

**In the right place at the right time:
The beneficial, but sensitive, effects of prequestions on learning**

Prof. Dr. Shana Carpenter

Decades of research have documented the beneficial effects of practicing to retrieve information, however less is known about the effects of answering questions before learning. Research on “prequestions” is quickly gaining momentum, with studies showing that answering questions prior to a learning event is significantly beneficial for subsequent learning, even if the answers to those questions are unknown and feedback is not provided at the time. This talk highlights key findings in the emerging research on prequestions, including candidate mechanisms for the effect and new data that support a specific mechanism based on attention orientation. Consistent with the notion that prequestions help orient learners to portions of the learning material that are most relevant to those prequestions, participants’ reading times and subsequent memory performance for information relevant to the prequestions (i.e., prequestioned information) were higher when that information appeared early in a reading passage, and their reading times and subsequent memory performance for information irrelevant to the prequestions (i.e., non-prequestioned information) were higher when that information came before, as opposed to after, the prequestioned information. Classroom data are presented that support this optimal spacing of prequestions, showing that strategic alignment of prequestions and the information within a lecture can optimize memory for both prequestioned and non-prequestioned information.

Vita

Dr. Shana Carpenter is a cognitive psychologist and professor of psychology at Oregon State University. She conducts research on ways to improve student learning and metacognition. She specializes in cognitive science principles that can be applied in classrooms to help students retain information, transfer what they have learned to new situations, and improve their awareness and regulation of their own learning. Dr. Carpenter is the author of over 80 published journal articles and book chapters on these topics, including a number of chapters and guides designed for teachers on how to apply cognitive science principles in the classroom. She teaches courses in introductory psychology, cognitive psychology, learning and memory, research methods, and advanced graduate seminars on topics related to teaching and learning.