

## News from the field

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### LEARNING

#### Intervention to improve academic performance

Chen, P., Chavez, O., Ong, D. C., & Gunderson, B. (2017). Strategic Resource Use for Learning: A Self-Administered Intervention That Guides Self-Reflection on Effective Resource Use Enhances Academic Performance. *Psychological Science*. doi:10.1177/0956797617696456

As cognitive psychologists, many of us have experienced disappointment at the continual failure to incorporate evidence-based information regarding learning and memory into the classroom. A recent study published in *Psychological Science* reports one free technique to improving classroom performance that the students themselves can control, without needing administration, teachers or professors to implement on their behalf, called Strategic Use Intervention. The authors randomly divided consenting students of Introductory Statistics courses into control and treatment conditions. A week to ten days prior to an exam, all students in both conditions were given a survey that asked questions regarding the grade they wanted to get on the upcoming exam, their motivation and confidence level in earning the desired grade, and were reminded about the upcoming exam. For the students in the treatment condition the survey continued by instructing the student to consider the upcoming exam format and select a subset of the available resources (out of 15 listed, such as lecture notes, practice exam questions, office hours, private tutoring, and peer discussions) that would help them study. Students were then prompted to articulate why each selected resource would be useful and make concrete and realistic plans on how, when, and where they were going to use the chosen resources. After the exams the authors also collected information regarding the student's self-reflections on the effectiveness of their approaches examining the resources they

ultimately used, how useful they found the resources to be, and other psychological aspects such as motivation and affect.

The students who participated in the Strategic Use Intervention treatment described above achieved, on average, a grade that was one third higher (e.g., B+ to an A-) than the control students. In addition to higher grades, the self-reflecting students also experienced emotional (i.e., lower negative affect toward upcoming exams) and motivational (i.e., higher perceived control over their own performance in class) benefits. The students in the treatment group reported significantly more self-reflection regarding their learning compared to the control group, such that strategic contemplation of how to effectively approach studying, increased their perceived utility of the available learning resources, which predicted how well they performed in class. Students in the treatment group actually used fewer learning resources than the control group, suggesting that the intervention helped the students use resources more effectively – working smarter, not harder. Importantly, the benefit was not limited to students of a particular demographic or performance level, indicating this exercise can potentially help all students in the classroom.

This paper reads like an instruction guide on cultivating the ideal student – one who recognizes their agency over success in the course and practices self-reflection on their learning, creating a realistic plan to use the class resources, resulting in better performance. It is important to note that simply reminding students about the upcoming exam and prompting them to consider their desired grade on the exam, which is what most of us professors probably do, was insufficient because those exercises were administered to the control group in this study. Perhaps incorporating this intervention into a course would eliminate the end of the semester pleas to raise one's final grade in exchange for a perfect rating on [ratemyprofessor.com](http://ratemyprofessor.com). To extrapolate beyond classroom

performance, implementing a modified Strategic Use Intervention activity into a lab meeting every few months might increase graduate student and postdoc agency over their research goals. Simply reminding lab members about upcoming conference or revision deadlines or looming projects, even while prompting researchers about how they want to perform on these tasks, does not appear to increase success if not accompanied by a strategic plan on using available resources. —Ashleigh M. Maxcey

## PERCEPTION

### Emotion perception and the Simon effect

Schlaghecken, Friederike; Blagrove, Elisabeth; Mantantzis, Konstantinos; Maylor, Elizabeth A.; Watson, Derrick G. (2017). Look on the bright side: Positivity bias modulates interference effects in the Simon task. *Journal of Experimental Psychology: General* 146(6), 763–770.

It has been repeatedly demonstrated that negative stimuli often benefit from a processing advantage such that they are processed rapidly relative to positive and/or neutral stimuli. With regard to negative faces, however, it has been shown that while these stimuli are detected more quickly than positive faces, they are categorized more

slowly. Given these conflicting findings, a group of researchers from the University of Warwick have now demonstrated that differential processing of negative faces can impact early attentional processes as measured in a modified Simon task. Schlaghecken, Blagrove, Mantantzis, Maylor, & Watson had participants respond to either positive (happy face), negative (sad face) or emotionally neutral (arrows) stimuli appearing at either a left or right target location. Though target location was irrelevant to the target identity response, it is well-established that the Simon effect occurs when target location is consistent with motor response such that targets appearing to the left are responded to more quickly with a left button press whereas targets appearing to the right are responded to more quickly with a right button press. In the present study, the fast processing/slow categorization of negative faces was expected to elicit a reduced Simon effect. Unexpectedly, however, this reduced Simon effect was not just observed for negative faces, but also for non-face stimuli which shared the same response as the negative faces. A second experiment replicated and extended this finding with different control stimuli. The authors suggest that spatial attention became biased away from the side associated with the negative faces and towards the side associated with positive faces, demonstrating an impact of positivity on early attentional processing.—Mike D. Dodd