



The Use of Smartwatches to Encourage Effective Study Habits

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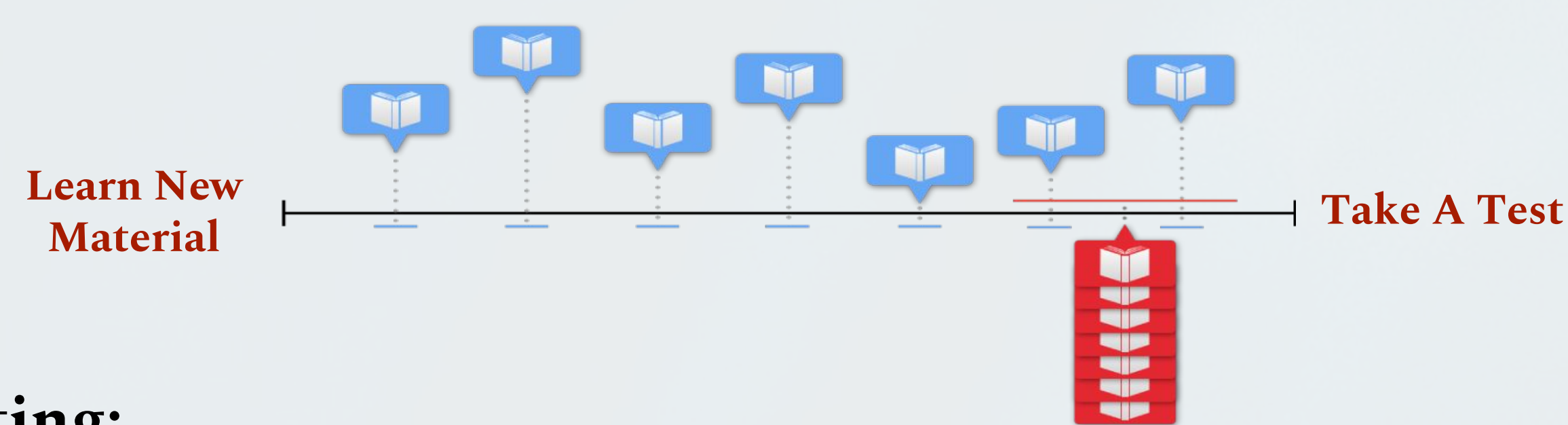


Introduction

The benefits of spacing and testing have been demonstrated repeatedly in laboratory settings (e.g., Kornell, 2009; Roediger & Karpicke, 2006).

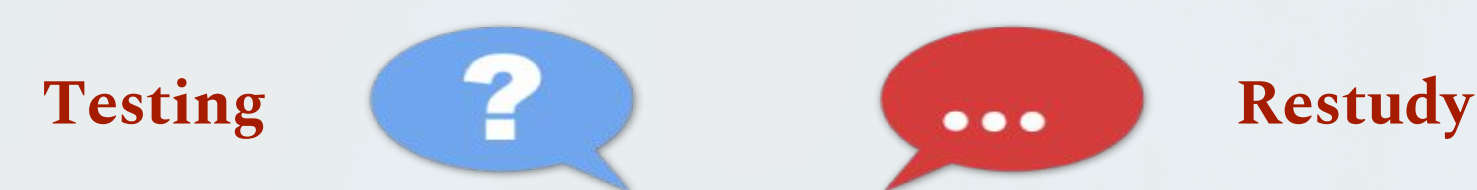
Spacing:

Studying in intervals--rather than cramming.



Testing:

Quizzing--rather than restudy.



Students believe that massing and restudying are the most effective study habits (McCabe, 2011).



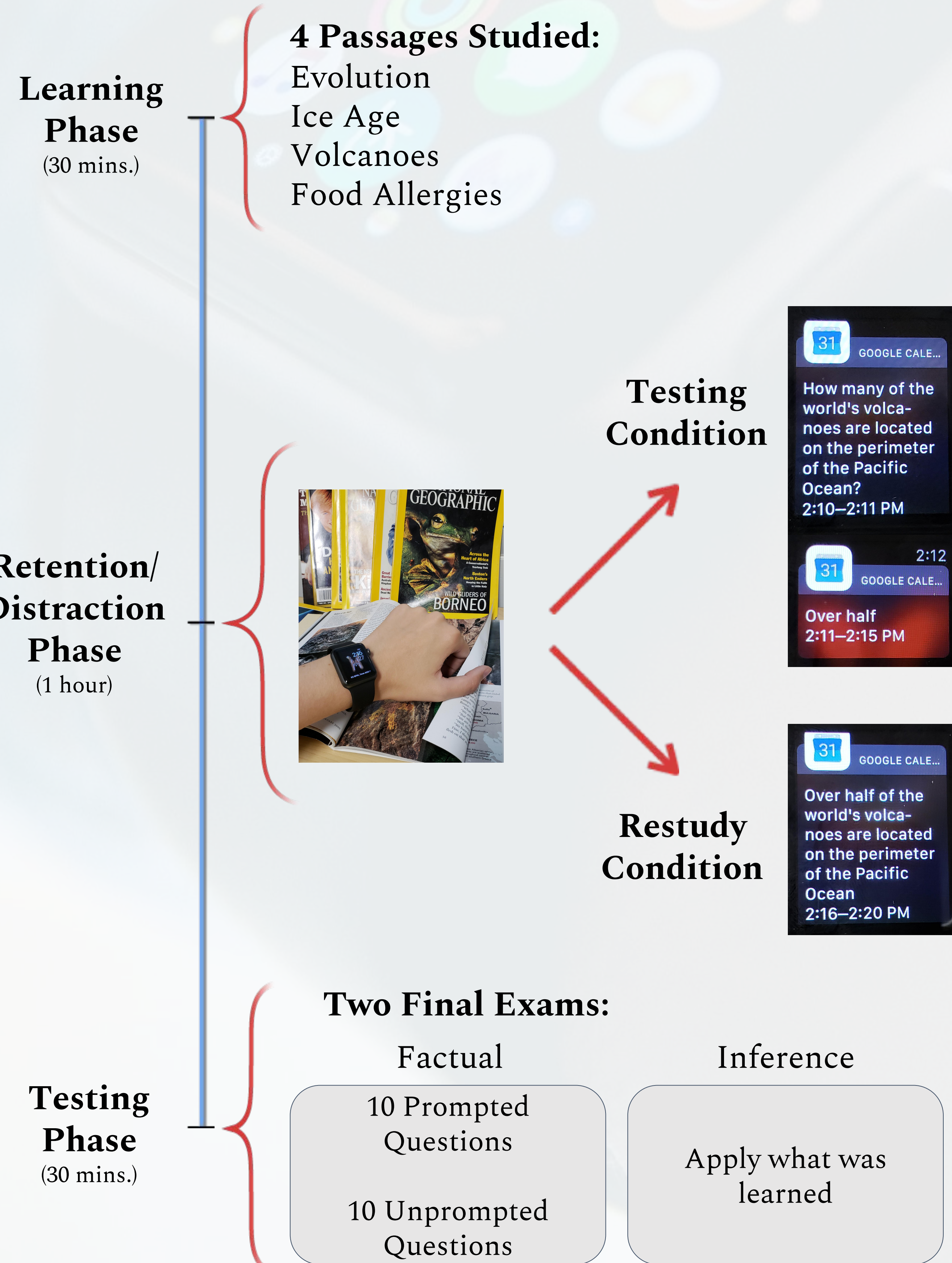
Present Study



1 in 10 American adults will use a smartwatch in 2019

Can encouraging effective study habits using a smartwatch increase performance on a final exam?

Methods



Previous Study

Research Question:

Can a Smartwatch successfully implement Spacing & Testing?

Results:

- The Smartwatch is effective at implementing spacing and testing.
- The levels of distraction and the testing effect are worth further investigation.

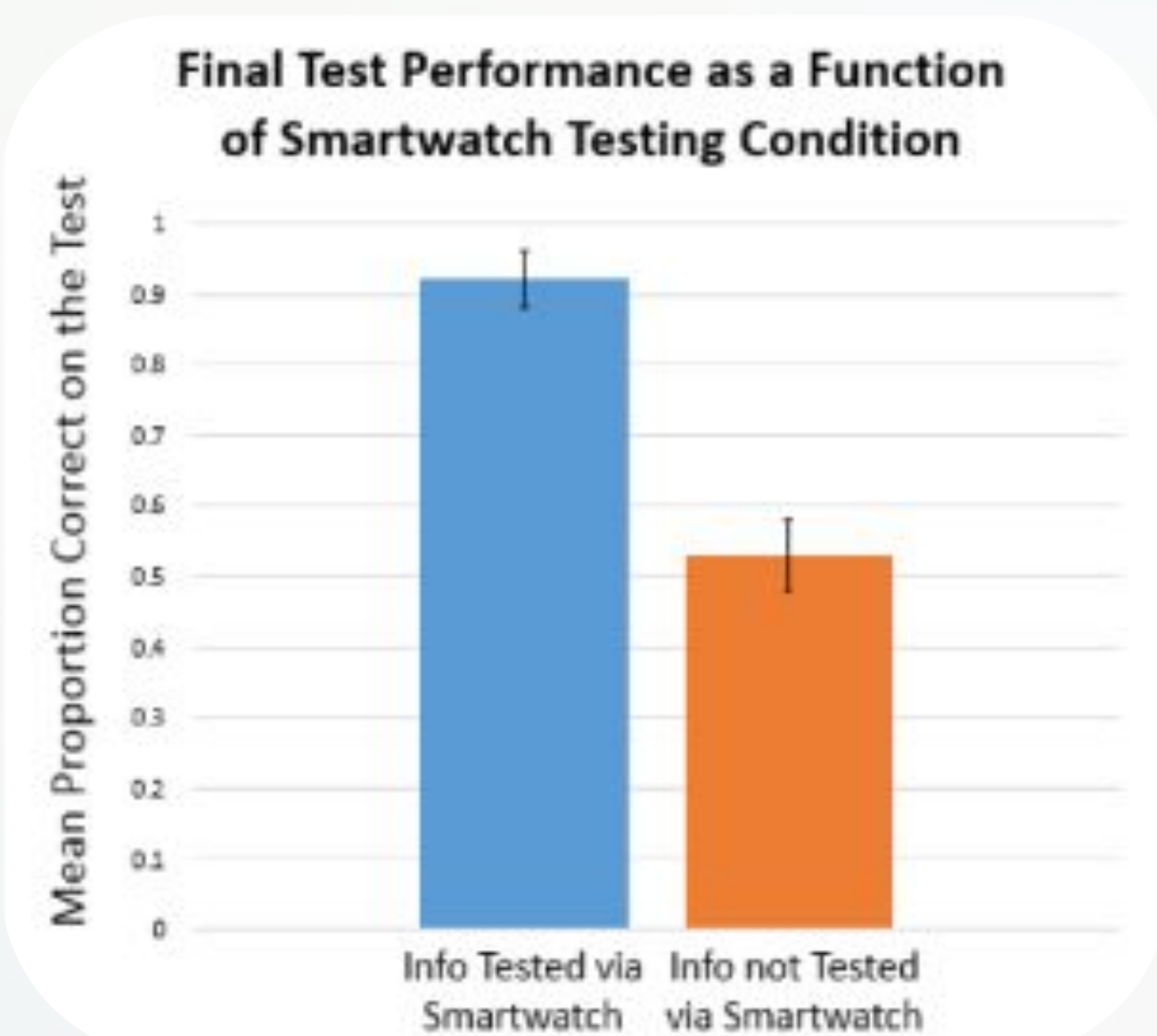
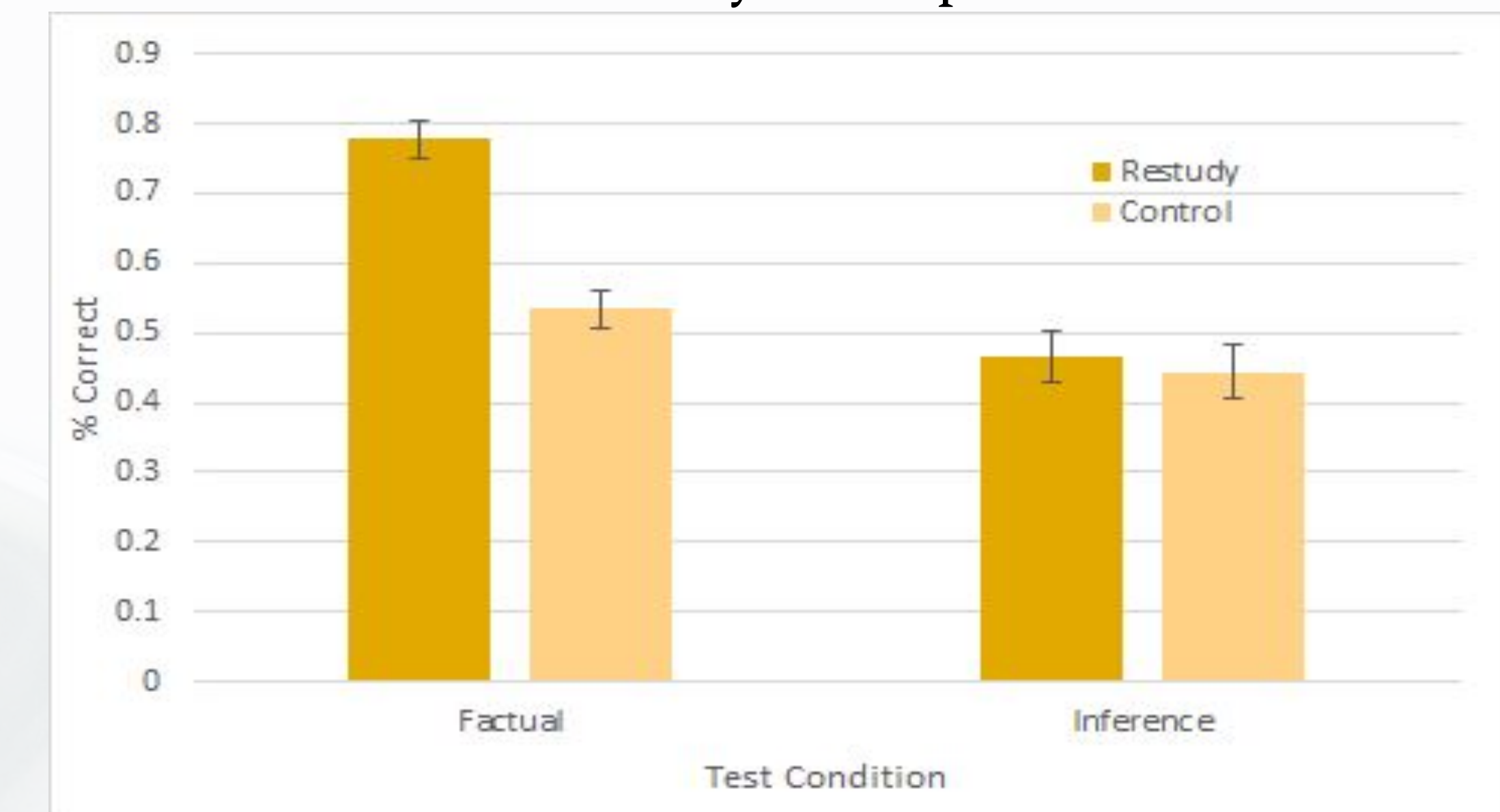


Figure 1. Wearable Technology for Implementing Spaced Testing to Enhance Learning in Real-world Contexts: Results [Poster] (2018)

Results

Restudy Prompts



Question & Answer Prompts



Discussion & Future Direction

Smartwatches may be a viable resource for helping students engage in effective study habits, such as testing.

Next, examine if this benefit persists through **long delays**, as well as with the degree of **divided attention**.



References

Cleary, A. M., Hausman, H., Rhodes, M. G., & Folkestad, J. (2008). *Wearable Technology for Implementing Spaced Testing to Enhance Learning in Real-world Contexts*. Poster presented at the Technology, Mind, and Society Conference, Washington, DC

Kornell, N. (2009). Optimising learning using flashcards: Spacing is more effective than cramming. *Applied Cognitive Psychology*, 23, 1297-1317. doi: 10.1002/acp.1537

McCabe, J. (2011). Metacognitive awareness of learning strategies in undergraduates. *Memory & Cognition*, 39, 452-476.

Musil, S. (2018). One in 10 American adults expected to have a smartwatch next year. *CNET*. Retrieved from <https://www.cnet.com/news/one-in-10-american-adults-expected-to-have-a-smartwatch-next-year/>

Roediger, H. L., & Karpicke, J. D. (2006). Test-enhanced learning: Taking memory tests improves long-term retention. *Psychological Science*, 17, 249-255.