

Big 5 Personality Characteristics Are Related to Choices About Study Strategy

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Introduction

What is the Big Five?

- Personality traits correlated with certain behaviors (Borkenau, 1992)
 - Conscientiousness, openness to experience, agreeableness, extraversion, neuroticism
 - Predict how individuals will behave and act in specific situations (Lanning, 1994)
- Conscientiousness and extraversion positively correlated with academic performance and academic satisfaction (Rodrigues et al., 2021)
- Conscientiousness is a strong predictor of performance (Mammadov, 2021)

What is Growth Mindset?

- The belief that person's cognitive capacities can be improved over time
- Students with Growth Mindset have better grades and show increased levels of well-being compared to those with fixed mindset (Ortiz et al., 2019)
- Growth Mindset has correlated positively with conscientiousness and openness (Bilingsley et al., 2021)

Retrieval Practice

- Research shows that the act of taking a test has a positive effect on learning the tested information (Roediger & Karpicke, 2006)
 - This is referred to as *Retrieval Practice*
- Students are often unaware of the benefits of retrieval practice and choose less effective strategies (Karpicke et al., 2009)

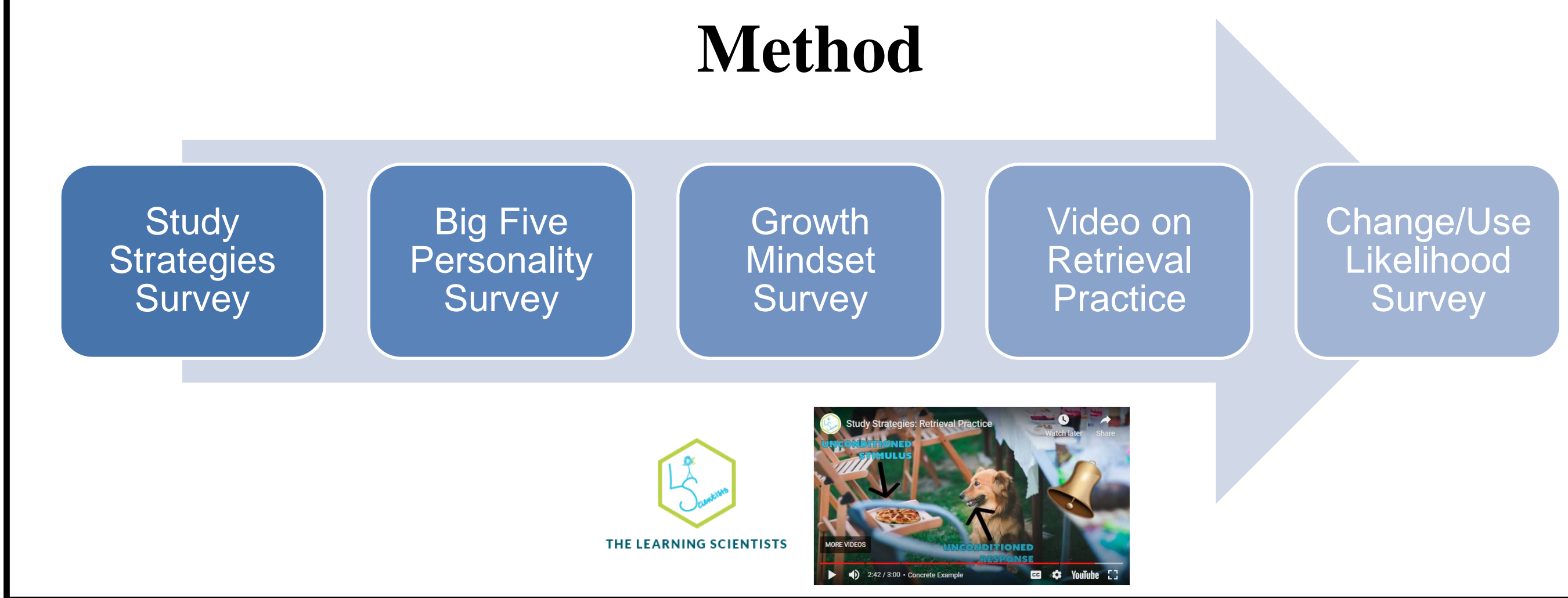
Study

- Students may be more willing to use retrieval practice as a study method if they are taught about the effectiveness of this strategy
- Willingness to change study strategies to use retrieval practice may be associated with personality
 - Conscientiousness, openness, agreeableness
 - Growth mindset
- *The Learning Scientists* produce materials aimed at teaching students about effective learning strategies

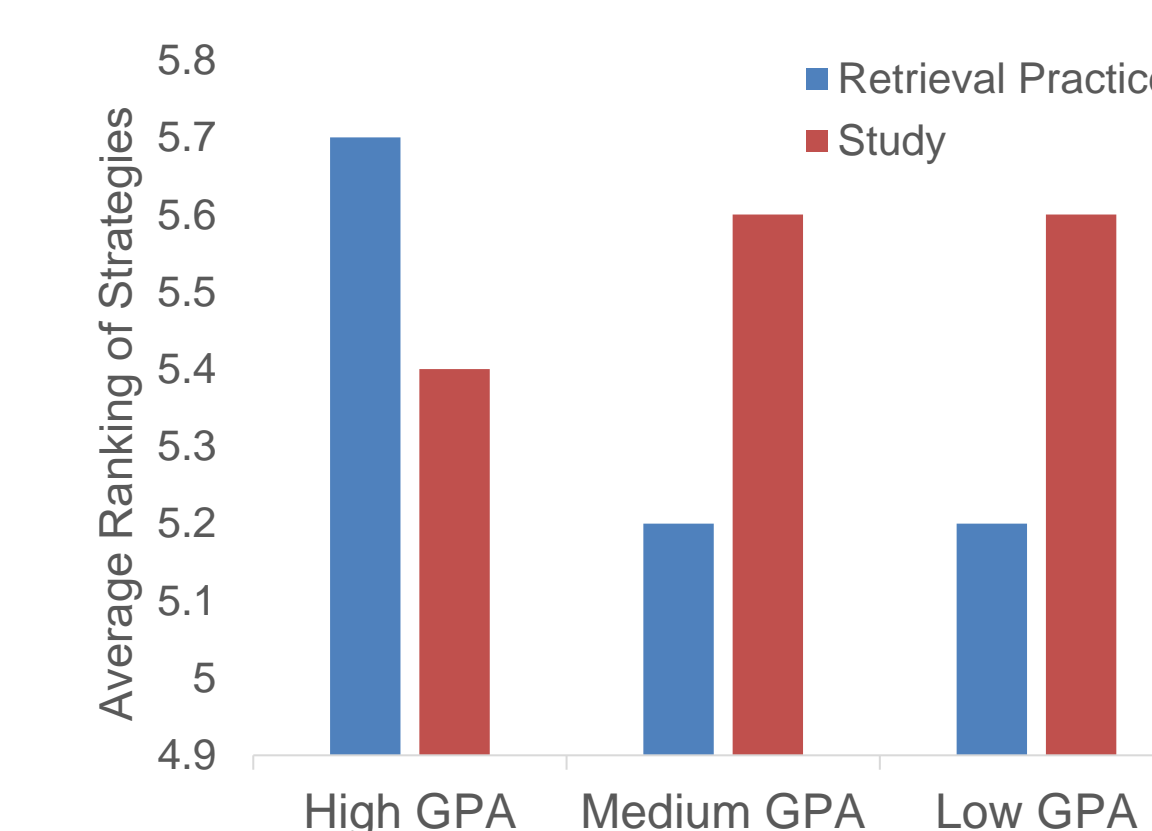
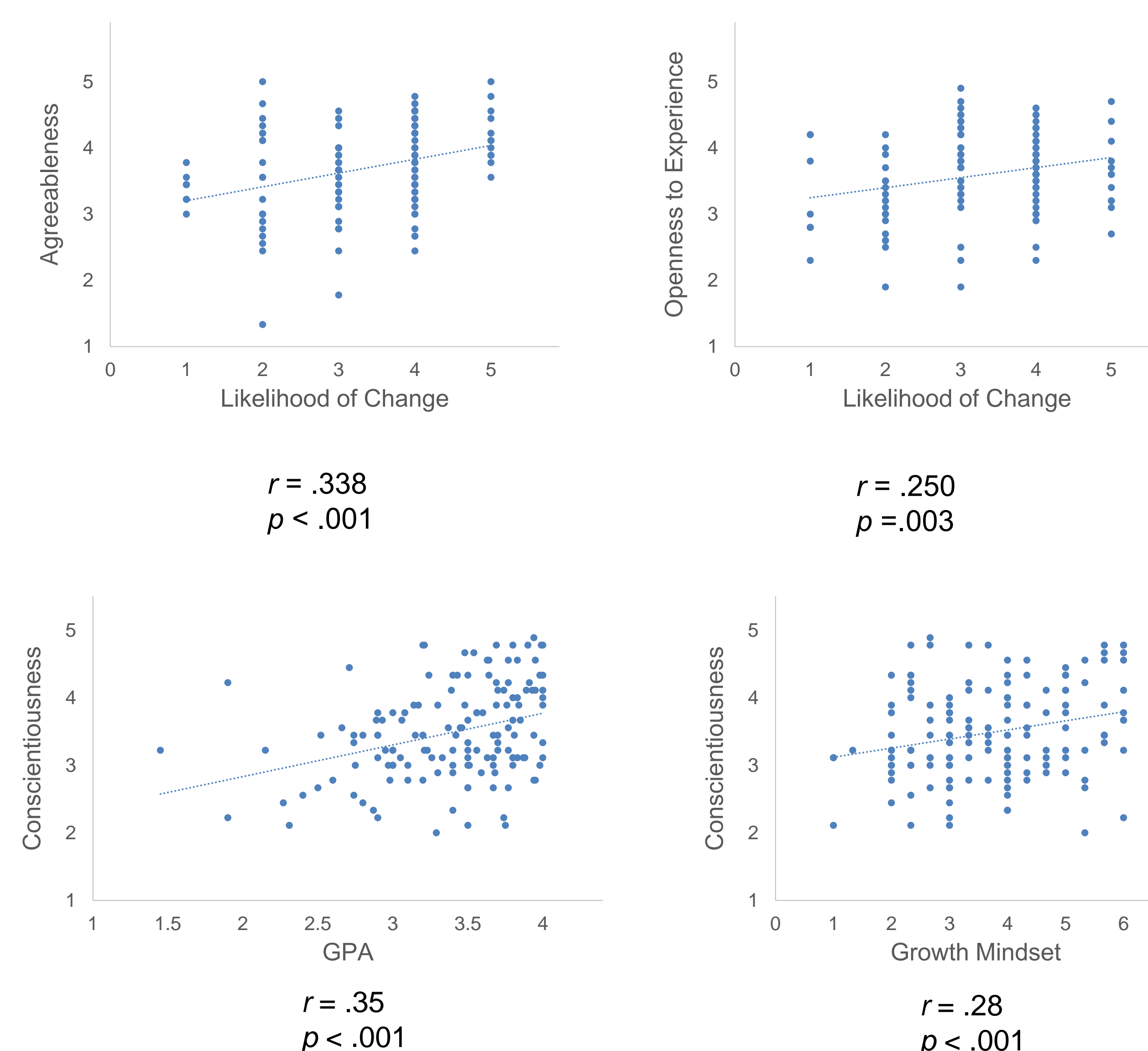
Hypotheses

- Likelihood of change to / use retrieval practice will be positively correlated with conscientiousness, openness and agreeableness
- GPA will be positively correlated with Conscientiousness; and
- Growth Mindset will be positively correlated with change/use of retrieval practice
- Students with high GPA will be more likely to use retrieval practice

Method



Results



Note: Lower rank indicates greater preference for this type of strategy

- Participants ranked 9 study strategies based on how much they preferred to use them
- Strategies were classified as Retrieval Practice if they involved retrieval (flashcards, practice problems, etc.) or as Study if they did not (rereading, highlighting, etc.)
- Participants were divided by high, medium, or low GPA

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Conclusions

Summary of findings

- Likelihood of changing strategies was positively correlated with agreeableness and openness
- Conscientiousness was positively correlated with GPA, but not with likelihood of changing strategies
- Likelihood of use findings mirror likelihood of change findings
- Growth mindset was also positively correlated with conscientiousness

Future Directions

- Finding strategies for academic motivation for those with lower conscientiousness, lower openness and lower agreeableness scores
- Improving strategies for raising conscientiousness among students

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