Attention in Hindsight: Using Video-Stimulated Recall as a Novel Approach to Capturing Fluctuations in Self-Reported Attentional Engagement

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INTRODUCTION

- Typically, intermittent **thought probes** are presented throughout an attention task to capture fluctuations in self-reported **introspective** attentional engagement[1-3]. However, this approach can be **intrusive** during ecological studies (e.g., during live lectures)[2].
- Thus, we evaluated **video-stimulated recall**[4] as a less-intrusive means of capturing moment-to-moment attentional engagement **retrospectively**.

METHOD

N = 100, within-subjects

- Two 15-min videos, one inherently **more-engaging** and one inherently **less-engaging,** were presented to participants.

TED — More-Engaging Video

Open Yale — Less-Engaging Video

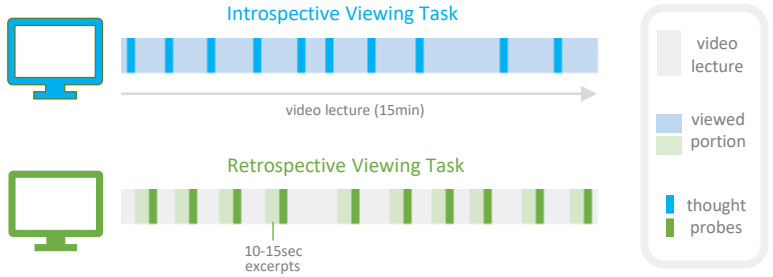
- Participants rated their subjective attentional engagement during the videos via ten **introspective probes**. Then, they watched ten short excerpts from those videos and rated their attentional engagement after-the-fact via ten **retrospective probes**.

Introspective Thought Probes

Just before this screen appeared, how engaged were you with the video lecture?
1 ---------- 7
Not at all Fully

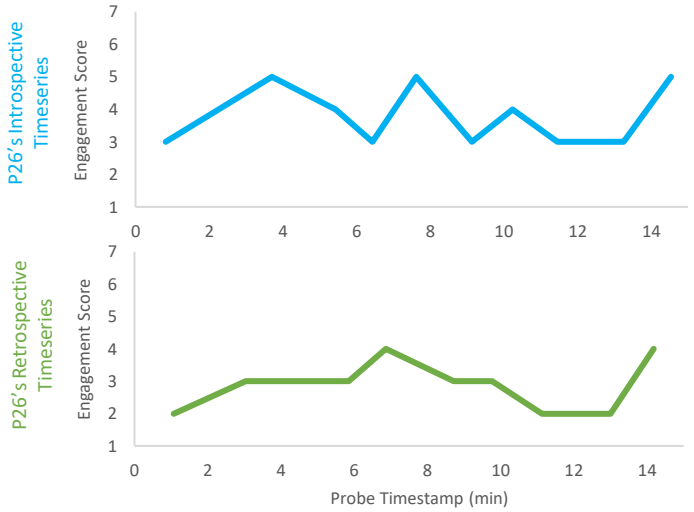
Retrospective Thought Probes

How engaged were you when you first watched this section of the video lecture?
1 ---------- 7
Not at all Fully

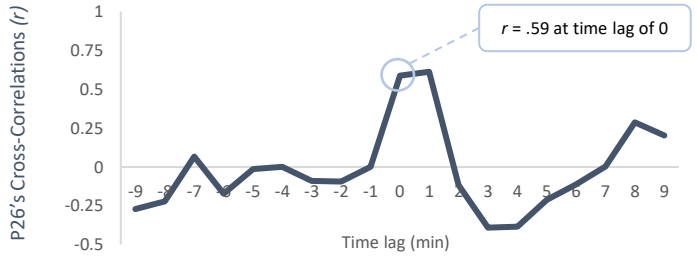


ANALYSES

1. For each video, each participant's **introspective** and **retrospective** ratings were converted into continuous timeseries representing their attentional engagement over time (select participant shown below).

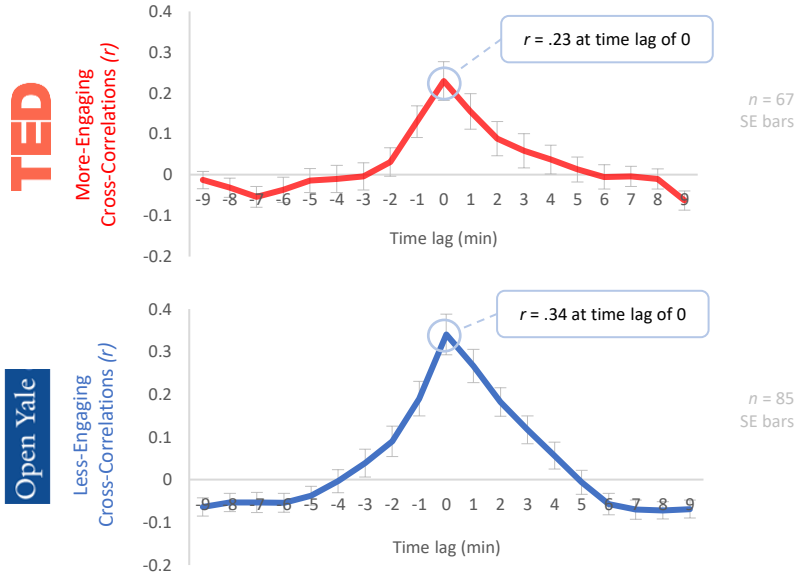


2. These timeseries were directly overlaid and the **cross-correlation coefficients**[5] were calculated at various time lags. To assess the direct concordance between the **introspective** and **retrospective** ratings, subsequent analyses focused on a **time lag of zero**.



RESULTS

- At a time lag of zero, **average cross-correlation coefficients** were significantly different from zero for the **more-engaging** ($p < .001$, $d = .59$) and **less-engaging** video conditions ($p < .001$, $d = .78$). These results did not significantly differ between the two video conditions ($p = .11$).
- Thus, **strong concordance** was observed between the **introspective** and **retrospective** measures of attentional engagement.



CONCLUSION

- **Video-stimulated recall** is a promising new avenue for capturing temporally precise ratings of subjective attention.

For more information:

- Contact S. Ayers-Glassey at **s.ayersglassey@outlook.com**
- Further analyses being presented by Dr. E.J. Pereira during **Talk Session #5B**

[1]Seli, Carriere, Levene, & Smilek, 2013; [2]Varao-Sousa & Kingstone, 2019; [3]Weinstein, 2018; [4]Gass & Mackey, 2000; [5]Derrick & Thomas, 2004