

Can I Have Your Attention?

Interim Testing Alleviates Mind-Wandering During Lectures

Amherst College

Jordan Gomez¹, Alexander Knopps², & Kathryn Wissman²
¹Amherst College & ²North Dakota State University

NDSU NORTH DAKOTA STATE UNIVERSITY

Research Objective

Research finds that mind-wandering consumes about 30-50% of our days.¹ For educational purposes, this poses negative implications for students' retention and comprehension.² Our research explored how interim testing affects mind-wandering rates and memory in a large, Introduction to Psychology classroom.

Methods

Participants: 217 NDSU Undergraduates

Design: Interim Testing (IT) versus Restudy (RS), manipulated within-subjects

Materials:

- Two Introduction to Psychology lectures: *Cognition & Intelligence (C&I)* and *Motivation & Emotion (M&E)* broken into 4 segments
- 22 fill-in-the-blank questions
- 4 Mind-Wandering Probes (MWP)

"A prototype refers to the best example of a concept."

"Moods involve low intensity, long-lasting emotional states."

"Prior to this slide, were you mind-wandering?" YES or NO

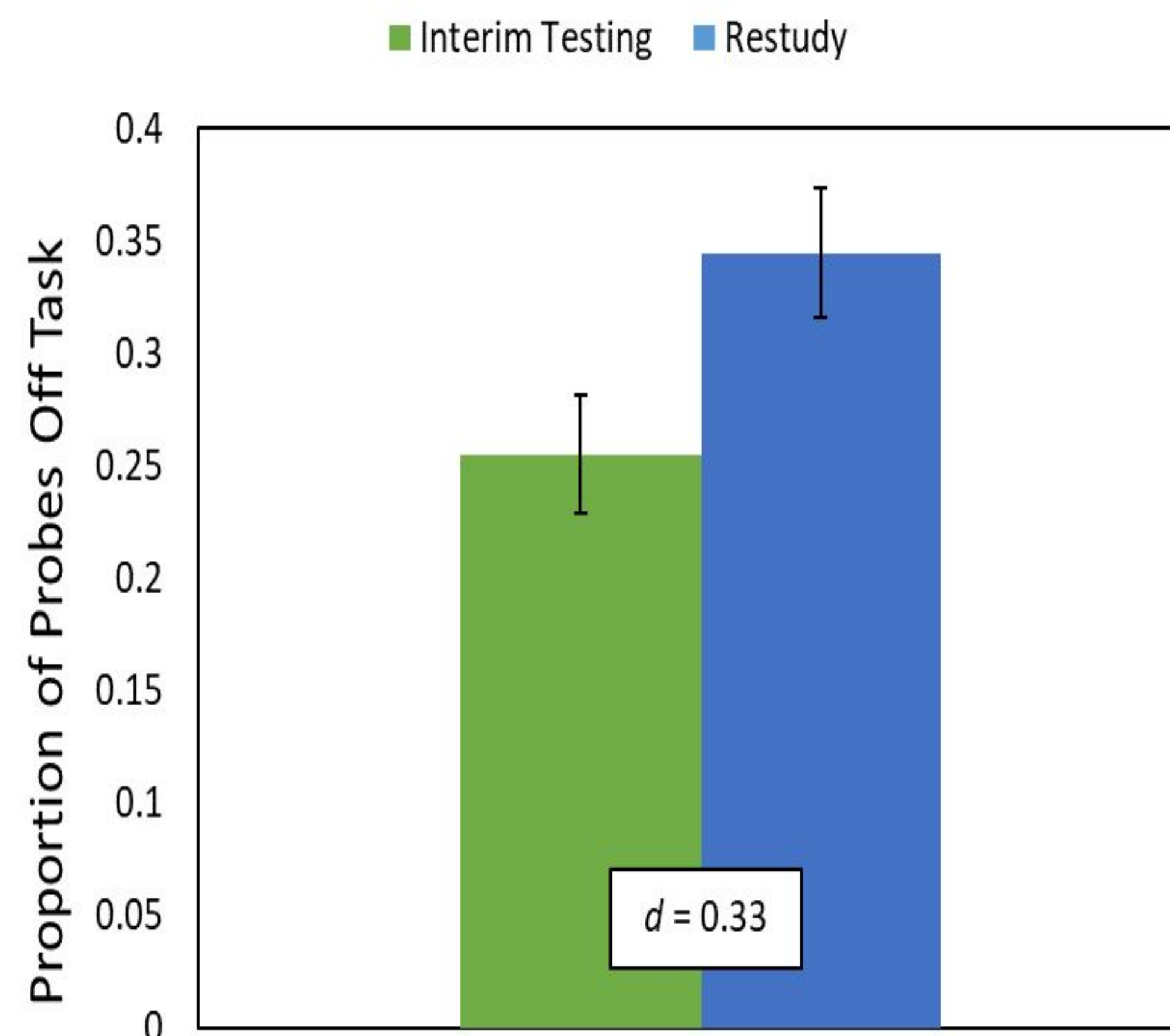
Procedure:

75 Minute Lecture

	Segment 1	Segment 2	Segment 3	Segment 4
C & I (Week 1)	Lecture + MWP + IT	Lecture + MWP + IT	Lecture + MWP + IT	Lecture + MWP + Test
M & E (Week 2)	Lecture + MWP + RS	Lecture + MWP + RS	Lecture + MWP + RS	Lecture + MWP + Test

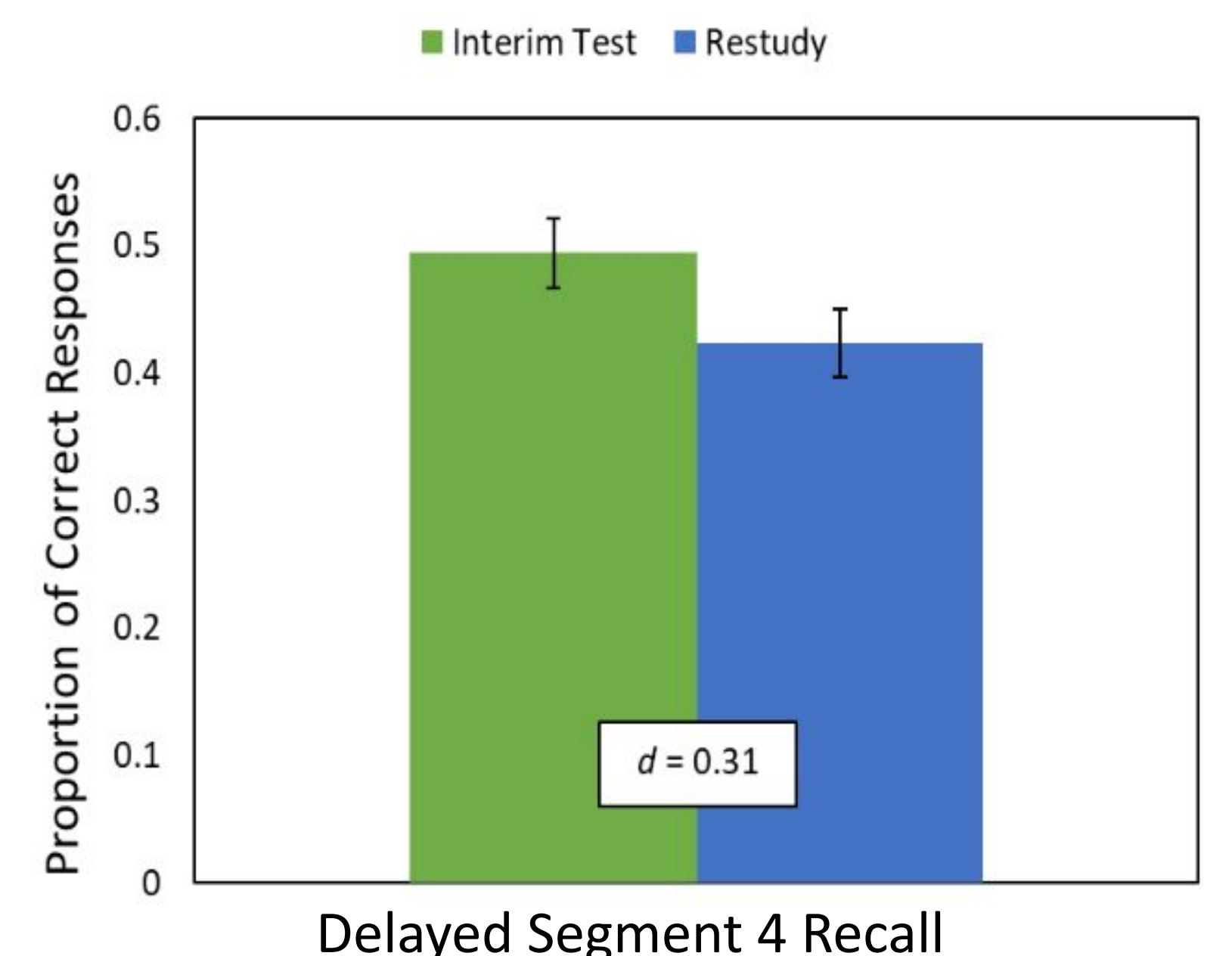
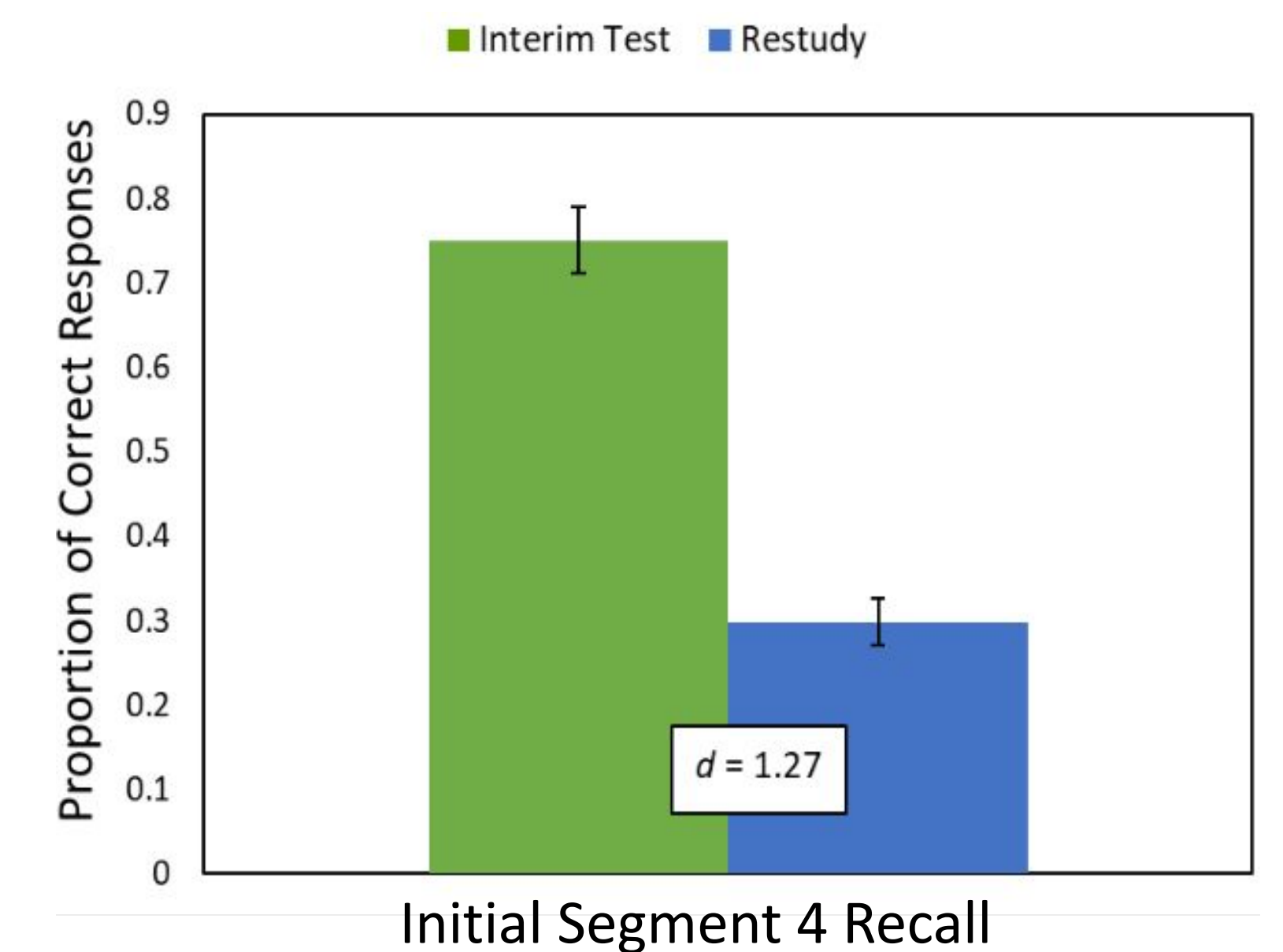
To test durability of the learning strategies, **delay memory test** occurred one week following each lecture.

Results: Mind-Wandering



During lecture, students reported significantly more off-task thinking in the Restudy condition compared to the Interim Testing condition ($t(94) = 3.12, p < 0.01$).

Results: Memory



Recall and retention was greater following interim testing.

Conclusion

Implementing interim testing into lectures reduced students' frequency of mind-wandering and increased the learning and retention of material.

Next Steps:

- Replicate
- Counterbalance

Want more information about our study? Have any ideas for future studies?!



Acknowledgements

1. Killingsworth, M. A., & Gilbert, D. T. (2010). A Wandering Mind Is an Unhappy Mind. *Science*, 330(6006), 932–932. <https://doi.org/10.1126/science.1192439>
 2. Risko, E. F., Anderson, N., Sarwal, A., Engelhardt, M., & Kingstone, A. (2012). Everyday Attention: Variation in Mind Wandering and Memory in a Lecture: Mind wandering. *Applied Cognitive Psychology*, 26(2), 234–242. <https://doi.org/10.1002/acp.1814>
- Special thanks to the 2023 CiDER REU Cohort



Research supported in part by NSF DUE-1852045 (This material is based upon work supported by the National Science Foundation. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the NSF.)