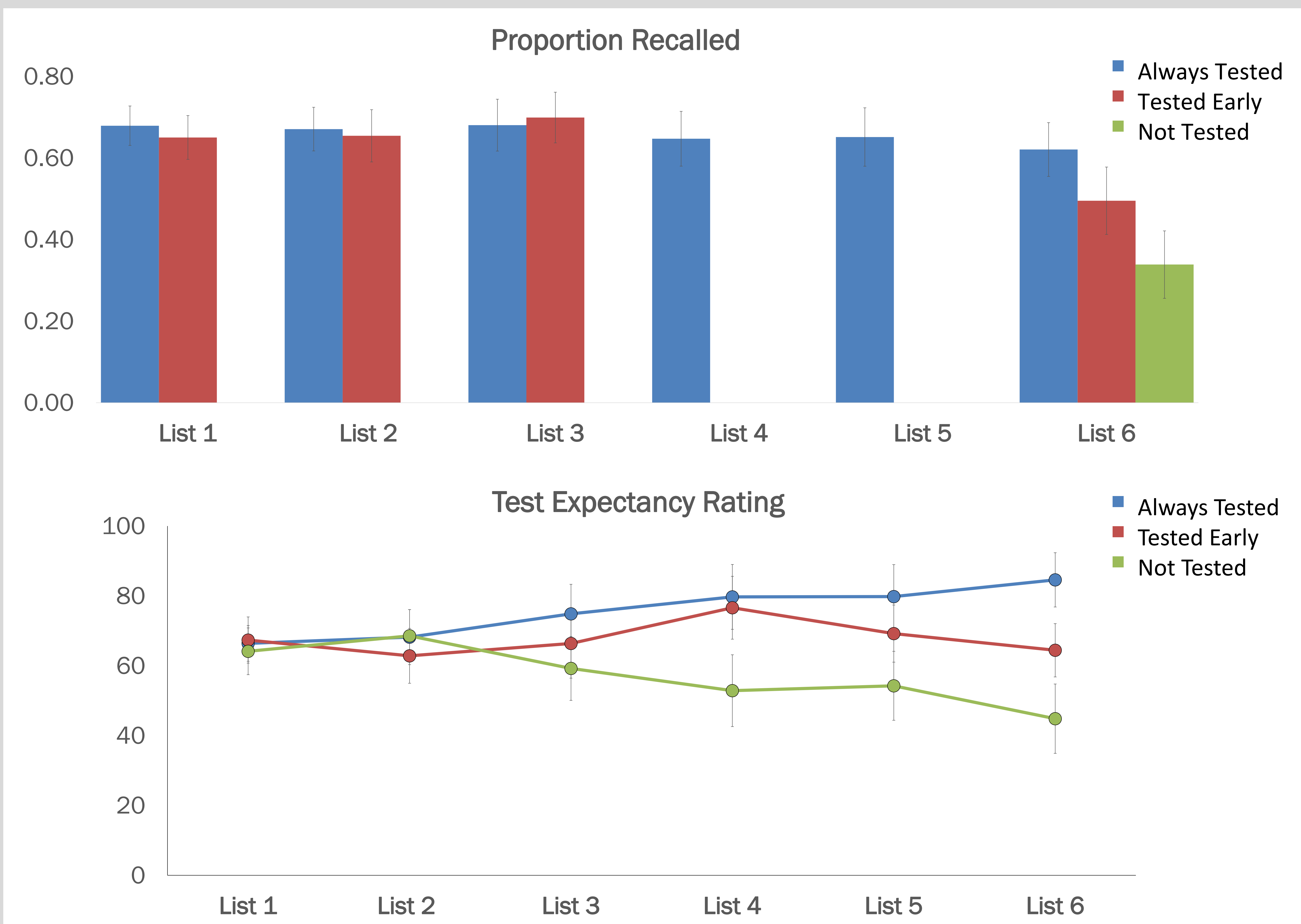
We also examined whether the magnitude of the forward testing effect is associated with students' expectation that they will be tested (Weinstein et al., 2014),

## Method

List 1	List 2	List 3	List 4	List 5	List 6	
Study-Test	Study-Test	Study-Test	Study-Test	Study-Test	Study-Test	Always Tested
Study-Test	Study-Test	Study-Test	Study-Math	Study-Math	Study-Test	Tested Early
Study-Math	Study-Math	Study-Math	Study-Math	Study-Math	Study-Test	Not Tested

All participants studied six lists and completed a test over List 6. Following each list, participants either completed math problems and then were tested on that list, or they would only complete the math problems. Additionally, we asked half of the participants to answer a **test expectancy question** before studying the lists. The question reads: "On a scale of 1-100, how likely do you believe you will be tested over the following list? 1 representing not at all, 50 unsure, and 100 belief they will be tested."

## Results



## Conclusions

Participants benefited most from consistent interpolated tests. The forward testing effect has been replicated in our experiment.

The forward testing effect was weakened substantially, though remained significant, when interpolated testing stopped.

Students expected tests at a higher rate when they are continuously tested and expect tests at a lower rate when not tested.

Interestingly, all it took was the lack of one test before the early tested group's test expectancy dropped.

### References

- Chan, J. C., Meissner, C. A., & Davis, S. D. (2018). Retrieval Potentiates New Learning: A Theoretical and Meta-Analytic Review. *Psychological Bulletin, 144*(11), 1111-1146.
- Weinstein, Y., Gilmore, A. W., Szpunar, K. K., & McDermott, K. B. (2014). The Role of Test Expectancy in the Build-Up of Proactive Interference In Long-Term Memory. *Journal of Experimental Psychology, 40*(4), 1039-1048.