

## Introduction

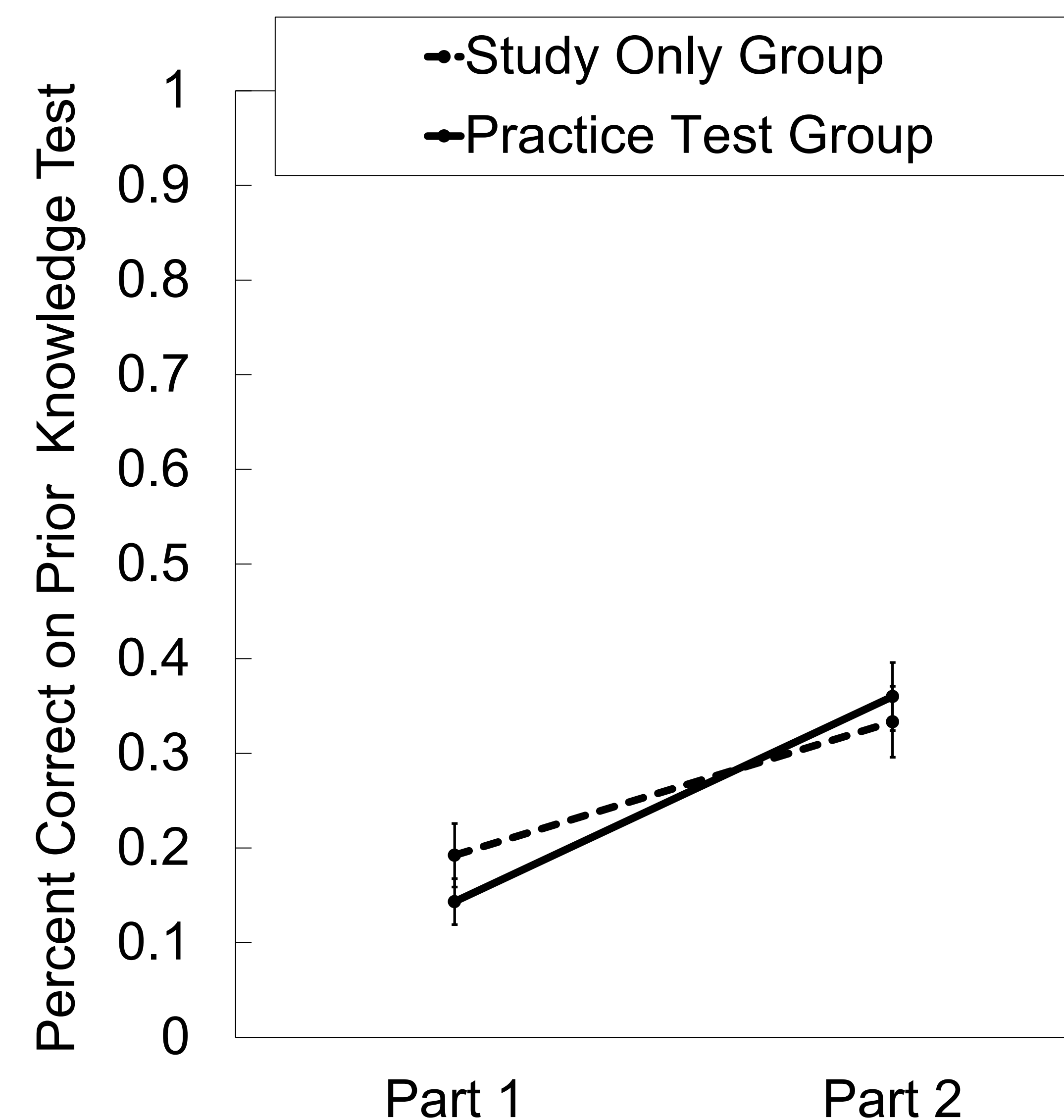
- During learning, students make decisions about the order in which they study concepts.
  - Students can select to interleave (mixing concepts together during study), or students can select to block (grouping concepts together during study).
- Our goal was to explore how prior knowledge on a topic and task type influenced students' study order decisions.
  - Introduction to geology students with more prior knowledge in geology will select to interleave more often during study than will students with less prior knowledge in geology.
  - Students in the practice test group will select to interleave more often during study than will students in the study only group.

## Materials & Procedure

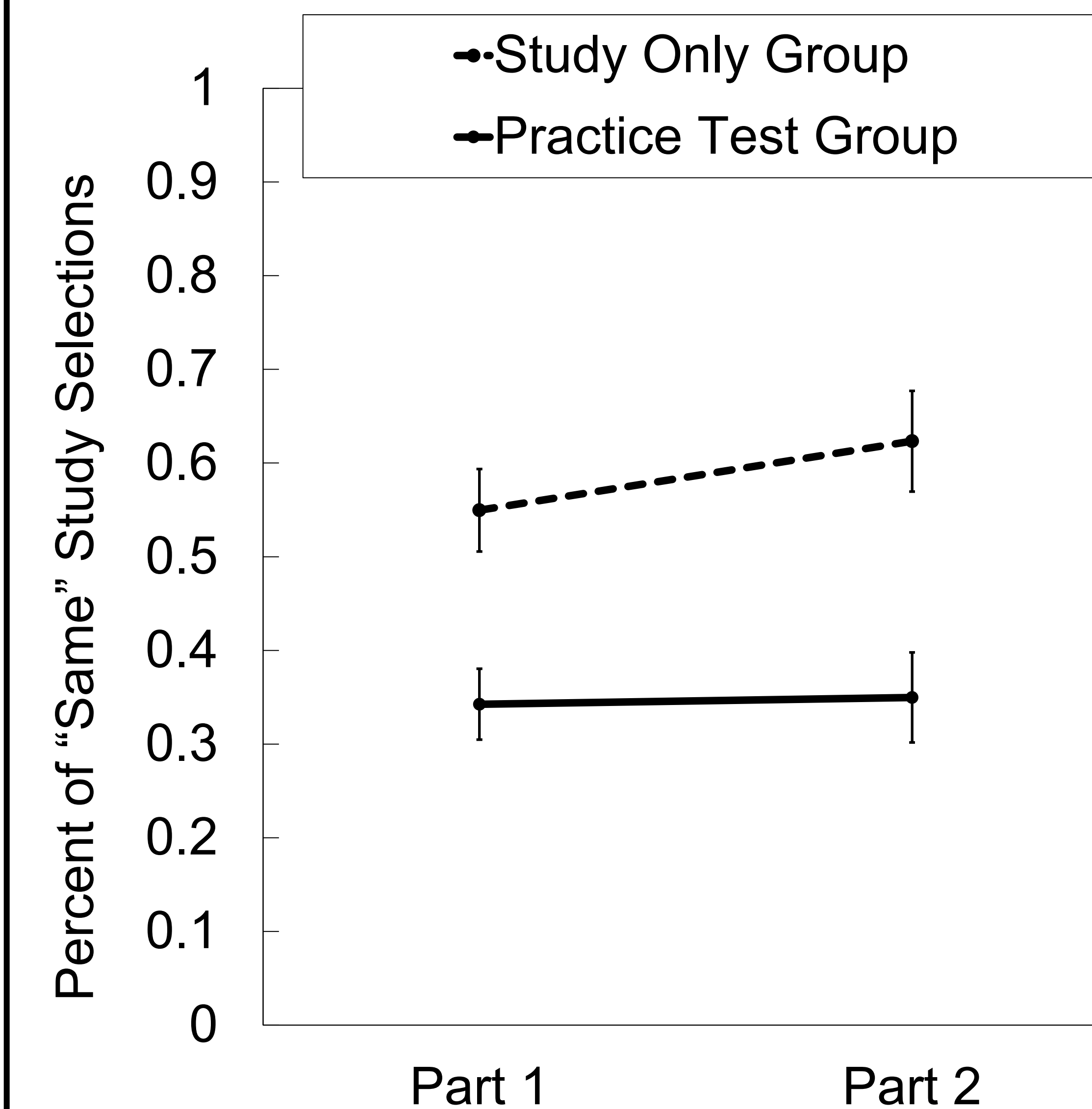
- **Participants and Materials:**
  - 51 TCU undergraduates enrolled in Understanding the Earth, between-participant design ( $n = 26$ , Study only group;  $n = 25$ , Practice test group).
  - Participants learned to classify 3 rock categories: igneous, metamorphic, & sedimentary (Nosofsky et al., 2017).
  - 12 exemplars during Prior knowledge classification test 1, 12 during Prior knowledge classification test 2, 84 during the self-regulated phases and studied test, 36 during the novel test).

## Results

### Performance on Prior Knowledge Tests

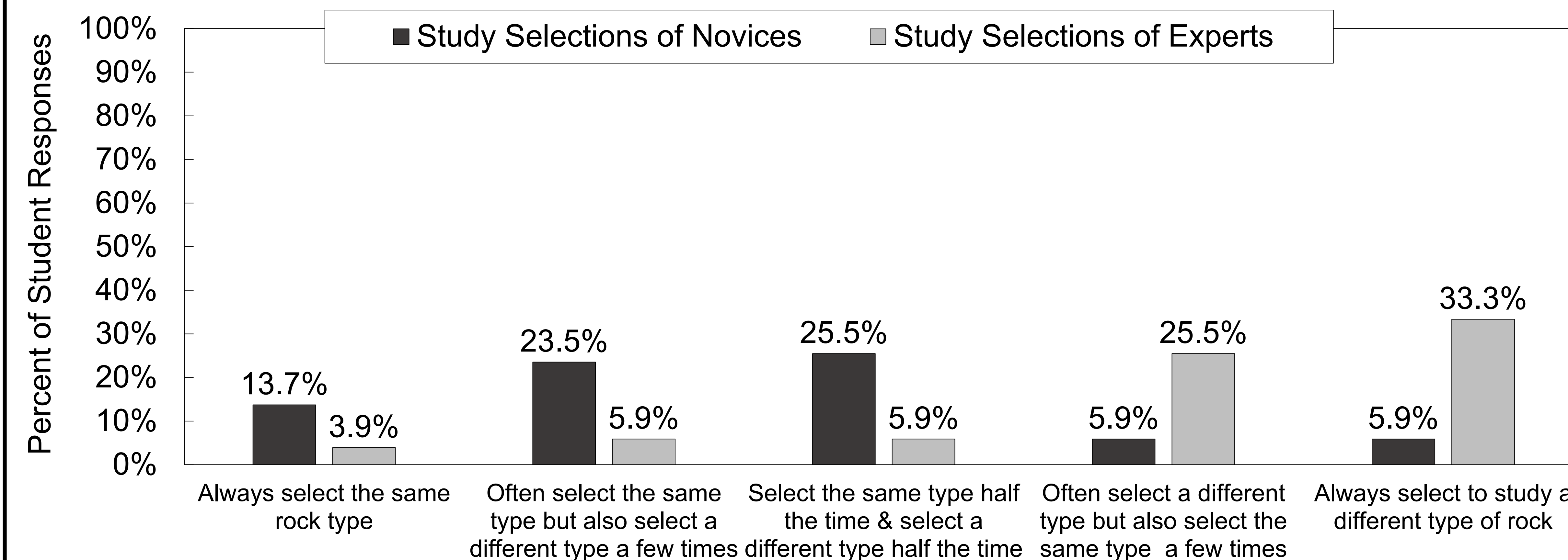


### Student' Study Order Selections during the Self-Regulated Phases



### Student Responses to Follow-up Question regarding Study Selections for Geology Novices and Geology Experts

74.5% of students indicated that they believed a geology novice and a geology expert would make different study decisions



## Discussion & Future Directions

- Although students' prior knowledge increased from part 1 to part 2, there were no differences in their decisions to block or interleave between parts, which is in contrast with their beliefs on how an expert in the topic should study.
  - However, the use of practice tests did impact students' study order decisions.
- Future research should explore how students make study order decisions at even higher levels of prior knowledge than in the current study.

