# Inside a Room With a View: Combining Global and Local Context to Produce Context Reinstatement Effects

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## INTRODUCTION

### Context Reinstatement Effects

Memory is better when the environmental context at study is reinstated at test than when it is not. Theoretically, this result occurs because associations between the context and studied information are created during encoding. Those same cues are available at test when the context is reinstated, but not when the context is not reinstated (Godden & Baddeley, 1975; Smith et al., 1978).

### Global vs Local Context

Global context: environmental cues that change slowly or not at all

Local context: environmental cues that change with each study item (Glenberg, 1979)

This distinction is not always as clear in a natural setting. For example, sometimes, the local context is changing rapidly while the global context is maintained. What is not known is which context is most important for context reinstatement effects to be obtained? Smith and Manzano (2010) have suggested that local context can provide robust results compared to previous studies that use a global context approach.

### Motivation for Study

To examine the effect of reinstating an immersive local context within a stable global context to determine whether context reinstatement effects would be obtained

Predictions:

- If participants use the local context, a context reinstatement effect will be obtained.
- If participants use the global context, which is always present at test (no reinstatement manipulation), then no context reinstatement effect will be obtained. Participants can use the global context cues when the local context is not reinstated.

In addition, we examined whether metamemory judgments before retrieval (DJOLs) were sensitive to any context reinstatement effects obtained under these conditions (Hanczakowski et al., 2017).

## RESEARCH QUESTIONS

Will context reinstatement effects be obtained in a condition in which an immersive local context is changing within a stable global context? Will metamemory judgments track any context reinstatement effects in memory?

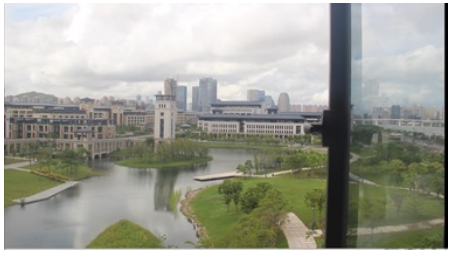
## THE EXPERIMENT

### Design and Participants

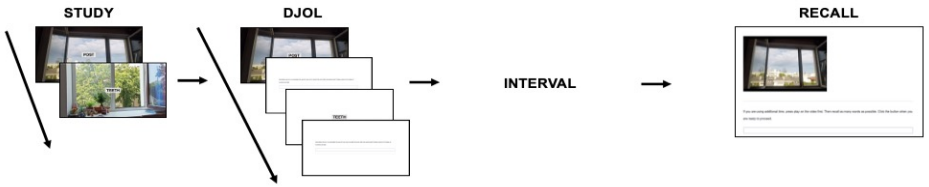
- Within-subjects design (reinstated context versus no reinstated context)
- 100 Mississippi State University students participated for research credit

### Materials

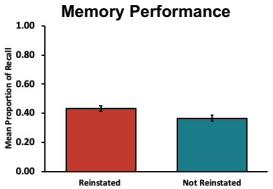
- 2 lists of 24 unrelated words (collapsed in analysis)
- Window Scenes: window-swap.com



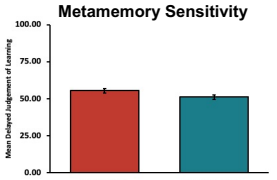
### Procedure



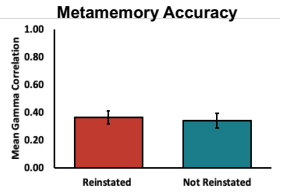

## RESULTS




$t(99) = 3.56$, $p = .001$, $d = .34$




$t(99) = 2.88$, $p = .005$, $d = .29$




Overall mean gamma different than zero

*M* = .39

$t(99) = 11.85$, $p < .001$, $d = 1.18$

## DISCUSSION

We found context reinstatement effects when the local context was reinstated even though the global context was maintained throughout the study. Apparently participants did not use the global context when the local context was not reinstated. The context reinstatement effects obtained suggest that local context supersedes global context.

The delayed judgment of learning (DJOL) magnitude seemed to track context reinstatement effects. There were higher DJOLs for when the local context was reinstated than when it was not reinstated. However, the magnitude differences were small.

Accuracy of DJOLs indicated that they were discriminating between items that would and would not be recalled within both the reinstated and non-reinstated conditions.