Expectations and Memory: Positive and Negative Expectations of Memorizing the Armenian Alphabet

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Expectations and Memory: Positive and Negative Expectations of Memorizing the Armenian Alphabet

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Abstract

Methods

Participants: 45 undergraduate students (23 men, 22 women) aged from 18-26 years. N=45 undergraduate students (23 men, 22 women), ranging in age from 18-26 years were divided equally into three groups: Group 1 was a control group, Group 2 was manipulated to have positive expectations before testing, and Group 3 was manipulated to have negative expectations before testing. All groups were given three minutes to study 18 Armenian letters and their English-letter counterparts. Participants were then given two minutes to write the correct English letter next to each Armenian equivalent. A single-factor ANOVA comparing averages between groups showed non-significant results (p = .15).

Background

• Research suggests that expectations are strongly linked to performance, with studies showing that perceived expectations of parents is the strongest predictor of academic success, followed by perceived expectations of teachers. Alternately, perceived expectations of peers is the strongest predictor of social behavioral outcomes (Wentz, Russell, & Baker, 2016).
• Other research suggests that expectations may affect cognitive functioning: expectations mediate the impact of meditation on cognitive processes, with positive expectations associated with higher cognitive functioning (Pristich, Kosowsky, Gaab, & Krummenacher, 2016).
• General cognitive control processes may play a causal role in linguistics (Hussey et al., 2016) and individuals with impaired language abilities may have impaired short-term memory (Fred, Lockton, & Adams, 2012), showing a link between language and memory.
• As research suggests that expectations may mediate improve cognitive functioning, our study specifically tested whether there are significant effects of positive and negative expectations on short-term memory.
• The Armenian language is a unique, complex language, with no ties to any of the romantic languages (Godel, 1975). As such, utilizing the Armenian language in memory research would provide a means of testing participants unbiasedly. However, to our knowledge, the Armenian language has not been employed as a means of studying short-term memory and expectations.
• Understanding how expectations affect short-term memory regarding language will provide insight into factors hindering or enhancing language acquisition.

Hypothesis

Do positive and negative expectations affect short term memory?

We hypothesized that participants with positive expectations would correctly identify more letters of the Armenian alphabet that the control group, and that those with negative expectations would correctly identify fewer letters than the control group.

Results

A single-factor ANOVA revealed non-significant results (p = .15). On average, Group 2 (M = 12.73, SD = 3.37) correctly identified slightly more letters than Group 3 (M = 10.67, SD = 4.52). On average, Group 3 (M = 9.93, SD = 3.99) correctly identified slightly fewer letters than Group 1. Means and standard deviations were calculated for checking for confounding variables, and there were no significant differences between groups. Other variables (see above) were also tested for confounds (see above).

Discussion

• Our hypothesis was that participants with experimentally-induced positive expectations would correctly identify significantly more letters of the Armenian alphabet than the control group, and that those with experimentally-induced negative expectations would correctly identify fewer letters than the control group.
• The results were non-significant, failing to reject the null hypothesis that there is no difference in performance on an Armenian-alphabet task between the control group and groups who were experimentally-manipulated to have positive or negative expectations about their performance on the task.

Possible Confounds:

Most participants in the study were current college students or were college students at one time. College experience may provide increased opportunities to practice activities involving short-term memory. A sample of well-educated participants, practiced in literacy and learning, may moderate the actual effects (Martini & Senechal, 2012). Additionally, 21 of the participants (the students enrolled in the upper level psychology course) were aware that we were conducting a study that would manipulate a variable, and they may have detected that the passages they read prior to testing were written for the purpose of experimentally-manipulating positive or negative expectations. Finally, inter-rater reliability may be a confounding factor in our study. Of the three test administrators, Examiner 1 was the actual instructor of 21 of the participants. Similar to single-informant approaches, this may have led to participants striving to perform better than they normally would (Wentz, Russell, & Baker, 2016).

Future Implications

• Although our data were not significant, results trended toward significance and the mean scores of each group were in line with our hypotheses. A future study should include a larger sample size to provide enough power to detect an effect.
• The uniqueness of the measure is a strength of this study. To our knowledge, the Armenian language has never been utilized this way, thus, this study provides possibilities for implicating other foreign languages as measures of cognitive functioning, short-term memory, and expectations.
• The trending results suggest a link between expectations regarding a task and the ability to recall information. These results could be useful for those learning a language, studying for school, or performing any task regarding memory.

References available upon request.