Recalling General and Specific Memories Affects Academic Performance
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Introduction

Do past and present academic experiences have a significant effect on current academic performance? Montet et al. (1996) looked at the effects of performance feedback and social visibility on incidental learning of peripheral stimuli. They hypothesized that the interaction of a student’s past and present classroom experiences can drastically affect their performance and distribution of attention. They found that the allocation of attention depends on the compatibility between students past academic experiences and the actual context of performance. When academic performance and the present are compatible they found that the students mind is free to process surrounding peripheral stimuli. Whereas when past academic experience and the present situation are incompatible it results in a very attention demanding situation and fewer peripheral stimuli are processed. This study reveals the importance of past academic experience and how it affects the distribution of attention.

Conway and Pleydell-Pearce (2000) suggested that autobiographical memories consist of three levels: lifetime periods, general events, and event-specific knowledge. They provided a breakdown of autobiographical memories and described the construction of patterns between levels as memories.

Method

Participants

• 61 undergraduate students from California State University, Fullerton participated in the experiment for partial fulfillment of the course research requirement.

Procedure

• Participants were asked to recall three autobiographical memories of academic performance consistent with one of four conditions. Specificity (general and specific) and content (success and failure) are the independent variables.

• General-Success: “In general, I am succeeding when…”

• General-Failure: “In general, I am failing when…”

• Specific-Success: “I succeeded once when I had to…”

• Specific-Failure: “I failed once when I had to…”

Manipulation check was given to assess typicality and pleasantness of each recalled memory measured on a 7-point numeric scale.

• Typicality

  “To what extent is this memory of success typical for you?”

  “To what extent is this memory of failure typical for you?”

• Pleasantness

  “To what extent is this memory pleasant for you?”

Participants watched a 15 minute video lecture on action potentials and basic neural communication. A 15 question exam was completed in 10 minutes based on the previous lecture. The proportion of correct answers on the exam was the dependent variable. The difficulty of each question was rated on a 7-point numeric scale.

Manipulation Check Results

\[ F(1, 57) = 7.69, p = .007, \eta^2 = .119. \]

\[ p^2 = .698. \]

\[ F(1, 59) = -.63, p = .532, \eta^2 = .046. \]

\[ p^2 = .075. \]

Results and Discussion

• A 2 (content) x 2 (specificity) between-within ANOVA was conducted on scores. A marginally significant interaction \[ F(1, 46) = 3.32, MSE = .032, p = .08, \eta^2 = .075. \] Participants who recalled memories of success answered more easy questions than participants who recalled memories of failure. However, the result for difficult questions was opposite. Future studies should investigate this phenomenon.

• Additional extraneous factors that may influence results include the social context (e.g. feedback and social visibility) of the classroom which may affect academic performance (Montet et al., 1996).

• Another factor was that the students were not allowed to take notes during the lecture. Williams and Eggert (2002) suggested that note-taking in the lecture facilitates learning. In an actual classroom lectures, students take notes to absorb and learn the content. In college campuses, note-taking on lectures is a common practice to many college students. It aids them in staying alert and it shows them the important content.

• The flaw of the current study should be considered. The study was conducted in cross-sectional format. Participants learned the material and were tested in the same session. Future studies should investigate using a longitudinal study format. There are many other potential variables in the academic setting that were not were not addressed in the current study that could be explored in future studies.

Hypotheses

• Hypothesis 1: Recalling general memories of failure will decrease performance

• Hypothesis 2: Recalling general memories of success will improve performance

• Hypothesis 3: Recalling specific memories of failure will not decrease performance

• Hypothesis 4: Recalling specific memories of success will not improve performance.

References


