

Individual Differences in Learning Strategy as they Relate to Study Habits and Preferences



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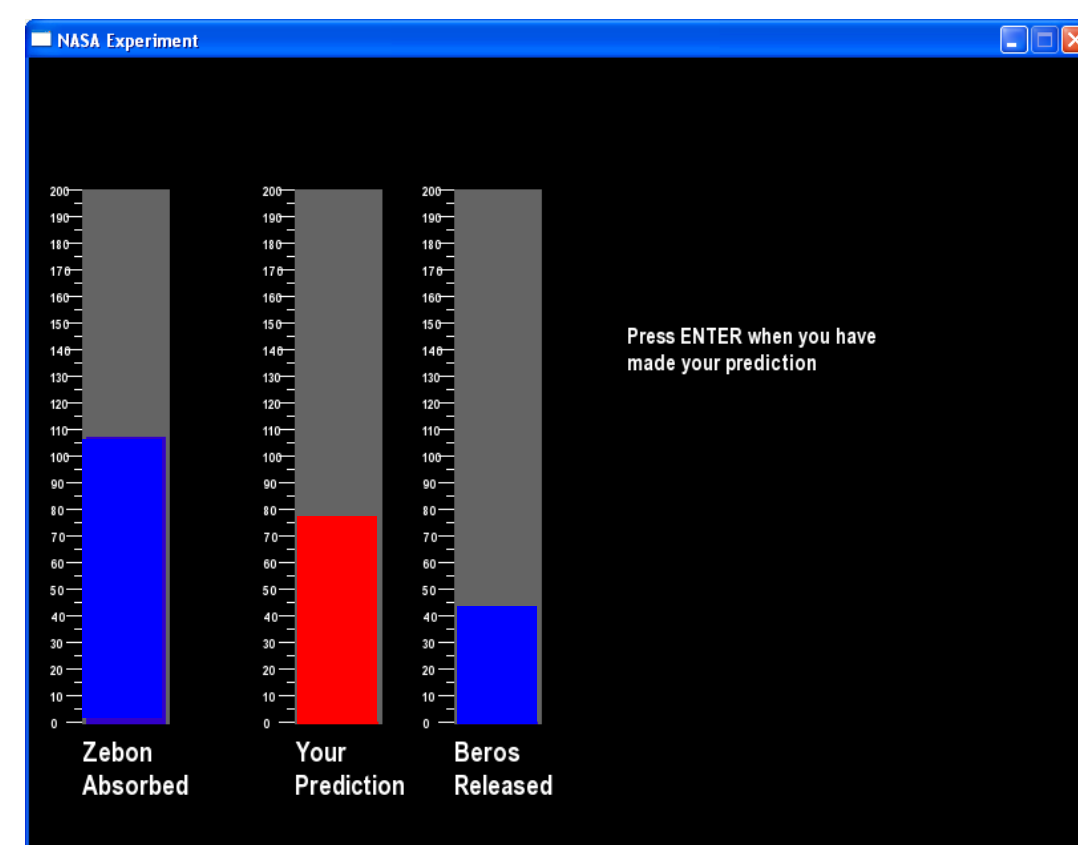
Background

1. Instructors often describe two types of learners: those who memorize and others who make connections between material.
2. A typical function-learning task has been used to identify these strategies for learning.
3. In the current study, we examined the educational relevance of these types of learning.

General Methods

Function Learning

Training: 10 blocks of 20 randomly ordered odd-numbered input values between 80 and 120



Test: 60 trials in a single random order; 20 repeated training trials, 20 even-numbered values in the training range, and 20 odd-numbered values above and below the training range

Study Strategy Survey

20-item questionnaire designed to determine study habits and academic preferences

Sample Questions

Q3: For most classes, I tend to forget everything once the semester is over.

Q12: I like when test material builds off of previously taught concepts.

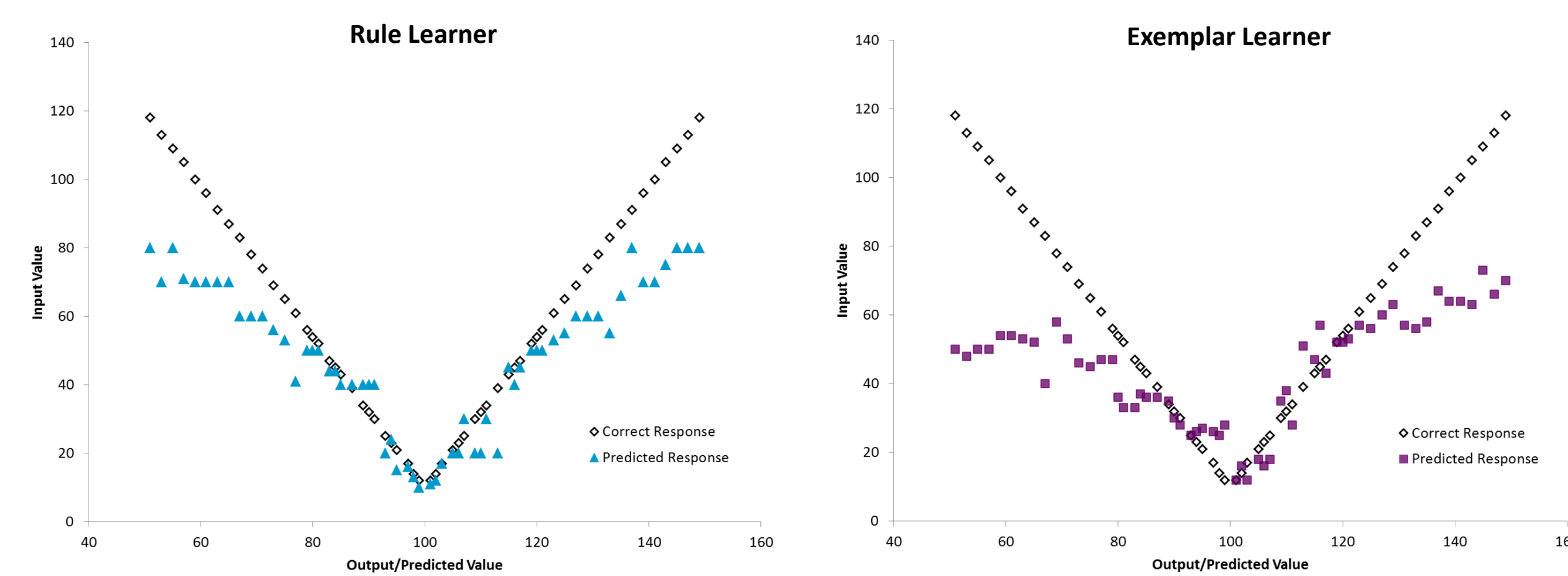
Q20: When I get a study guide, I memorize everything on it.

Learner Determination

Non-learners: Performed poorly on last block of training

Rule Learners: Demonstrated understanding of V-shaped function on new trials outside training range

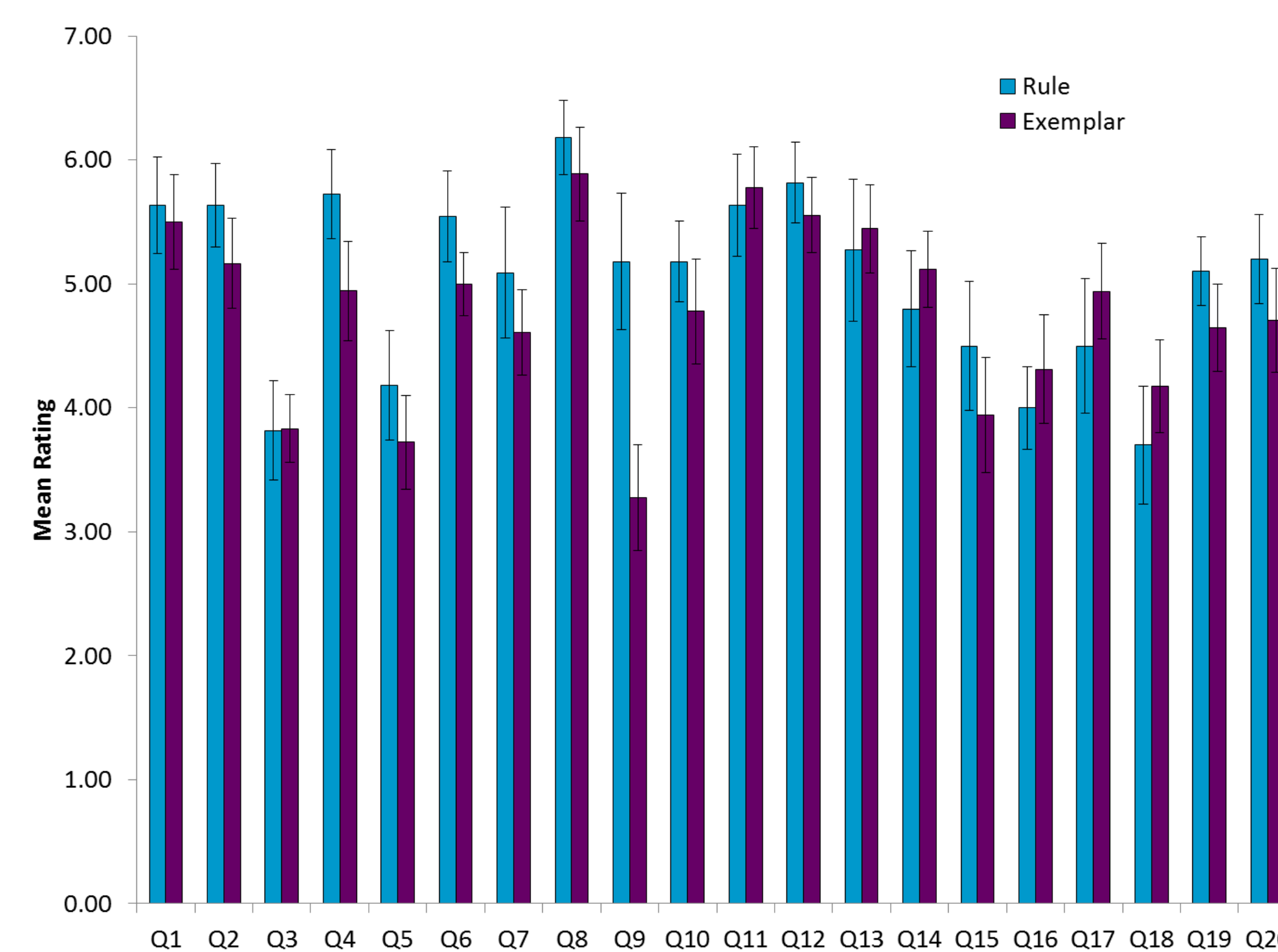
Exemplar Learners: Did not demonstrate understanding of V-shaped function



Study 1

Purpose: Examine differences in study habits between rule and exemplar learners

Results:

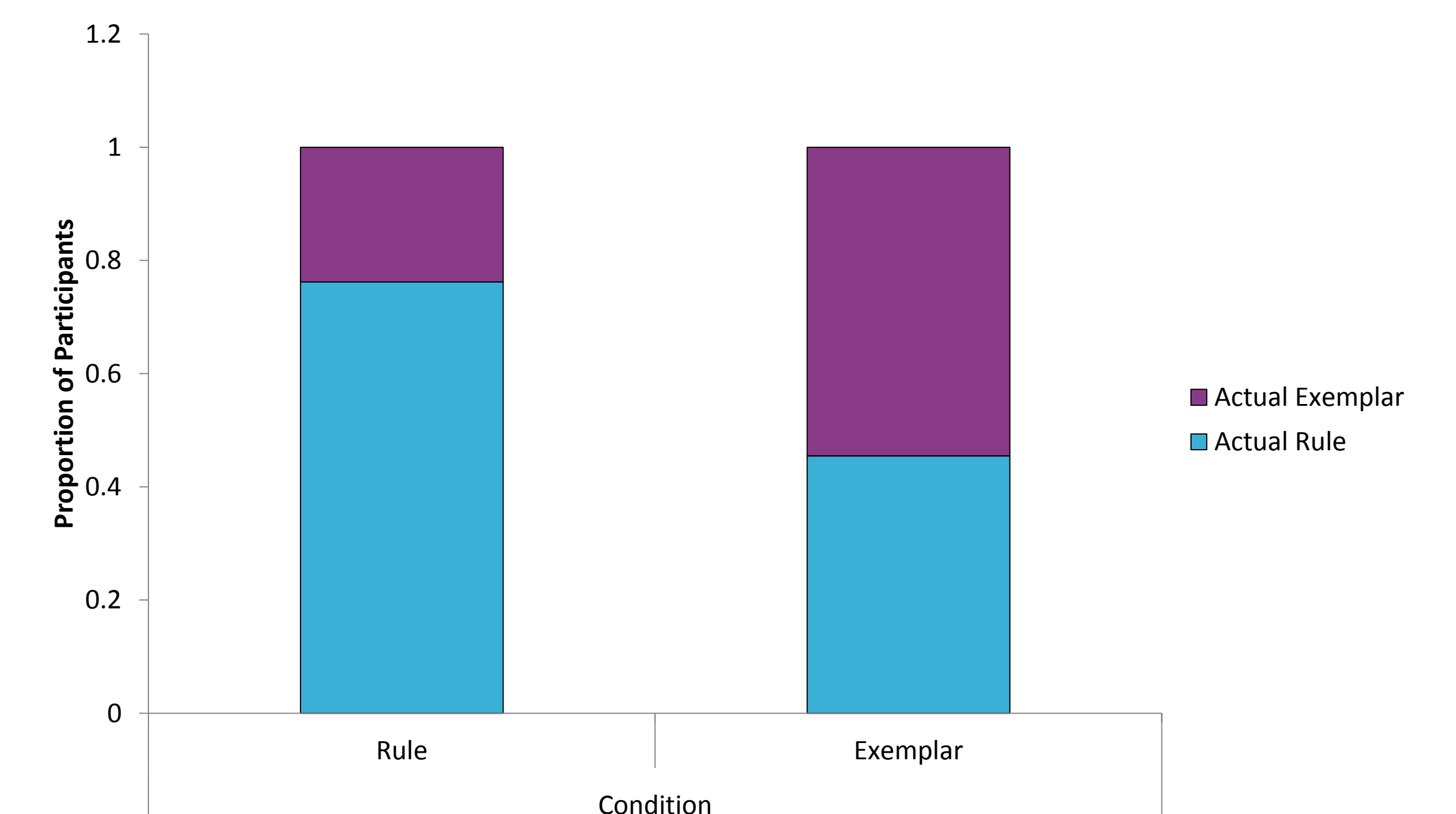


Q9: $p = .011$; Bonferroni correction: $\alpha = .0025$.

Study 2

Purpose: Examine if individuals can flexibly apply learning strategy when given explicit instruction

Results:



$\chi^2(1) = 4.246, p = .039$

General Discussion

1. We found no significant differences in study habits between rule and exemplar learners.
2. Students may be able to flexibly apply learning strategies.
3. When instructed, participants tended to use the suggested learning strategy to meet the task demands.
4. Collectively, these results may indicate that there is limited ecological validity of the function learning task.
5. Future research should further examine classroom implications of function learning strategies.

Acknowledgements

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