

Study Strategies Relate to Exam Performance but not Metacognitive Calibration



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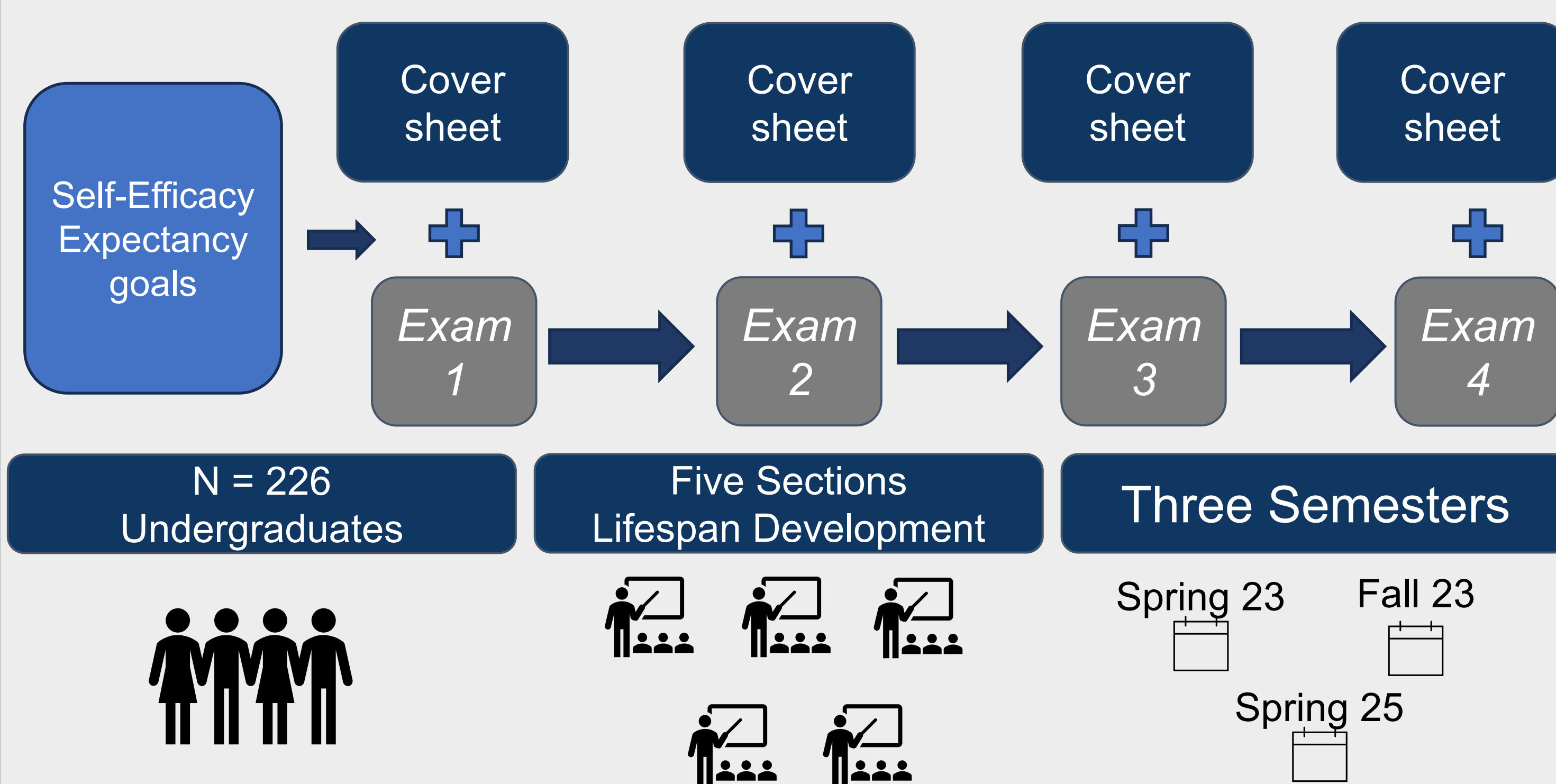
Background

- Students' judgments of their own knowledge are predictive of their study decisions.
- Many students are *overconfident*, which can lead to understudying and lower exam performance (Senko et al., 2021).
- Effective study strategies, like practice testing, might lead to more accurate predictions of exam performance (e.g., Rivers, 2020).
- Self-efficacy can influence self-regulated learning processes and is positively related to academic performance and measures of metacognition (Coutinho, 2008; Zimmerman, 2000).

Questions

- Does exam performance vary by self-reported study strategy?
- How do students predict their performance if they used active versus passive study strategies?
- Are students more accurate at predicting their performance if they used active compared to passive study strategies?
- How does student self-efficacy relate to (a) exam performance and (b) monitoring accuracy?

Method & Design



Pre-Semester Survey

Self-Efficacy: "Please indicate to what extent the following statements are true or not true of you..."

I expect to do very well in this class."

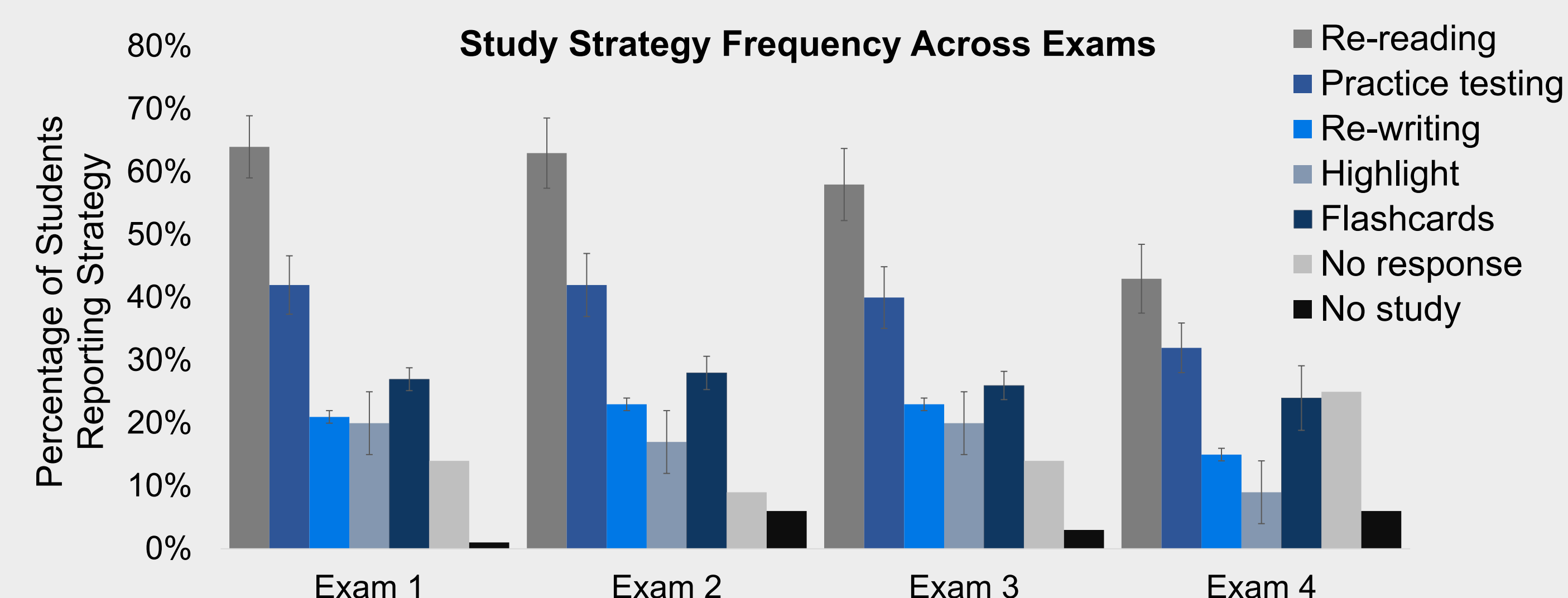
Exam Cover Sheet

Predictive Judgments: "How many questions, out of 54, do you think you will answer correctly?"

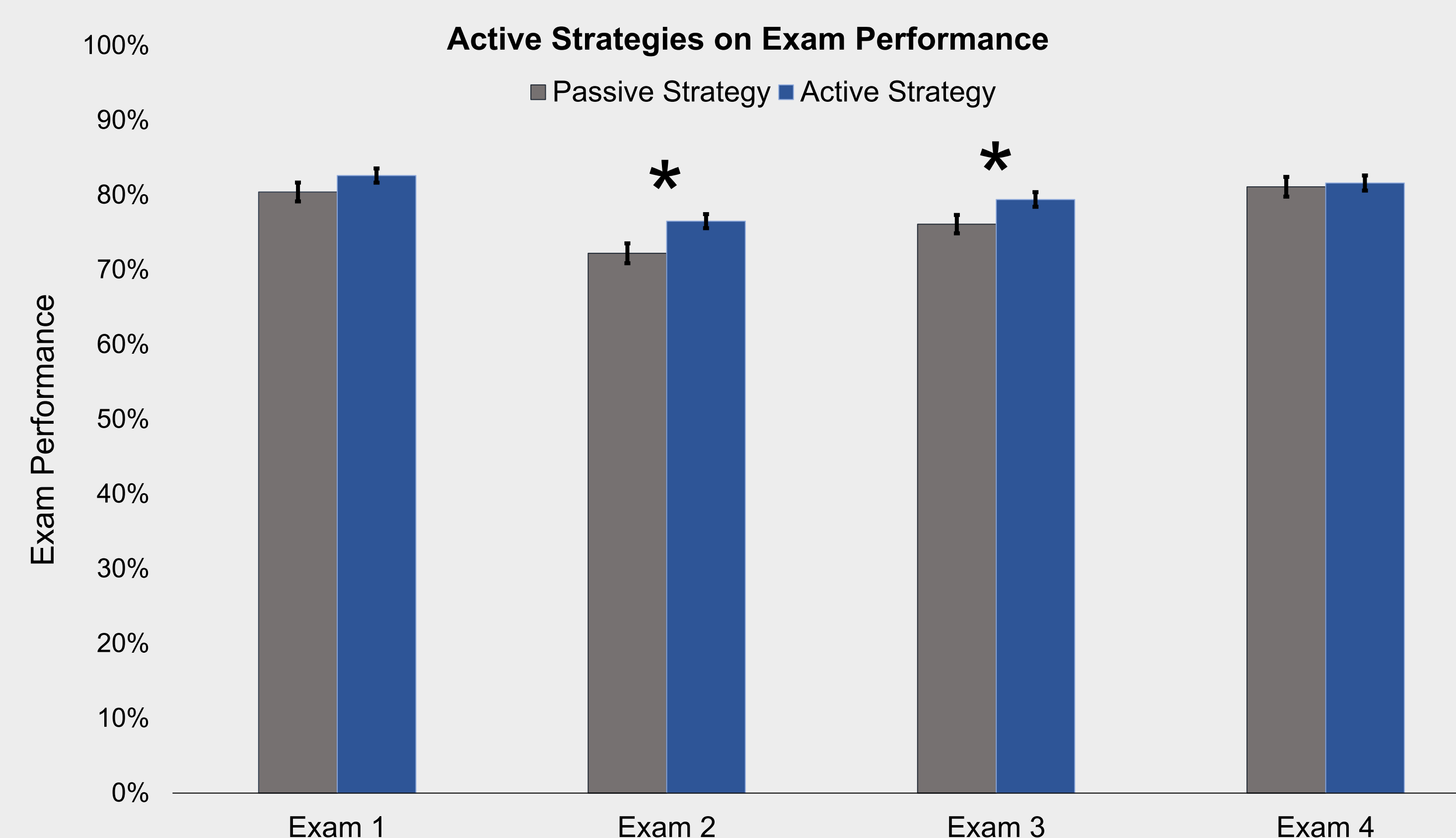
Study strategies: "Please select the methods you used to study for this course exam."

Study Strategy Frequencies

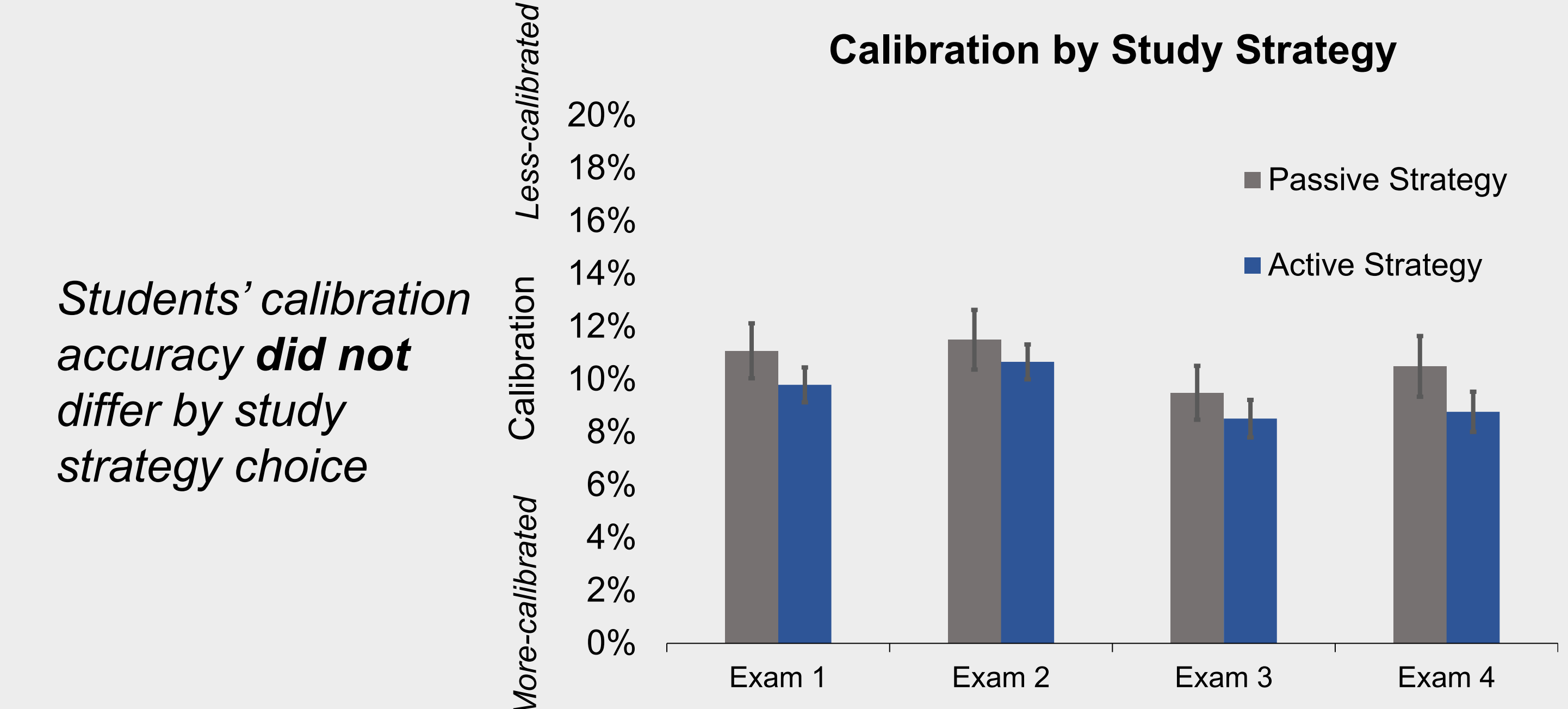
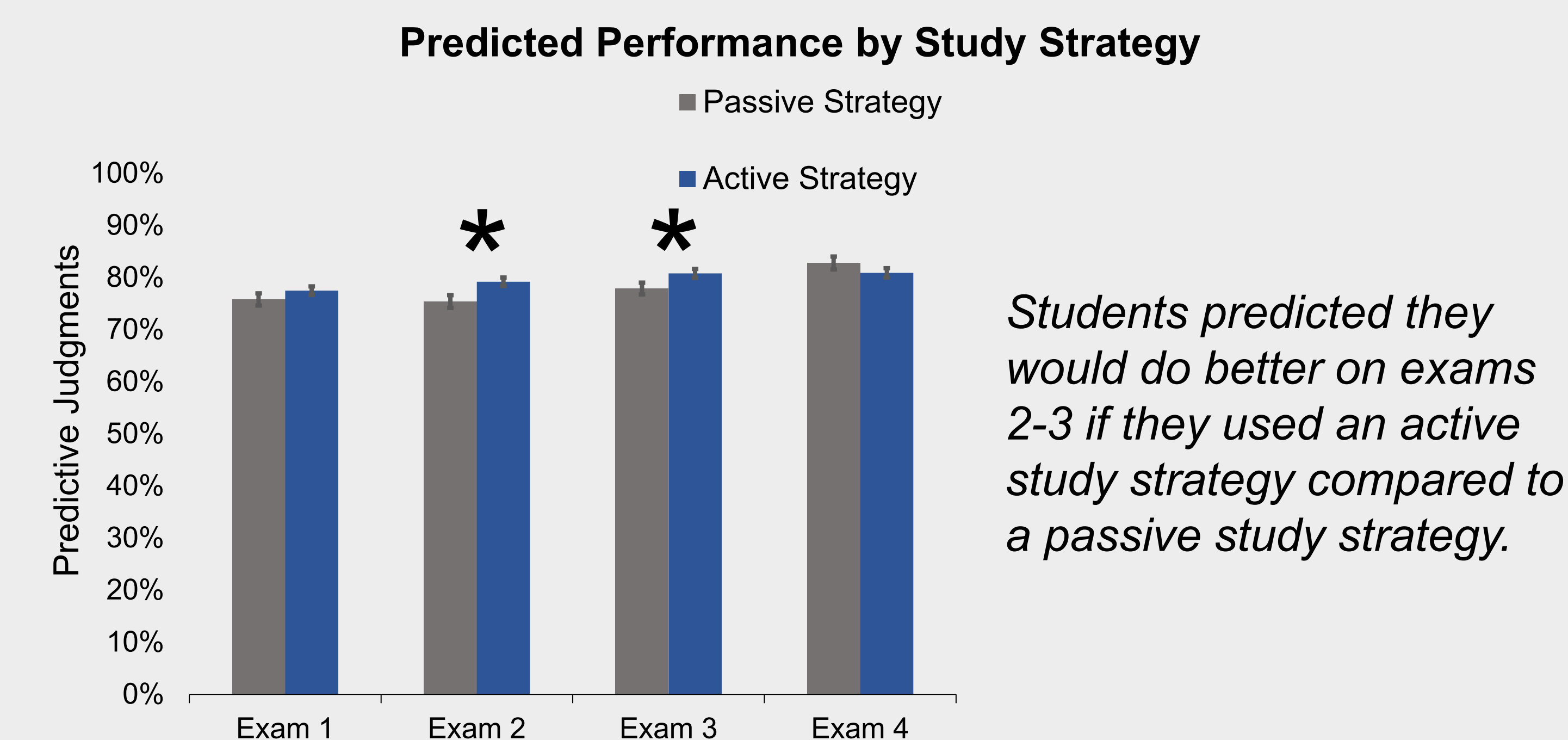
Strategy	Percent Use (Across all exams)	Strategy Coding
Re-read the chapters	57%	Passive
Completed Smartbook assignments and/or recharge	43%	N/A
Practice tested materials	40%	Active
Created or used Flashcards	26%	Active
Re-wrote notes or study guide	20%	Active
Highlighted key terms in book or notes	16%	Passive
No response	15%	N/A
Other strategy not listed	12%	N/A
Studied with a friend	7%	N/A
Did not study beyond class assignments	4%	No Strategy



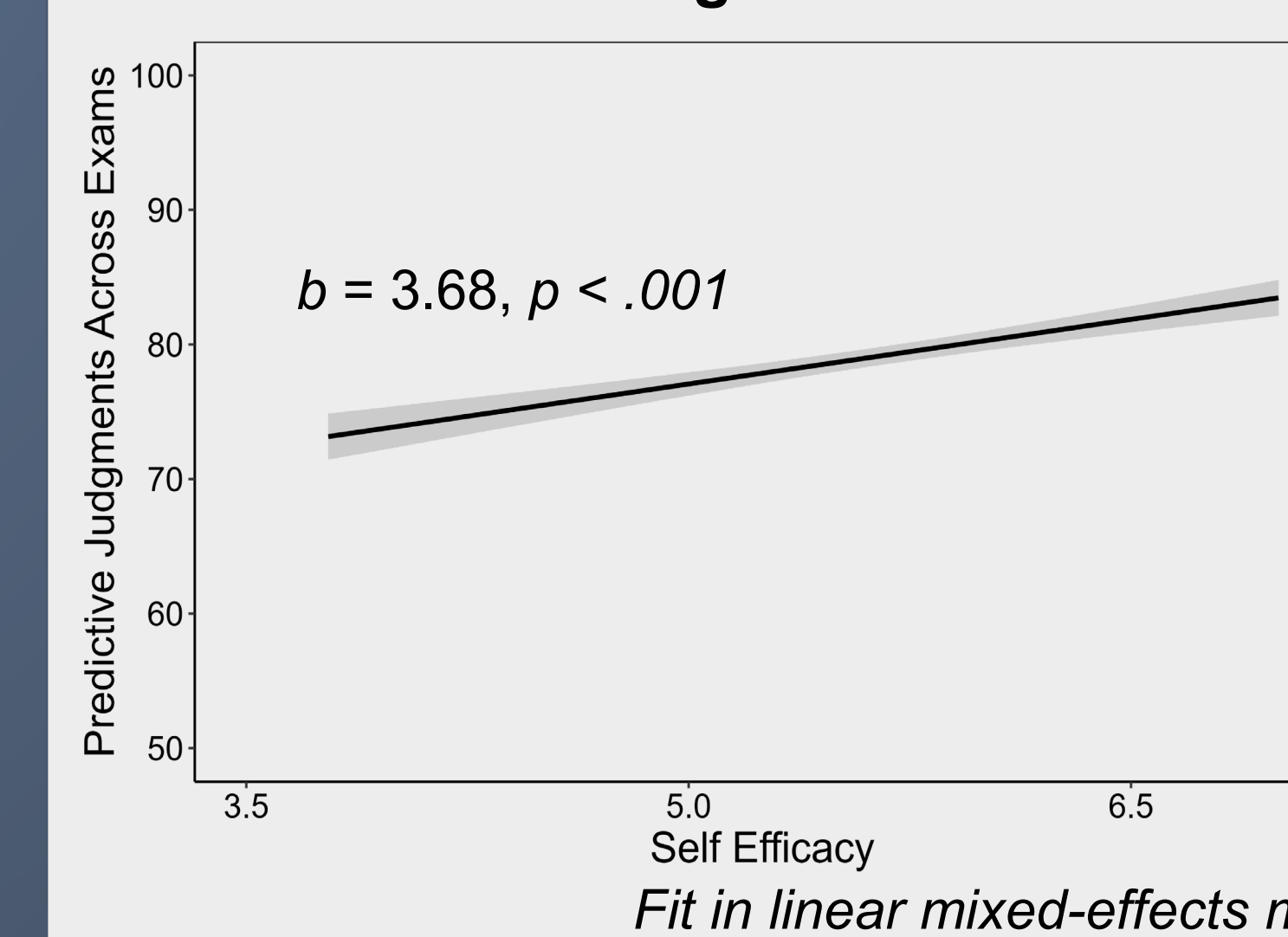
Study Strategies and Exam Performance



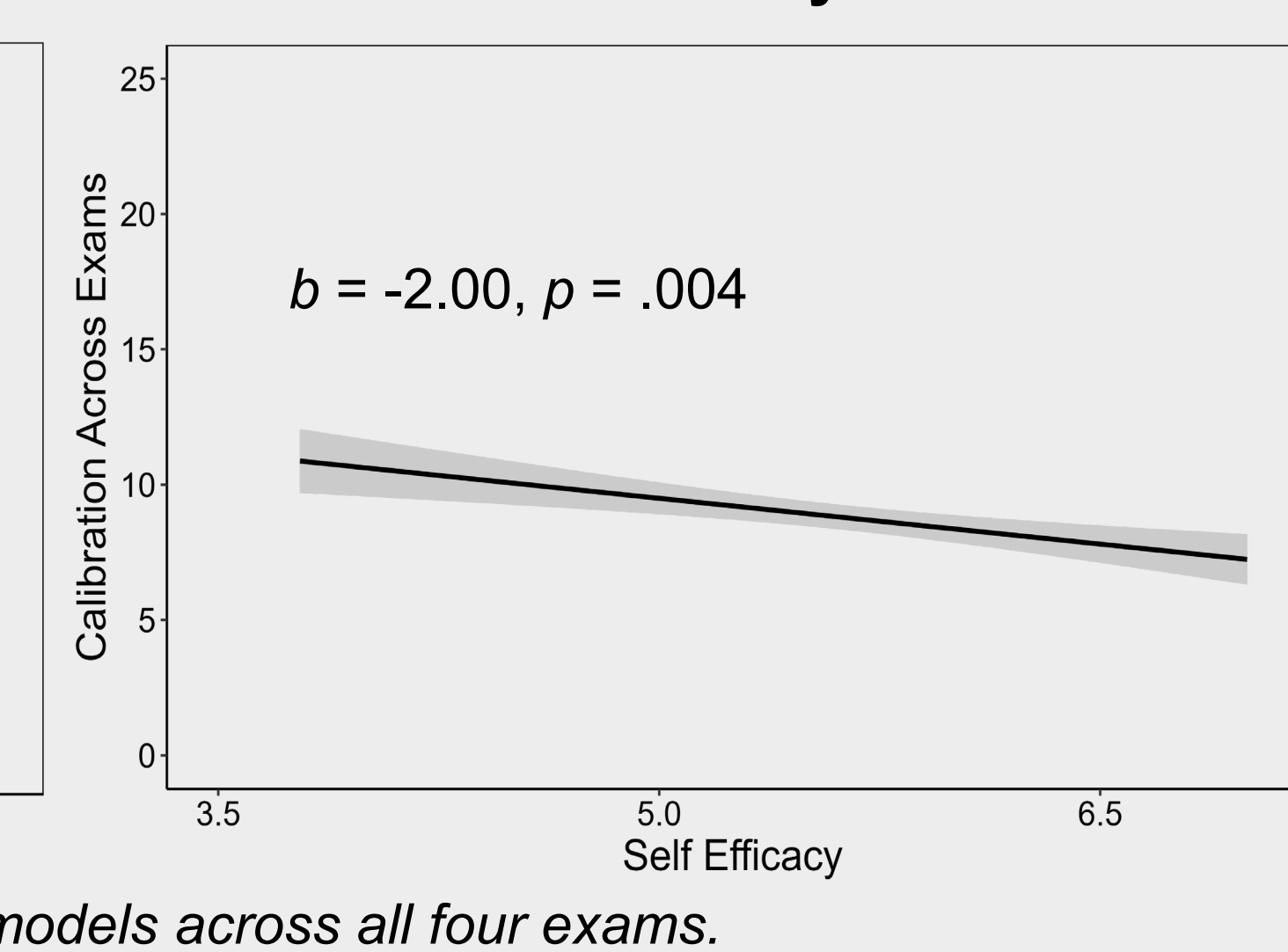
Metacognitive Accuracy by Study Strategy and Self-Efficacy



Self Efficacy Relates to Predictive Judgments



Self Efficacy Relates to Calibration Accuracy



Discussion and Future Directions

- Frequency of re-reading was similar to prior work, but students were less likely to report active strategies in the current study compared to prior work (Morehead et al., 2016; Hartwing & Dunlosky, 2012).
- Further examination is needed as to why active study strategies did not lead to more well calibrated metacognitive judgments.
- Metacognitive accuracy may not differ by self-reported study strategies in classrooms with existing supports (e.g., required practice testing).