

# Shana K. Carpenter

Curriculum Vitae  
September, 2025

## CONTACT INFORMATION:

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School of Psychological Science  
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## EDUCATION:

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Ph.D. (2004), Cognitive psychology, Colorado State University, Fort Collins, CO.  
M. S. (2003), Cognitive psychology, Colorado State University, Fort Collins, CO.  
B. A. (2000), Experimental psychology, University of Southern Colorado, Pueblo, CO.

## PROFESSIONAL EXPERIENCE:

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- Professor, School of Psychological Science, Oregon State University (2023 - present)
- Professor, Department of Psychology, Iowa State University (2021 - 2023)
- Associate Professor, Department of Psychology, Iowa State University (2014 - 2021)
- Assistant Professor, Department of Psychology, Iowa State University (2008 - 2014)
- Assistant Project Scientist, University of California, San Diego (2007 - 2008)
- Postdoc, Department of Psychology, University of California, San Diego (2005 - 2007)

## HONORS AND AWARDS:

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- Association for Psychological Science (APS) *Rising Star* Award (2012)
- Fellow of the Psychonomic Society
- Fellow of the Association for Psychological Science (APS)
- Iowa State University Gene Lange Innovation Award (2022)
- Iowa State University Department of Psychology Award for Mid-Career Research Excellence (2022)
- Iowa State University Department of Psychology Award for Outstanding Success in Extramural Funding (2017)
- Iowa State University Kentner-Fritz Award for Outstanding Research Productivity (2015)
- Iowa State University Award for Excellence in Honors Teaching (2011)
- Iowa State University Department of Psychology Award for Early Career Excellence in Research (2010)

## FUNDED GRANTS:

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Principal Investigator (Co-Investigators Andrew C. Butler, Jeffrey D. Karpicke, David Miele, Timothy Nokes-Malach, Uma Tauber), "Implementing Principles from the Science of Learning within Educational Practice." Collaborative Activity Award funded by the James S. McDonnell Foundation (\$4,635,718.00), 2016-2027.

Principal Investigator (Co-PIs Clark Coffman, Monica Lamm, Patrick Armstrong, Robert Reason), "Using Retrieval Practice to Enhance Achievement in STEM Courses." Proposal funded by the National Science Foundation (\$247,109.00), 2015-2018.

Principal Investigator (Co-PI Veronica Dark), "Exploring the Optimal Placement of Practice Questions for Enhancing Student Learning." Seed Grant funded by the Iowa State University College of Liberal Arts and Sciences (\$8000.00), 2015-2016.

Principal Investigator, "Implementing Retrieval-Based Interventions to Enhance Achievement in STEM Courses." Small Grant funded by the Iowa State University Department of Psychology (\$3852.00), 2015.

## **PUBLICATIONS:**

(graduate student/postdoc author, undergraduate student author)

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King-Shepard, Q., Walker, J., Nokes-Malach, T. J., **Carpenter, S. K.**, & Fraundorf, S. (in press). The effect of prequestions on learning: A multilevel meta-analysis. *Educational Psychology Review*.

Corral, D., & **Carpenter, S. K.** (in press). Effects of retrieval practice on retention and application of complex educational concepts. *Learning & Instruction*.

**Carpenter, S. K.**, & Pan, S. C. (in press). Spacing effects in learning and memory. In L. Mickes (Ed.), *Cognitive Psychology of Memory, Vol. 2 Learning and Memory: A Comprehensive Reference, 3<sup>rd</sup> edition*, J. T. Wixted (Ed.). Oxford: Academic Press.

Obergassel, N., Renkl, A., Endres, T., Nückles, M., **Carpenter, S. K.**, & Roelle, J. (2025). Combining generative tasks and retrieval tasks. *Journal of Educational Psychology*, 117, 980-997.

**Carpenter, S. K.** (2025). Spaced practice: Optimize class time to boost learning. In P. K. Agarwal (Ed.), *Smart Teaching, Stronger Learning: Practical Tips From 10 Cognitive Scientists*. Unleash Learning, LLC.

Corral, D., & **Carpenter, S. K.** (2024). Acquiring complex concepts through classification versus observation. *Cognitive Research: Principles and Implications*, 9, 81.

Endres, T., **Carpenter, S. K.**, & Renkl, A. (2024). Constructive retrieval: Benefits for learning, motivation, and metacognitive monitoring. *Learning & Instruction*, 94.

**Carpenter, S. K.** (2023). Encouraging students to use retrieval practice: A review of emerging research from five types of interventions. *Educational Psychology Review*, 35, 96.

Pan, S. C., & **Carpenter, S. K.** (2023). Prequestioning and pretesting effects: A review of empirical research, theoretical perspectives, and implications for educational practice. *Educational Psychology Review*, 35, 97.

Witherby, A. E., **Carpenter, S. K.**, & Smith, A. M. (2023). Exploring the relationship between prior knowledge and metacognitive monitoring accuracy. *Metacognition & Learning*, 18, 591-621.

- Sana, F., & **Carpenter, S. K.** (2023). Broader benefits of the pretesting effect: Placement matters. *Psychonomic Bulletin & Review*, 30, 1908-1916.
- Corral, D., **Carpenter, S. K.**, & St. Hilaire, K. J. (2023). The effects of retrieval versus study on analogical problem solving. *Psychonomic Bulletin & Review*, 30, 1954-1965.
- Corral, D., & **Carpenter, S. K.** (2023). Long-term hypercorrection, return errors, and the transfer of learning in the classroom. *Journal of Applied Research in Memory & Cognition*, 12, 208-229.
- Northern, P. E., Tauber, S. K., St. Hilaire, K. J., & **Carpenter, S. K.** (2023). Application of a two-phase model of note quality to explore the impact of instructor fluency on students' note-taking. *Journal of Applied Research in Memory & Cognition*, 12, 94-104.
- Carpenter, S. K.**, King-Shepard, Q., & Nokes-Malach, T. J. (2023). The prequestion effect: Why it is useful to ask students questions before they learn. In C. Overson, C. Hakala, L. Kordonowy, & V. Benassi (Eds.) *In their own words: What scholars want you to know about why and how to apply the science of learning in your academic setting* (pp. 74-82). Society for the Teaching of Psychology.
- Carpenter, S. K.** (2023). Optimizing learning through retrieval practice and spacing. In R. Tierney, F. Rizvi, & K. Ercikan (Eds.), *International Encyclopedia of Education*. Elsevier.
- Witherby, A. E., & **Carpenter, S. K.** (2022). The impact of lecture fluency and technology fluency on students' online learning and evaluations of instructors. *Journal of Applied Research in Memory & Cognition*, 11, 500-509.
- Carpenter, S. K.**, Pan, S. C., & Butler, A. C. (2022). The science of effective learning with spacing and retrieval practice. *Nature Reviews Psychology*, 1, 496-511.
- Witherby, A. E., & **Carpenter, S. K.** (2022). The rich-get-richer effect: Prior knowledge predicts new learning of domain-relevant information. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 48, 483-498.
- Kelly, J. W., Lim, A. F., & **Carpenter, S. K.** (2022). Turn-by-turn route guidance does not impair route learning. *Journal of Applied Research in Memory & Cognition*, 11, 76-84.
- Yeung, K. L., **Carpenter, S. K.**, & Corral, D. (2021). A comprehensive review of educational technology on objective learning outcomes in academic contexts. *Educational Psychology Review*, 33, 1583-1630.
- Carpenter, S. K.** (2021). Distributed practice/spacing effect. In Li-fang Zhang (Ed.), *Oxford Research Encyclopedia of Education*. Oxford University Press.
- Corral, D., **Carpenter, S. K.**, & Clingan-Siverly, S. (2021). The effects of immediate vs. delayed explanatory feedback on complex concept learning. *Quarterly Journal of Experimental Psychology*, 74, 786-799.
- de Bruin, A. B. H., Roelle, J., **Carpenter, S. K.**, & Baars, M. (2020). Synthesizing cognitive load and self-regulation theory: A theoretical framework and research agenda. *Educational Psychology Review*, 32, 903-915.
- Carpenter, S. K.**, Endres, T., & Hui, L. (2020). Students' use of retrieval in self-regulated learning: Implications for monitoring and regulating effortful learning experiences. *Educational Psychology Review*, 32, 1029-1054.

- St. Hilaire, K. J., & **Carpenter, S. K.** (2020). Prequestions enhance learning, but only when they are remembered. *Journal of Experimental Psychology: Applied*, 26, 705-716.
- Corral, D., & **Carpenter, S. K.** (2020). Facilitating transfer through incorrect examples and explanatory feedback. *Quarterly Journal of Experimental Psychology*, 73, 1340-1359.
- Carpenter, S. K.**, Witherby, A. E., & Tauber, S. K. (2020). On students' (mis)judgments of learning and teaching effectiveness: Where we stand and how to move forward. *Journal of Applied Research in Memory & Cognition*, 9, 181-185.
- Carpenter, S. K.**, Witherby, A. E., & Tauber, S. K. (2020). On students' (mis)judgments of learning and teaching effectiveness. *Journal of Applied Research in Memory & Cognition*, 9, 137-151.
- Corral, D., **Carpenter, S. K.**, Perkins, K., & Gentile, D. (2020). Assessing students' use of optional online lecture reviews. *Applied Cognitive Psychology*, 34, 318-329.
- Carpenter, S. K.**, & Geller, J. (2020). Is a picture really worth a thousand words? Evaluating contributions of fluency and analytic processing in metacognitive judgments for pictures in foreign language vocabulary learning. *Quarterly Journal of Experimental Psychology*, 73, 211-224.
- Carpenter, S. K.**, Northern, P. E., Tauber, S. K., & Toftness, A. R. (2020). Effects of lecture fluency and instructor experience on students' judgments of learning, test scores, and evaluations of instructors. *Journal of Experimental Psychology: Applied*, 26, 26-39.
- St. Hilaire, K. J., **Carpenter, S. K.**, & Jennings, J. (2019). Using prequestions to enhance learning from reading passages: The roles of question type and structure building ability. *Memory*, 27, 1204-1213.
- Toftness, A. R., **Carpenter, S. K.**, Lauber, S., & Mickes, L. (2018). The limited effects of prequestions on learning from authentic lecture videos. *Journal of Applied Research in Memory & Cognition*, 7, 370-378.
- Geller, J., Still, M., Dark, V. J., & **Carpenter, S. K.** (2018). Would disfluency by any other name still be disfluent? Examining the disfluency effect with cursive handwriting. *Memory & Cognition*, 46, 1109-1126.
- Carpenter, S. K.**, Haynes, C. L., Corral, D., & Yeung, K. L. (2018). Hypercorrection of high confidence errors in the classroom. *Memory*, 26, 1379-1384.
- Carpenter, S. K.**, Rahman, S., & Perkins, K. (2018). The effects of prequestions on classroom learning. *Journal of Experimental Psychology: Applied*, 24, 34-42.
- Geller, J., Toftness, A. R., Armstrong, P. I., **Carpenter, S. K.**, Manz, C. L., Coffman, C. R., & Lamm, M. H. (2018). Study strategies and beliefs about learning as a function of academic achievement and achievement goals. *Memory*, 26, 683-690.
- Toftness, A. R., **Carpenter, S. K.**, Geller, J., Lauber, S., Johnson, M., & Armstrong, P. I. (2018). Instructor fluency leads to higher confidence in learning, but not better learning. *Metacognition & Learning*, 13, 1-14.

- Carpenter, S. K.** (2017). Spacing effects in learning and memory. In J. T. Wixted (Ed.), *Cognitive Psychology of Memory, Vol. 2 Learning and Memory: A Comprehensive Reference, 2<sup>nd</sup> edition*, J. H. Byrne (Ed.), pp. 465-485. Oxford: Academic Press.
- Geller, J., **Carpenter, S. K.**, Lamm, M. H., Rahman, S., Armstrong, P. I., & Coffman, C. R. (2017). Prequestions do not enhance the benefits of retrieval in a STEM classroom. *Cognitive Research: Principles & Implications*, 2:42.
- Carpenter, S. K.**, Rahman, S., Lund, T. J. S., Armstrong, P. I., Lamm, M. H., Reason, R. D., & Coffman, C. R. (2017). Students' use of optional online reviews and their relationship to summative assessment outcomes in introductory biology. *CBE Life Sciences Education*, 16, 1-9.
- Carpenter, S. K.**, & Toftness, A. R. (2017). The effect of prequestions on learning from video presentations. *Journal of Applied Research in Memory & Cognition*, 6, 104-109.
- Endres, T., **Carpenter, S. K.**, Martin, A., & Renkl, A. (2017). Enhancing learning by retrieval: Enriching free recall with elaborative prompting. *Learning & Instruction*, 49, 13-20.
- Carpenter, S. K.**, & Yeung, K. L. (2017). The role of mediator strength in learning from retrieval. *Journal of Memory & Language*, 92, 128-141.
- Carpenter, S. K.**, Mickes, L., Rahman, S., & Fernandez, C. S. (2016). The effect of instructor fluency on students' perceptions of instructors, confidence in learning, and actual learning. *Journal of Experimental Psychology: Applied*, 22, 161-172.
- Carpenter, S. K.**, Lund, T. J. S., Coffman, C. R., Armstrong, P. I., Lamm, M. H., & Reason, R. D. (2016). A classroom study on the relationship between student achievement and retrieval-enhanced learning. *Educational Psychology Review*, 28, 353-375.
- Kelly, J. W., **Carpenter, S. K.**, & Sjolund, L. A. (2015). Retrieval enhances route knowledge acquisition, but only when movement errors are prevented. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 41, 1540-1547.
- Rawson, K. A., Vaughn, K. E., & **Carpenter, S. K.** (2015). Does the benefit of testing depend on lag, and if so why? Evaluating the elaborative retrieval hypothesis. *Memory & Cognition*, 43, 619-633.
- Butler, A. C., & **Carpenter, S. K.** (2015). Separating myth from reality in education: Introduction to the special issue. *Educational Psychology Review*, 27, 563-565.
- Mullaney, K. M., **Carpenter, S. K.**, Grotenhuis, C., & Burianek, S. (2014). Waiting for feedback helps if you want to know the answer: The role of curiosity in the delay-of-feedback benefit. *Memory & Cognition*, 42, 1273-1284.
- Carpenter, S. K.** (2014). Enhancing student learning in low-maintenance and cost-effective ways. *Journal of Applied Research in Memory & Cognition*, 3, 121-123.
- Carpenter, S. K.** (2014). Spacing and interleaving of study and practice. In V. A. Benassi, C. E. Overson, & C. M. Hakala (Eds.), *Applying the science of learning in education: Infusing psychological science into the curriculum* (pp. 131-141). American Psychological Association.

- Carpenter, S. K., Wilford, M., Kornell, N., & Mullaney, K. M.** (2013). Appearances can be deceiving: Instructor fluency increases perceptions of learning without increasing actual learning. *Psychonomic Bulletin & Review*, 20, 1350-1356.
- Carpenter, S. K., & Mueller, F. E.** (2013). The effects of interleaving vs. blocking on foreign language pronunciation learning. *Memory & Cognition*, 41, 671-682.
- Carpenter, S. K., Lohse, K. R., Healy, A. F., Bourne, L. E. Jr., & Clegg, B. A.** (2013). External focus of attention improves performance in a speeded aiming task. *Journal of Applied Research in Memory & Cognition*, 2, 14-19.
- Carpenter, S. K., & Kelly, J. W.** (2012). Tests enhance retention and transfer of spatial learning. *Psychonomic Bulletin & Review*, 19, 443-448.
- Carpenter, S. K., Sachs, R. E., Martin, B., Schmidt, K., & Looft, R.** (2012). Learning new vocabulary in German: The effects of inferring word meanings, type of feedback, and time of test. *Psychonomic Bulletin & Review*, 19, 81-86.
- Carpenter, S. K., & Olson, K. M.** (2012). Are pictures good for learning new vocabulary in a foreign language? Only if you think they are not. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 38, 92-101.
- Carpenter, S. K.** (2012). Testing enhances the transfer of learning. *Current Directions in Psychological Science*, 21, 279-283.
- Carpenter, S. K., Cepeda, N. J., Rohrer, D., Kang, S. H. K., & Pashler, H.** (2012). Using spacing to enhance diverse forms of learning: Review of recent research and implications for instruction. *Educational Psychology Review*, 24, 369-378.
- Carpenter, S. K.** (2012). Effects of testing on learning. In N. Seel (Ed.), *Encyclopedia of the Sciences of Learning* (pp. 1095-1097). New York: Springer.
- Carpenter, S. K.** (2011). Semantic information activated during retrieval contributes to later retention: Support for the mediator effectiveness hypothesis of the testing effect. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 37, 1547-1552.
- Carpenter, S. K., & Vul, E.** (2011). Delaying feedback by three seconds benefits retention of face-name pairs: The role of active anticipatory processing. *Memory & Cognition*, 39, 1211-1221.
- Kang, S. H. K., Pashler, H., Cepeda, N. J., Rohrer, D., **Carpenter, S. K.**, & Mozer, M. C. (2011). Does incorrect guessing impair fact learning? *Journal of Educational Psychology*, 103, 48-59.
- Carpenter, S. K.** (2009). Cue strength as a moderator of the testing effect: The benefits of elaborative retrieval. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 35, 1563-1569.
- Carpenter, S. K., Pashler, H., & Cepeda, N. J.** (2009). Using tests to enhance 8<sup>th</sup> grade students' retention of U. S. history facts. *Applied Cognitive Psychology*, 23, 760-771.
- Carpenter, S. K., Pashler, H., Wixted, J. T., & Vul, E.** (2008). The effects of tests on learning and forgetting. *Memory & Cognition*, 36, 438-448.

- Carpenter, S. K., & Pashler, H.** (2007). Testing beyond words: Using tests to enhance visuospatial map learning. *Psychonomic Bulletin & Review*, 14, 474-478.
- Pashler, H., Rohrer, D., Cepeda, N. J., & **Carpenter, S. K.** (2007). Enhancing learning and retarding forgetting: Choices and consequences. *Psychonomic Bulletin & Review*, 14, 187-193.
- Wixted, J. T., & **Carpenter, S. K.** (2007). The Wickelgren power law and the Ebbinghaus savings function. *Psychological Science*, 18, 133-134.
- Carpenter, S. K., Pashler, H., & Vul, E.** (2006). What types of learning are enhanced by a cued recall test? *Psychonomic Bulletin & Review*, 13, 826-830.
- Carpenter, S. K., & DeLosh, E. L.** (2006). Impoverished cue support enhances subsequent retention: Support for the elaborative retrieval explanation of the testing effect. *Memory & Cognition*, 34, 268-276.
- Carpenter, S. K., & DeLosh, E. L.** (2005). Application of the testing and spacing effects to name learning. *Applied Cognitive Psychology*, 19, 619-636.
- Carpenter, S. K.** (2005). Some neglected contributions of Wilhelm Wundt to the psychology of memory. *Psychological Reports*, 97, 63-73.

**INVITED TALKS:** (graduate student/postdoc author, undergraduate student author)

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- Carpenter, S. K.** (2025, April). *Enhancing learning through “pretrieval”: Why it is useful to ask students questions before they learn*. Keynote address presented at the Learning & the Brain Conference, New York, NY.
- Carpenter, S. K.** (2024, February). *The science of effective learning: The benefits of retrieval practice and spacing*. Presented at the Educational Development Seminar, Swedish University of Agricultural Sciences, Uppsala, Sweden.
- Carpenter, S. K.** (2023, November). *“Pretrieval practice:” Why it is useful to ask students questions before they learn*. Presented at the Mesolab group meeting, Indiana University, Bloomington, IN.
- Carpenter, S. K.** (2023, November). *The science of effective learning and teaching: Retrieval practice, spacing, and metacognition*. Keynote address presented at the Learning & the Brain Conference, Boston, MA.
- Carpenter, S. K.** (2023, October). *Using questions as teaching tools: How pretrieval can boost academic success*. Center for Teaching and Learning, Oregon State University.
- Carpenter, S. K.** (2023, October). *“Pretrieval practice:” Why it is useful to ask students questions before they learn*. Keynote address presented at the Würzburg International Autumn School, University of Würzburg, Germany.
- Carpenter, S. K.** (2023, May). *Questions as teaching tools: How “pretrieval” can boost academic success*. Oregon State University, School of Psychological Science.
- Carpenter, S. K.** (2023, January). *The science of effective learning with retrieval practice and spacing*. Presented at the College of Veterinary Medicine, Iowa State University, Ames, IA.

- Carpenter, S. K.** (2022, October). *The science of effective learning: Retrieval, spacing, and metacognition*. Presented at the ResearchED Conference, Frederick, MD.
- Carpenter, S. K.** (2022, February). *Implementing principles from the science of learning within educational practice*. Keynote address presented at the Learning & the Brain Conference, San Francisco, CA.
- Carpenter, S. K.** (2020, September). *Why we've been teaching and learning the wrong way: Biases, beliefs, and illusions of competence in education*. Trinity University, Department of Psychology.
- Carpenter, S. K.** (2019, September). *Optimizing the benefits of prequestions for enhancing learning in STEM courses*. University of Pittsburgh, Department of Psychology and Learning, Research, and Development Center (LRDC).
- Carpenter, S. K.** (2019, July). *Using prequestions to enhance student learning*. Plenary address presented at the McMaster University Conference on Education and Cognition, Hamilton, Ontario, Canada.
- Carpenter, S. K.** (2019, June). *On students' (mis)judgments of learning and teaching effectiveness*. Presented at the Memory and Perceptual Illusions Conference, Fort Collins, CO.
- Carpenter, S. K.** (2019, January). *Using prequestions to enhance student learning in STEM courses*. University of California, Los Angeles, Department of Psychology.
- Carpenter, S. K.** (2018, November). *Using practice questions to enhance student learning*. Keynote address delivered at the Conference on Effective Learning Strategies. Eindhoven, Netherlands.
- Carpenter, S. K.** (2017, October). *Using retrieval practice to enhance achievement in STEM courses*. Dartmouth College, Department of Psychology and Education, Hanover, NH.
- Carpenter, S. K., Geller, J., Armstrong, P. I., Coffman, C. R., & Lamm, M. H.** (2017, May). *Using prequestions to enhance the effects of retrieval practice in STEM courses*. Keynote address delivered at the conference on Fostering Academic Success in Undergraduate Biological Science Education: Science of Learning in Action. University of New Hampshire, Durham, NH.
- Carpenter, S. K., Lund, T. J. S., Coffman, C. R., Armstrong, P. I., Lamm, M. H., & Reason, R. D.** (2016, April). *Classroom studies on the relationship between student achievement and retrieval-enhanced learning*. Mary Hennessey Blum Lecture, University of New Hampshire, Durham, NH.
- Carpenter, S. K.** (January, 2016). *Strategies to improve learning and retention of course material*. Presented at the Preparing Future Faculty symposium, Iowa State University, Ames, IA.
- Carpenter, S. K., Lund, T. J. S., Coffman, C. R., Armstrong, P. I., Lamm, M. H., & Reason, R. D.** (2015, June). *Classroom studies on the relationship between student achievement and retrieval-enhanced learning*. Keynote address delivered at the annual Cognitive Load Theory Conference, Fort Collins, CO.



- Carpenter, S. K.** (January, 2015). *Strategies to improve learning and retention of course material*. Presented at the Preparing Future Faculty symposium, Iowa State University, Ames, IA.
- Carpenter, S. K.** (March, 2014). *Strategies to improve learning and retention of course material*. Presented at the Preparing Future Faculty symposium, Iowa State University, Ames, IA.
- Carpenter, S. K.** (2013, April). *Explaining the benefits of testing on learning: The role of mediating information*. University of Iowa Delta Center.
- Carpenter, S. K.** (2012, November). *Memory principles that optimize learning: Effects of retrieval, distributed practice, and feedback timing*. University of Illinois at Urbana-Champaign, Department of Educational Psychology.
- Carpenter, S. K.** (2011, September). *The effects of testing on retention and transfer of complex forms of learning*. Michigan State University, Department of Psychology, East Lansing, MI.
- Carpenter, S. K.** (2009, February). *Memory principles that optimize learning and retention: Implications for theory and instruction*. University of Northern Iowa, Department of Education, Cedar Falls, IA.
- Carpenter, S. K.** (2008, July). *Using tests to optimize learning: Implications for theory and educational practice*. Colorado State University, Department of Psychology, Fort Collins, CO.
- Carpenter, S. K.** (2007, November). *Using tests to enhance learning: Implications for education*. University of South Florida, Department of Psychology, Tampa, FL.
- Carpenter, S. K., & Pashler, H.** (2007, August). *Memory principles that optimize learning and retention: Implications for instruction*. Presented at the Summer Workshop for Teachers, San Diego Unified School Districts, San Diego, CA.
- Carpenter, S. K.** (2007, June). *Using tests to optimize learning: Implications for education*. Auburn University, Department of Psychology, Auburn, AL.
- Carpenter, S. K.** (2004, April). *Application of the testing and spacing effects to name-learning*. Paper presented at the Ellis-Battig Memory Symposium, Rocky Mountain Psychological Association, Reno, NV.

**CONFERENCE TALKS:** (graduate student/postdoc author, undergraduate student author)

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- Carpenter, S. K.** (2025, August). *Alexander Renkl's impact on retrieval practice research*. Symposium talk presented at the annual meeting of the European Association for Research on Learning & Instruction, Graz, Austria.
- Obergassel, N., Renkl, A., Endres, T., Nückles, M., Carpenter, S. K., & Roelle, J. (2025, August). *Combining generative tasks and retrieval tasks: The role of sequence and generative task specificity*. Paper presented at the annual meeting of the European Association for Research on Learning & Instruction, Graz, Austria.

- Carpenter, S. K., Kane, K., Witherby, A. E., & Jones, K.** (2024, November). *An experimental investigation of gender bias in student evaluations of teaching*. Paper presented at the annual meeting of the Psychonomic Society, New York, NY.
- Obergassel, N., Renkl, A., Endres, T., Nückles, M., Carpenter, S. K., & Roelle, J.** (2024, August). *Combining generative learning and retrieval practice: Investigating the role of learning task delay*. Symposium talk presented at the annual meeting of the European Association for Research on Learning & Instruction, Tübingen, Germany.
- Carpenter, S. K.** (2022, August). *On the indirect benefits of retrieval practice*. Symposium discussion presented at the online meeting of the European Association for Research on Learning & Instruction, Zollikofen, Switzerland.
- Witherby, A. E., & Carpenter, S. K.** (2022, April). *How does prior knowledge influence monitoring accuracy?* Paper presented at the annual meeting of the Midwestern Psychological Association, Chicago, IL.
- Carpenter, S. K.** (2021, August). *Generating answers to prequestions supplements the benefits of retrieval practice*. Symposium talk presented at the online meeting of the European Association for Research on Learning & Instruction, Gothenburg, Sweden.
- Carpenter, S. K.** (2021, August). *Understanding and utilizing effort to optimize learning*. Symposium discussion presented at the online meeting of the European Association for Research on Learning & Instruction, Gothenburg, Sweden.
- Carpenter, S. K., & St. Hilaire, K. J.** (2019, June). *When do prequestions enhance student learning?* Symposium talk presented at the meeting of the Society for Applied Research in Memory & Cognition, Cape Cod, MA.
- Corral, D., & Carpenter, S. K.** (2019, June). *The benefits of testing and feedback on complex concept learning*. Paper presented at the meeting of the Society for Applied Research in Memory & Cognition, Cape Cod, MA.
- Corral, D., & Carpenter, S. K.** (April, 2019). *Acquiring complex concepts through immediate versus delayed feedback*. Paper presented at the annual meeting of the Midwestern Psychological Association, Chicago, IL.
- Corral, D., Carpenter, S. K., & Perkins, K.** (2018, April). *Assessing students' use of optional online reviews*. Paper presented at the annual meeting of the Midwestern Psychological Association, Chicago, IL.
- Carpenter, S. K., Rahman, S., Lund, T. J. S., Coffman, C. R., Lamm, M. H., & Armstrong, P. I.** (2016, August). *Using retrieval practice to enhance achievement in STEM courses: What works, when, and for whom?* Symposium talk presented at the annual conference of the American Psychological Association, Denver, CO.
- Endres, T., Carpenter, S. K., Martin, A., & Renkl, A.** (2016, June). *Constructive retrieval by prompted recall*. Paper presented at the annual Cognitive Load Theory Conference, Bochum, Germany.
- Carpenter, S. K., Coffman, C. R., Rahman, S., Lund, T. J. S., Lamm, M. H., Armstrong, P. I., Reason, R. D., & Leow, S.** (2016, April). *Using retrieval practice to enhance achievement in STEM courses*. Paper presented at the symposium on envisioning the future of undergraduate STEM education, Washington, DC.

- Lamm, M. H., **Carpenter, S. K.**, Rahman, S., Armstrong, P. I., Coffman, C. R., & Reason, R. D. (2015, November). *Show them the data: A strategy to engage students in a material and energy balances course*. Paper presented at the annual meeting of the American Institute of Chemical Engineers, Salt Lake City, UT.
- Carpenter, S. K.**, Fernandez, C. S. (2014, May). *Blocking benefits foreign language pronunciation learning more than interleaving*. Symposium talk presented at the annual meeting of the Midwestern Psychological Association, Chicago, IL.
- Carpenter, S. K.**, Wilford, M. M., Kornell, N., & Mullaney, K. M. (August, 2013). *Instructor fluency increases perceptions of learning, but not actual learning*. Symposium talk presented at the annual meeting of the American Psychological Association, Honolulu, Hawaii.
- Carpenter, S. K.**, Kelly, J. W., & Sjolund, L. A. (2013, June). *The effects of retrieval practice on visuospatial learning*. Symposium talk presented at annual meeting of the Society for Applied Research in Memory & Cognition, Rotterdam, Netherlands.
- Carpenter, S. K.** (2013, May). *Using spacing to enhance diverse forms of learning: Review of recent research and implications for instruction*. Symposium talk presented at the annual meeting of the Association for Psychological Science, Washington DC.
- Carpenter, S. K.** (2011, November). *Semantic information activated during retrieval contributes to later retention: Support for the mediator effectiveness hypothesis of the testing effect*. Paper presented at the annual meeting of the Psychonomic Society, Seattle, WA.
- Carpenter, S. K.**, Sachs, R. E., Martin, B. A., Schmidt, K., & Looft, R. (2011, October). *Wie kann man neue Wörter auf Deutsch besser lernen? Die Bedeutung vom Kontext abzuleiten, oder die Übersetzung nur zu lesen?* Paper presented at the Iowa World Language Association, Des Moines, IA.
- Carpenter, S. K.**, & Olson, K. (2011, April). *Why are picture superiority effects absent in foreign language vocabulary learning?* Paper presented at the annual meeting of the Midwestern Psychological Association, Chicago, IL.
- Carpenter, S. K.**, Sachs, R. E., Looney, M., Martin, B. A., & Schmidt, K. (2010, November). *Learning new vocabulary in German: The beneficial effects of inferring the meanings of unknown words*. Paper presented at the annual meeting of the Psychonomic Society, Saint Louis, MO.
- Carpenter, S. K.**, Sachs, R. E., Martin, B. A., & Looney, M. (2010, October). *Wie kann man neue Wörter auf Deutsch besser lernen? Die Bedeutung vom Kontext abzuleiten, oder die Übersetzung nur zu lesen?* Paper presented at the annual meeting of the Iowa World Language Association, Des Moines, IA.
- Rohrer, D., Taylor, K., **Carpenter, S. K.**, Pashler, H., & Kang, S. H. K. (2010, June). *Tests can enhance the transfer of learning*. Paper presented at the annual meeting of the Institute of Education Sciences, Washington, DC.
- Carpenter, S. K.** (2009, November). *A low-maintenance method for inspiring good student projects in a research methods course*. Presented at the annual meeting of the Iowa Teachers of Psychology, Pella, IA.

- Carpenter, S. K., Erdman, M., & Kloeppel, J.** (2009, April). *Cue strength as a moderator of the testing effect*. Paper presented at the annual meeting of the Midwestern Psychological Association, Chicago, IL.
- Pashler, H., **Carpenter, S. K.**, & Rohrer, D. (2008, November). *Does guessing with little information interfere with learning?* Paper presented at the annual meeting of the Psychonomic Society, Chicago, IL.
- Carpenter, S. K.**, Pashler, H., Cepeda, N. J., & Alvarez, D. (2008, February). *Using tests to enhance 8<sup>th</sup> grade students' retention of U. S. history facts*. Paper presented at the annual meeting of the Science of Learning Center, Pittsburgh, PA.
- Carpenter, S. K.**, Pashler, H., & Cepeda, N. J. (2007, November). *Applying the principles of testing and spacing to classroom learning*. Paper presented at the annual meeting of the Psychonomic Society, Long Beach, CA.
- Carpenter, S. K.**, Pashler, H., Cepeda, N. J., & Alvarez, D. (2007, August). *Applying the principles of testing and spacing to classroom learning*. Paper presented at the Cognitive Science and Student Learning in the Classroom Symposium, Cognitive Science Society, Nashville, TN.
- Carpenter, S. K.**, Pashler, H., & Alvarez, D. (2007, January). *The Preuss project: Applying the principles of testing and spacing to classroom learning*. Paper presented at all-hands meeting of the Temporal Dynamics of Learning Center, La Jolla, CA.
- Carpenter, S. K.**, & Pashler, H. (2006, November). *Enhancing learning through retrieval practice: Can covert retrieval speed up visual and visuospatial learning?* Paper presented at the annual meeting of the Psychonomic Society, Houston, TX.
- Carpenter, S. K.**, Pashler, H., Wixted, J. T., & Vul, E. (2006, April). *Are tests effective at enhancing learning?* Paper presented at the Cognition and Student Learning Symposium, American Educational Research Association, San Francisco, CA.
- Pashler, H., **Carpenter, S. K.**, Rohrer, D., & Cepeda, N. J. (2005, November). *Does being forced to guess make one learn the wrong answer?* Paper presented at the annual meeting of the Psychonomic Society, Toronto, ON.
- Carpenter, S. K.** (2003, April). *Untangling the influences of cue effectiveness and item difficulty in the testing effect*. Paper presented at the annual meeting of the Rocky Mountain Psychological Association, Denver, CO.
- Carpenter, S. K.** (2003, April). *Wundt's neglected contributions to the psychology of memory*. Paper presented at the Rocky Mountain Psychological Association, Denver, CO.

#### **CONFERENCE POSTERS:**

(graduate student/postdoc author, undergraduate student author)

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- Cook, C. M., Witherby, A. E., & **Carpenter, S. K.** (2024, April). How does prior knowledge relate to students' study choices? Poster presented at the annual meeting of the Midwestern Psychological Association, Chicago, IL.

- Geller, J., Carpenter, S. K., & Witherby, A. E. (2022, November). Stopping too soon: Truncated search in delayed JOLs. Poster presented at the annual meeting of the Psychonomic Society, Boston, MA.
- Kane, K., Carpenter, S. K., & Witherby, A. E. (2022, November). Instructor fluency, but not gender, inflates students' judgments of learning more than their actual learning. Poster presented at the annual meeting of the Psychonomic Society, Boston, MA.
- Witherby, A. E., & Carpenter, S. K. (2022, November). The impact of prior knowledge on students' study choices. Poster presented at the annual meeting of the Psychonomic Society, Boston, MA.
- Obergassel, N., Renkl, A., Endres, T., Nückles, M., Carpenter, S. K., & Roelle, J. (2022, August). *Does sequentially combining generative and retrieval practice tasks foster the acquisition of declarative concepts?* Poster presented at the meeting of the European Association for Research on Learning & Instruction, Zollikofen, Switzerland.
- Witherby, A. E., & Carpenter, S. K. (2021, November). *The effects of instructor fluency and preparedness on student learning and instructor evaluations.* Poster presented at the annual meeting of the Psychonomic Society, New Orleans, LA.
- Witherby, A. E., & Carpenter, S. K. (2020, November). *The influence of prior knowledge on learning and metacognitive monitoring.* Poster presented at the annual meeting of the Psychonomic Society, Austin, TX.
- Kane, K., St. Hilaire, K. J., & Carpenter, S. K. (2020, November). *Instructor gender and fluency bias students' perceived, but not actual, learning.* Poster presented at the annual meeting of the Psychonomic Society, Austin, TX.
- St. Hilaire, K. J., & Carpenter, S. K. (2020, November). *How question type affects learning from prequestions versus learning objectives.* Poster presented at the annual meeting of the Psychonomic Society, Austin, TX.
- King-Shepard, Q., Boden, K., Adelman, A., Nokes-Malach, T. J., & Carpenter, S. K. (2020, July). *Investigating the benefits of pre-questions on lecture-based learning.* Poster presented at the annual meeting of the Cognitive Science Society, Toronto, Ontario, CA.
- Witherby, A. E., & Carpenter, S. K. (2020, May). *Do the rich get richer? Effects of prior knowledge on new learning.* Poster presented at the annual meeting of the Association for Psychological Science, Chicago, IL.
- Endres, T., Renkl, A., & Carpenter, S. K. (2019, November). *Constructive retrieval by prompted recall: Exploiting the benefits of retrieval practice and elaboration.* Poster presented at the annual meeting of the Psychonomic Society, Montreal, Quebec, CA.
- Geller, J., & Carpenter, S. K. (2019, November). *Is a picture really worth a thousand words? Evaluating contributions of fluency and analytic processing in metacognitive judgments for pictures in foreign language vocabulary learning.* Poster presented at the annual meeting of the Psychonomic Society, Montreal, Quebec, CA.
- Corral, D., Carpenter, S. K., St. Hilaire, K. J., Hickman, C., Reese, E., & Benshoof, C. (2019, November). *The effects of retrieval practice on analogical problem solving.* Poster presented at the annual meeting of the Psychonomic Society, Montreal, Quebec, CA.

- St. Hilaire, K. J., & **Carpenter, S. K.** (2019, November). *The effect of prequestions versus learning objectives on lecture-based learning*. Poster presented at the annual meeting of the Psychonomic Society, Montreal, Quebec, CA.
- Northern, P. E., Tauber, S. K., St. Hilaire, K. J., & **Carpenter, S. K.** (2019, November). *The impact of lecture fluency on note-taking*. Poster presented at the annual meeting of the Psychonomic Society, Montreal, Quebec, CA.
- St. Hilaire, K. J., & **Carpenter, S. K.** (2019, May). *Answering prequestions enhances learning, but only when you notice them*. Poster presented at the annual meeting of the Association for Psychological Science, Washington, DC.
- St. Hilaire, K. J., **Carpenter, S. K.**, & Jennings, J. (2018, November). *The prequestion effect: How question type and structure building ability impact learning*. Poster presented at the annual meeting of the Psychonomic Society, New Orleans, LA.
- Lim, A. F., Kelly, J. W., & **Carpenter, S. K.** (2018, November). *Effect of testing on route learning using GPS navigation*. Poster presented at the annual meeting of the Psychonomic Society, New Orleans, LA.
- Corral, D., & **Carpenter, S. K.**, (2018, November). *Using testing to improve concept learning*. Poster presented at the annual meeting of the Psychonomic Society, New Orleans, LA.
- Corral, D., **Carpenter, S. K.**, & Clingan-Siverly, S. (2018, July). *When being wrong makes you right: Incorrect examples improve complex concept learning*. Poster presented at the annual meeting of the Cognitive Science Society, Madison, WI.
- Romena, N. P., Hefner, H. C., Northern, P. E., Tauber, S. K., Toftness, A. R., & **Carpenter, S. K.** (2018, April). *The effects of lecture fluency and instructor expertise on students' experiences*. Poster presented at the annual meeting of the Southwestern Psychological Association, Houston, TX.
- Geller, J., **Carpenter, S. K.**, Rahman, S., Toftness, A. R., Coffman, C. R., Manz, C. L., Armstrong, P. I., & Lamm, M. H. (2017, November). *The effects of prequestions on learning introductory biology*. Poster presented at the annual meeting of the Psychonomic Society, Vancouver, BC.
- Toftness, A. R., **Carpenter, S. K.**, Tauber, S. K., & Northern, P. E. (2017, November). *The effects of instructor fluency and expertise on students' overconfidence*. Poster presented at the annual meeting of the Psychonomic Society, Vancouver, BC.
- Toftness, A. R., & **Carpenter, S. K.** (2016, November). *The effects of prequestions on learning from video presentations*. Poster presented at the annual meeting of the Psychonomic Society, Boston, MA.
- Coffman, C., Manz, C., Armstrong, P., **Carpenter, S.**, Geller, J., Lamm, M., Leow, S., Pederson, L., Rahman, S., Reason, R., & Toftness, A. (2016, July). *Using systematic application of retrieval practice to enhance student achievement in introductory biology*. Poster presented at the annual meeting of the Society for the Advancement of Biology Education Research, Minneapolis, MN.
- Manz, C., Coffman, C., Toftness, A., Reason, R., Rahman, S., Lamm, M., **Carpenter, S.**, & Armstrong, P. (2016, July). *The role of achievement motivation in students' choice of*

*study habits in a large biology course*. Poster presented at the annual meeting of the Society for the Advancement of Biology Education Research, Minneapolis, MN.

**Carpenter, S. K., Lund, T. J. S., Rahman, S., Coffman, C. R., Armstrong, P. I., & Lamm, M. H.** (2016, August). *Students' use of retrieval-based review techniques in STEM courses*. Poster presented at the annual meeting of the American Psychological Association, Denver, CO.

Rahman, S., & **Carpenter, S. K.** (2016, August). *Exploring the optimal placement of practice questions in learning from lectures*. Poster presented at the annual meeting of the American Psychological Association, Denver, CO.

Rahman, S., **Carpenter, S. K.**, Lund, T. J. S., Coffman, C. R., Armstrong, P. I., Lamm, M. H., & Reason, R. D. (2015, November). *Tracking students' review patterns: Use of retrieval versus restudy*. Poster presented at the annual meeting of the Psychonomic Society, Chicago, IL.

Coffman, C. R., Reason, R. D., Rahman, S., Lund, T. J. S., Lamm, M. H., **Carpenter, S. K.**, & Armstrong, P. I. (2015, July). *Engaging students in retrieval practice and reflection on learning to enhance achievement in STEM courses*. Poster presented at the annual meeting of the Society for Advancement of Biology Education, Minneapolis, MN.

**Carpenter, S. K.**, Lamm, M. H., Armstrong, P. I., Coffman, C. R., Rahman, S., & Reason, R. D. (2015, April). *Show them the data: The effects of worked examples on students' problem solving performance, study preferences, and study choices*. Poster presented at the annual meeting for the Center for Integration of Research on Teaching and Learning (CIRTL), College Station, TX.

Rahman, S., **Carpenter, S. K.**, Lund, T. J. S., Coffman, C. R., Armstrong, P. I., Lamm, M. H., & Reason, R. D. (2015, April). *A classroom study on the relationship between student achievement and retrieval-enhanced learning*. Poster presented at the annual meeting of the Midwestern Psychological Association, Chicago, IL.

Fernandez, C. S., & **Carpenter, S. K.** (2014, November). *Extending the boundaries of the testing effect: A look at verbal and nonverbal components*. Poster presented at the annual meeting of the Psychonomic Society, Long Beach, CA.

Coffman, C. R., Armstrong, P. I., Brewer, C. E., **Carpenter, S. K.**, Curtiss, J., Houston, J. P., Lamm, M. H., Reason, R. D., & Shuster, M. (2014, July). *Creating a culture of engaged STEM learners: Implementing evidence-based interventions to improve learning and transfer in diverse classrooms*. Poster presented at the annual meeting of the Society for the Advancement of Biology Education Research, Minneapolis, MN.

Fernandez, C. S., & **Carpenter, S. K.** (2014, May). *Blocking vs. interleaving: The effects of simultaneous presentation on learning foreign language pronunciations*. Poster presented at the annual meeting of the Midwestern Psychological Association, Chicago, IL.

Vaughn, K. E., Rawson, K. A., & **Carpenter, S. K.** (2013, November). *Why does the benefit of testing depend on lag? Evaluating the elaborative retrieval hypothesis*. Poster presented at the annual meeting of the Psychonomic Society, Toronto, ON, CA.

- Wilford, M. M., **Carpenter, S. K.**, Kornell, N., & Mullaney, K. M. (2013, November). *The misleading effects of fluency on learning*. Poster presented at the annual meeting of the Psychonomic Society, Toronto, ON, CA.
- Mullaney, K. M., & **Carpenter, S. K.** (2012, November). *The benefit of spacing on retention and transfer of mathematics knowledge*. Poster presented at the annual meeting of the Psychonomic Society, Minneapolis, MN.
- Olson, K., & **Carpenter, S. K.** (2011, November). *Delaying feedback helps, but only if you want to know the answer*. Poster presented at the annual meeting of the Psychonomic Society, Seattle, WA.
- Olson, K., & **Carpenter, S. K.** (2011, May). *Learning new vocabulary through scaffolded feedback*. Poster presented at the annual meeting of the Midwestern Psychological Association, Chicago, IL.
- Carpenter, S. K.**, & Vul, E. (2009, November). *The delay-of-feedback benefit: Timing vs. duration*. Poster presented at the meeting of the Psychonomic Society, Boston, MA.
- Kang, S., **Carpenter, S. K.**, Pashler, H., & Rohrer, D. (2009, November). *Is subsequent learning hurt by prior erroneous guessing?* Poster presented at the annual meeting of the Psychonomic Society, Boston, MA.
- Kang, S., **Carpenter, S. K.**, Rohrer, D., & Pashler, H. (2009, June). *Does guessing when one doesn't know the answer hurt subsequent learning?* Poster presented at the annual meeting of the Institute of Education Sciences, Washington, DC.
- Carpenter, S. K.**, Pashler, H., & Jones, J. J. (2008, November). *The effects of retrieval practice on associative recall of word pairs*. Poster presented at the annual meeting of the Psychonomic Society, Chicago, IL.
- Carpenter, S. K.**, Pashler, H., Rohrer, D., & Coburn, N. (2008, June). *Using retrieval practice to enhance learning of complex anatomy structures*. Poster presented at the annual meeting of the Institute of Education Sciences, Washington, DC.
- Carpenter, S. K.**, & Pashler, H. (2008, May). *Using retrieval practice to enhance learning of complex visual information*. Poster presented at the annual meeting of the Association for Psychological Science, Chicago, IL.
- Carpenter, S. K.**, Pashler, H., Cepeda, N. J., & Alvarez, D. (2008, February). *Using tests to enhance 8<sup>th</sup> grade students' retention of U. S. history facts*. Poster presented at the annual student/postdoc meeting of the Science of Learning Center, Pittsburgh, PA.
- Jones, J. J., Pashler, H., & **Carpenter, S. K.** (2008, January). *Statistical learning for passively viewed, actively recorded and explicitly predicted sequences*. Poster presented at the annual meeting of the Temporal Dynamics of Learning Center, Nashville, TN.
- Carpenter, S. K.**, Pashler, H., Cepeda, N. J., & Alvarez, D. (2008, January). *Using tests to enhance 8<sup>th</sup> grade students' retention of U. S. history facts*. Poster presented at the annual meeting of the Temporal Dynamics of Learning Center, Nashville, TN.
- Carpenter, S. K.**, Pashler, H., Rohrer, D., & Cepeda, N. J. (2007, August). *Does forced guessing cause one to learn the wrong answer?* Poster presented at the symposium on



Memory Dynamics and the Optimization of Instruction, American Psychological Association, San Francisco, CA.

- Carpenter, S. K.**, Pashler, H., Wixted, J. T., & Vul, E. (2007, June). *Item characteristics and task conditions that predict forgetting*. Poster presented at the annual meeting of the Institute for Education Sciences, Washington, DC.
- Carpenter, S. K.**, Pashler, H., Wixted, J. T., & Vul, E. (2007, May). *Facts, faces, and obscure places: Individual and item characteristics that predict rate of forgetting*. Poster presented at the annual meeting of the Association for Psychological Science, Washington, DC.
- Carpenter, S. K.**, Pashler, H., Wixted, J. T., & Vul, E. (2007, January). *The effects of tests on learning and forgetting*. Poster presented at the annual meeting of the Temporal Dynamics of Learning Center, La Jolla, CA.
- Carpenter, S. K.**, Pashler, H., & Vul, E. (2006, November). *The effects of test timing and feedback timing on the learning of obscure facts*. Poster presented at the annual meeting of the Psychonomic Society, Houston, TX.
- Carpenter, S. K.**, Pashler, H., & Vul, E. (2006, May). *What types of learning are enhanced by a cued recall test?* Poster presented at the annual meeting of the Association for Psychological Science, New York, NY.
- Carpenter, S. K.**, Pashler, H., & Wixted, J. T. (2005, November). *The testing effect: Enhanced retention or attenuated forgetting?* Poster presented at the annual meeting of the Psychonomic Society, Toronto, ON.
- Carpenter, S. K.**, & DeLosh, E. L. (2004, November). *A multiple-cue hypothesis for the testing effect*. Poster presented at the annual meeting of Psychonomic Society, Minneapolis, MN.
- Carpenter, S. K.** (2003, May). *The role of item difficulty in the testing effect*. Poster presented at the festschrift in honor of Lyle Bourne, Walter Kintsch, Tom Landauer. Boulder, CO.
- Carpenter, S. K.**, & DeLosh, E. L. (2002, April). *The role of retrieval strategy in memory for high- and low-frequency words*. Poster presented at the annual meeting of the Rocky Mountain Psychological Association, Park City, UT.

## TEACHING:

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- **PSY 201/202 Introductory Psychology** (4 sections taught at OSU): Undergraduate course covering a broad range of topics in psychology.
- **PSY 697 Psychological Science of Teaching and Learning** (one section taught at OSU): Graduate seminar exploring basic and applied research related to teaching and learning.
- **PSY 692 Graduate Seminar – Cognition** (2 sections taught at ISU): Graduate seminar exploring current topics and issues related to research in cognitive psychology.
- **PSY 598 Graduate Seminar – Learning and Memory** (2 sections taught at ISU): Graduate course exploring empirical, methodological, theoretical, and applied perspectives on memory research.
- **PSY 313/444 Learning & Memory** (11 sections taught at ISU; 2 sections online or hybrid at ISU; one section taught at OSU): Undergraduate course exploring theoretical and applied aspects of learning and memory.
- **PSY 101H Introduction to Psychology, Honors** (3 sections taught at ISU): Undergraduate

honors course covering a range of topics, hands-on activities, and research projects in psychology.

- **PSY 301/302 Research Methods** (18 sections taught at ISU; 2 sections online at ISU; one section taught at OSU): Undergraduate course emphasizing a hands-on approach to empirical research in psychology.

## PROFESSIONAL SERVICE:

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- Associate editor for *Journal of Experimental Psychology: Applied* (2023 - present)
- Associate editor for *Journal of Applied Research in Memory & Cognition* (2013 - 2016, 2018 - 2021)
- Editorial board member for *Memory & Cognition* (2009 - 2020)
- Editorial board member for *Journal of Applied Research in Memory & Cognition* (2021 – present)
- Editorial board member for *Journal of Experimental Psychology: Learning, Memory, & Cognition* (2011 - present)
- Editorial board member for *Educational Psychology Review* (2012 - present)
- Editorial board member for *Journal of Experimental Psychology: Applied* (2015 - 2023)
- Editorial board member for *Psychonomic Bulletin & Review* (2020 - present)
- NSF Grant Review Panelist (reviewed and ranked 30+ proposals each for *Science of Learning*, *Improving Undergraduate STEM Education*, *EHR Core Research*, *Graduate Research Fellowships*, and *CAREER*) in 2016, 2018, 2019, 2020, 2021, 2022 (two panels each in 2021 and 2022), 2023, 2024, and 2025
- Ad-hoc reviewer for 50+ journals and books in learning, cognition, and education

## ADMINISTRATIVE SERVICE TO UNIVERSITY AND DEPARTMENT:

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- Promotion and Tenure Committee at OSU (2023 – present)
- SONA Research Participation Committee at OSU (2023 – 2024)
- Area Director, Cognitive Psychology Ph.D. Program at ISU (2022 – 2023)
- Psychology Department Chair Search Committee ISU (Appointed by Dean, 2022 - 2023)
- Chair of Committee for re-vamping Evaluation of Research, Teaching and Service in Psychology at ISU (2021 – 2023)
- Graduate Council for Liberal Arts and Sciences at ISU (Elected by Faculty, 2018 – 2021)
- Committee on Outdoor Teaching and Learning at ISU (2018 – 2023)
- Faculty Advisor for *Zeitgeist* (German Speaking) Organization at ISU (2009 - 2023)
- Faculty Advisor for *Psi Chi* at ISU (2010 - 2016)
- Promotion and Tenure Committee in Psychology at ISU (Elected by Faculty, 2018 – 2023)
- Executive Committee (Advisory Committee to Department Chair, 2014-2015; 2017-2018)
- Chair of Committee for Evaluation of Research, Teaching and Service at ISU (2013-2016)
- Chair of Human Research Ethics Review/IRB Screening Committee at ISU (2018 – 2020)
- Quantitative Psychology Search Committee at ISU (2018-2019)
- Cognitive Neuroscience Search Committee at ISU (2017-2018)
- Spousal Accommodation Search Committee at ISU (2015-2016)
- Diversity Colloquium Committee at ISU (2020 – 2023)
- Faculty Enhancement (Awards) Committee at ISU (2016 – 2018, 2020 - 2022)

## **CONSULTING AND OUTREACH:**

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- Enhancing learning with spaced practice (Professional development webinar organized by Dr. Pooja Agarwal, August, 2025)
- Do we need a science of teaching? (Panel discussant at the Learning & the Brain Conference, New York, NY, April 2025)
- The science of effective learning: How cognitive principles can enhance learning and metacognition (Professional development webinar for teachers at Ottawa Carleton Elementary Teacher's Federation of Ontario, March, 2025)
- What are schools for? (Podcast interview for *Teachers Talk Radio*, May, 2024)
- Translating knowledge and practice between research and the classroom (Panel discussant at the Learning & the Brain Conference, Boston, MA, November 2023)
- The science of effective learning: Spacing, retrieval, and metacognition (Professional development webinar for teachers, Central Rivers Academy, Marshalltown, IA, October, 2023)
- The science of memory (Professional development webinar for teachers at Browning Public Schools, Browning, MT, August 2023)
- Researcher of the month: What is the science behind effective learning? (Tooled Up Education podcast interview, February 2023)
- The science of learning and metacognition (InnerDrive podcast interview, January, 2023)
- The science of effective learning (Professional development webinar for teachers, Learning & the Brain, January 2023)
- Test scores decline in nearly every state, including Iowa (*River to River* podcast interview, December 2022)
- Encouraging future scientists: Supporting undergraduates at Psychonomics (Panel discussant at the Psychonomic Society annual meeting, Boston, MA, November 2022)
- The science of learning (Panel discussant at the Learning & the Brain Conference, San Francisco, CA, February 2022)
- What do cognitive psychologists do in their own classroom teaching? (Panel discussant at the Education & Cognition Conference, Hamilton, ON, Canada, July 2019)
- Synergy between teaching and learning practice and research across higher education (Panel discussant at the Annual Conference on Teaching, Society for the Teaching of Psychology, Denver, CO, October 2019)

## **PROFESSIONAL AFFILIATIONS:**

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- American Psychological Association (Member since 2005)
- Association for Psychological Science (Member since 2005)
- Midwestern Psychological Association (Member since 2008)
- Psychonomic Society (Member since 2007)
- Cognitive Science Society (Member since 2018)
- Society for Applied Research in Memory and Cognition (Member since 2018)
- European Association for Research on Learning and Instruction (Member since 2020)
- American Educational Research Association (Member since 2024)