

Tackling Mind Wandering in Video Learning Environments

A Study Comparing Interpolated Testing and Self-Explanation Strategies

Daniel Ebbert, Alrike Claassen, Natasha Wilson, Srecko Joksimovic, Negin Mirriahi, and Shane Dawson





**Were you mind
wandering?**

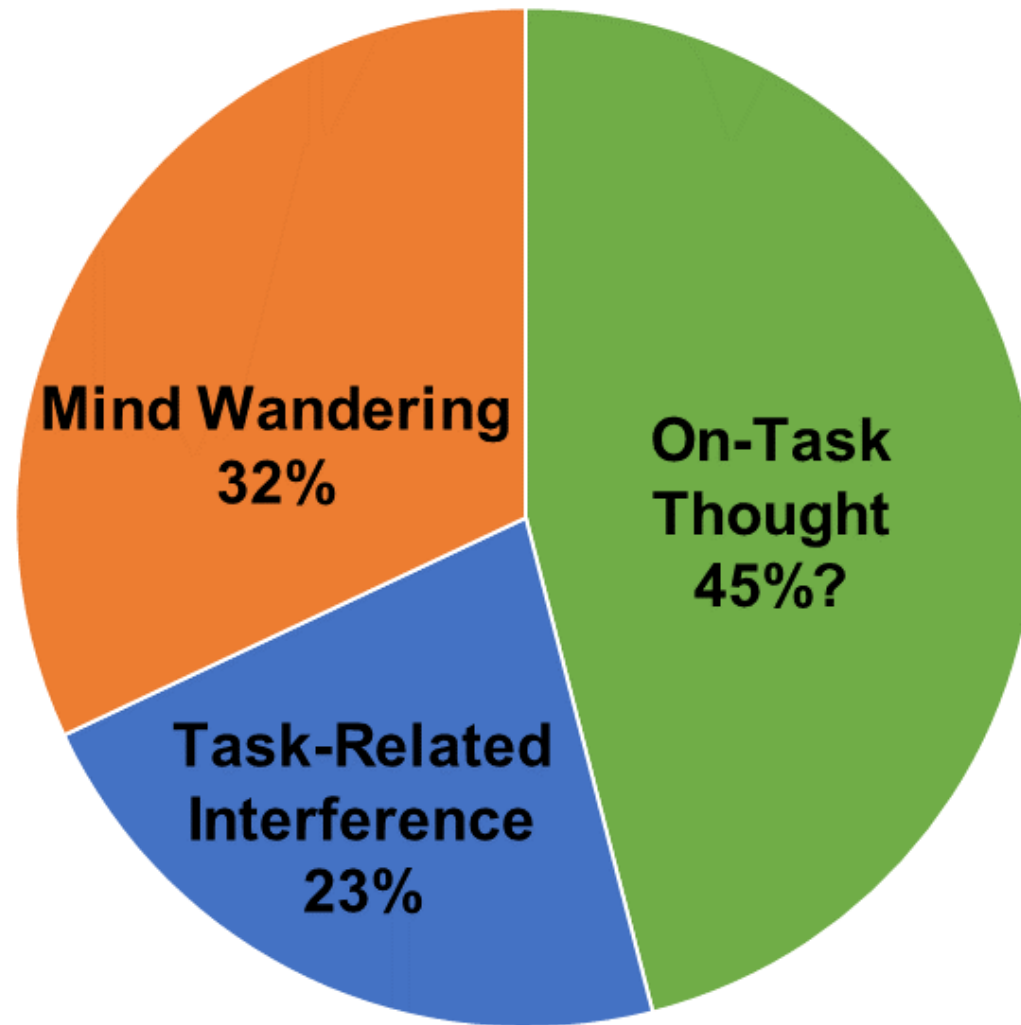


Mind Wandering = task-unrelated thoughts,
e.g. about dinner or a social event

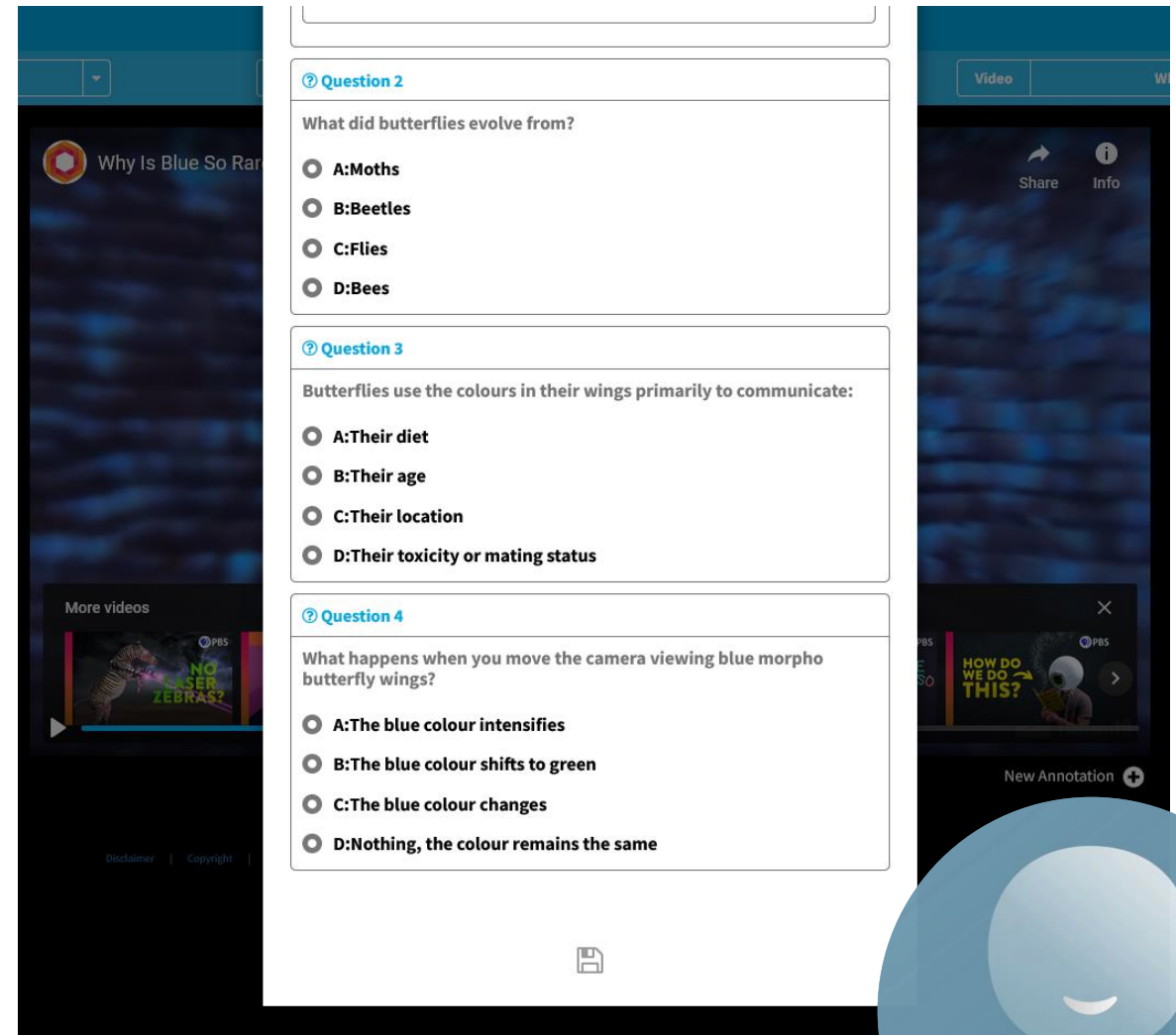
Task-Related Interference = internal stream
of thought that is still somewhat related to
the task, e.g. how well am I understanding
this task?



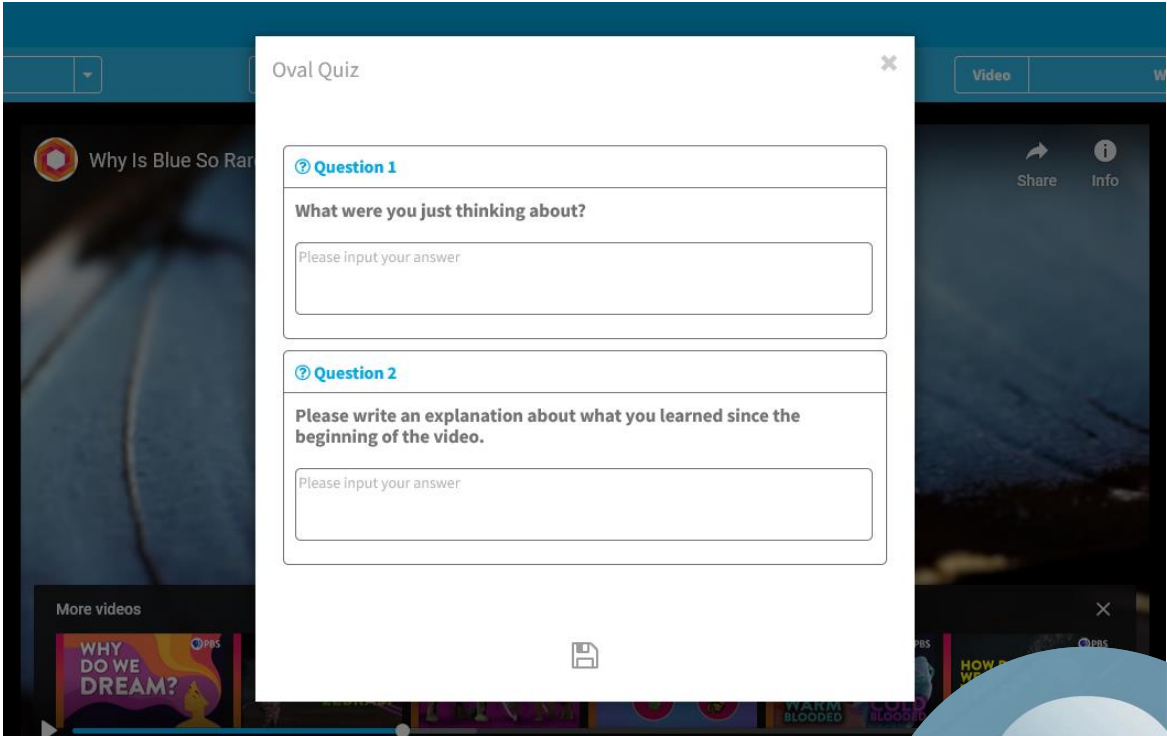
Thought Type Distribution



Interpolated Testing



Self-Explanation



Oval Quiz

Question 1

What were you just thinking about?

Please input your answer

Question 2

Please write an explanation about what you learned since the beginning of the video.

Please input your answer

Why Is Blue So Rare?

More videos

WHY DO WE DREAM?

HOW WE...

STARM BLOODED

Share Info

Video

Save



Meta- Awareness



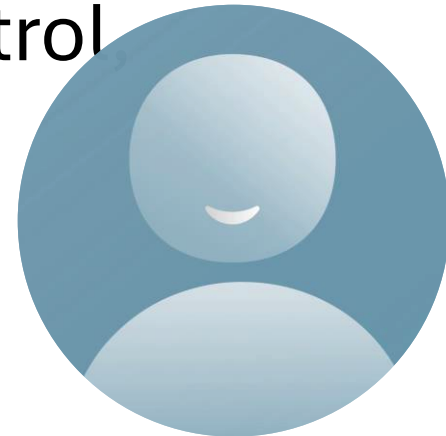


Research Question 1:
Does writing self-explanations at pauses
during video learning sessions more
effectively reduce task-unrelated thoughts
and enhance learning outcomes compared
to interpolated testing or no intervention?



Hypotheses

- **Hypothesis 1:** There will be a significant difference in knowledge gain among the three experimental groups (control, interpolated testing, self-explanation).
- **Hypothesis 2:** There will be a significant difference in the number of thought reports written among the three experimental groups (control, interpolated testing, self-explanation).



Research Question 2:

Does the number of thought reports, in total and by thought type, correlate with learning outcomes?



WHY IS BLUE SO RARE?

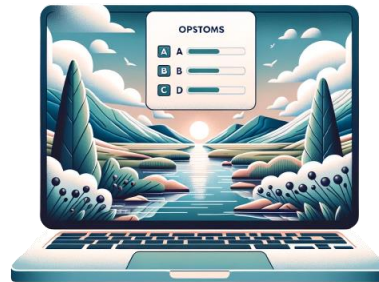


Three Groups

Control



Interpolated Testing



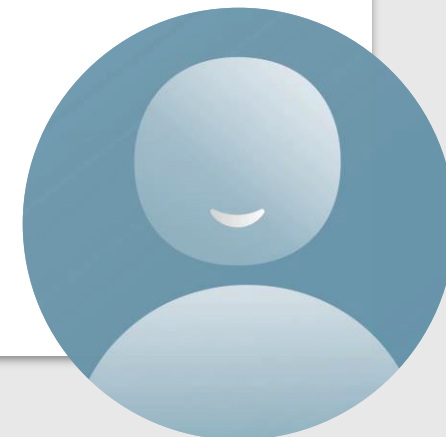
Self-Explanation



Pre-Test



Post-Test



Probe-caught

Self-caught

Oval Quiz



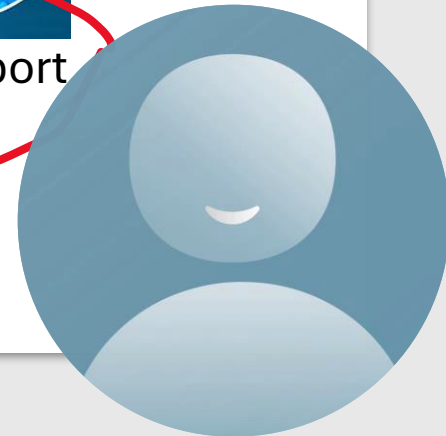
Question 1

What were you just thinking about?

Please input your answer



New Thought Report

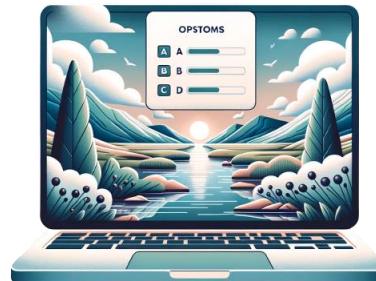


No difference in knowledge gain

Control



**Interpolated
Testing**



Self-Explanation

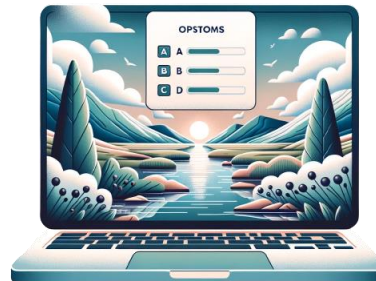


No difference in number of thought reports

Control



**Interpolated
Testing**



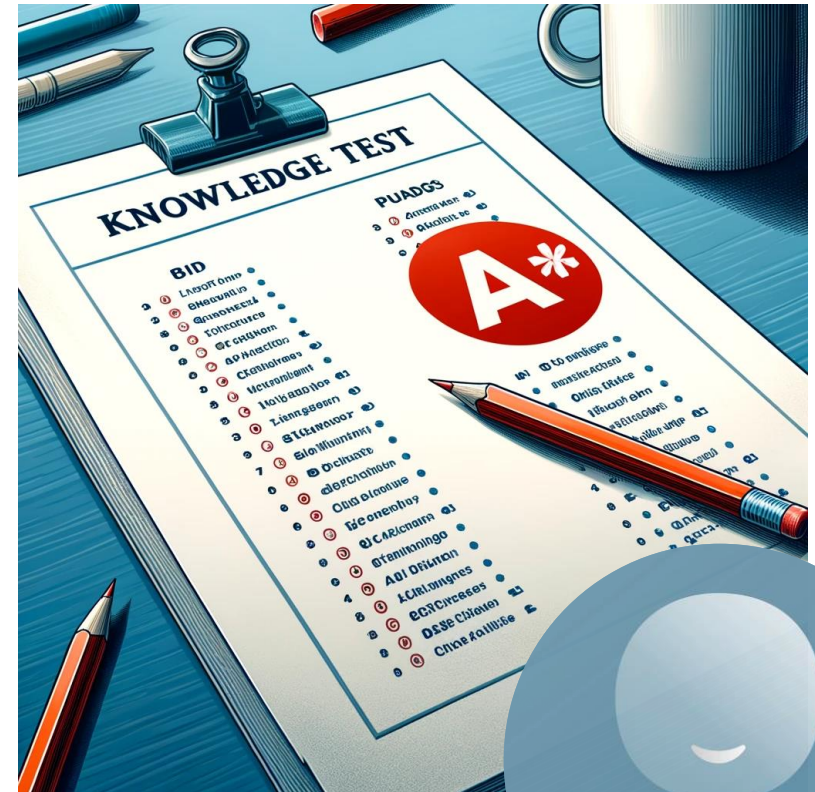
Self-Explanation



Meta-Awareness



Knowledge Gain





Thank you!

