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Education

Ph.D., Experimental Psychology
Washington University in St. Louis, 2007

M.A., Experimental Psychology
Washington University in St. Louis, 2004

B.A., with honors in Psychology
Indiana University, Bloomington, 2002

Academic Positions

James V. Bradley Professor of Psychological Sciences
Professor of Speech, Language, and Hearing Sciences (courtesy)
Purdue University, 2017-present

James V. Bradley Associate Professor of Psychological Sciences
Associate Professor of Speech, Language, and Hearing Sciences (courtesy)
Purdue University, 2013-2017

Provost Fellow
Purdue University, 2013-2014

Associate Professor of Psychological Sciences
Purdue University, 2012-2013

Assistant Professor of Psychological Sciences
Purdue University, 2007-2012

Research Interests

Human learning and memory, especially retrieval processes

Cognitive science and education, especially learning in STEM disciplines

Educational technology, computer-based learning, personalized learning, learning analytics

Complex learning, comprehension, and knowledge application

Learning and cognitive strategies in children

Metacognition and self-regulated learning

Honors and Awards

Research and Scholarship:

- Early Career Alumni Award, Indiana University Department of Psychological and Brain Sciences, 2017
- Early Investigator Award, Society of Experimental Psychologists, 2017
- Claude Bernard Distinguished Lectureship Award, American Physiological Society, 2017
- Janet Taylor Spence Award for Transformative Early Career Contributions, Association for Psychological Science, 2015
- Purdue University Seed For Success Award (3 times), 2011, 2015, 2016
- Outstanding Young Investigator Award from the Psychonomic Society, 2013
- Presidential Early Career Award for Scientists and Engineers (PECASE), 2012
- National Science Foundation CAREER Award, 2012
- Association for Psychological Sciences "Rising Star", 2011
- College of Health and Human Sciences Early Career Research Achievement Award, 2010-2011
- American Psychological Association Dissertation Research Award, 2006-2007
- APF/COGDOP Graduate Research Scholarship in Psychology, 2006-2007
- Washington University Dean's Dissertation Fellowship, 2006-2007
- J. R. Kantor Award for Research in Psychology, Indiana University, 2002
- Phi Beta Kappa, 2002

Teaching:

- Elected Fellow, The Teaching Academy at Purdue University, 2011
- Outstanding Undergraduate Teaching Award in Memory of Charles B. Murphy, 2010-2011
- College of Health and Human Sciences Award for Excellence in Undergraduate Education, 2010-2011
- James C. Naylor Award for Teaching Excellence in Psychology, 2010-2011
- Purdue Student Government Excellence in Teaching Award, 2008-2009

Professional Memberships

- Fellow – Association for Psychological Science
- Fellow – Midwestern Psychological Association
- Fellow – Psychonomic Society
- Fellow – Society of Experimental Psychologists
- Full Member – Sigma Xi

Research Grants (* = In Progress)

Extramural:

- *Co-Investigator. James S. McDonnell Foundation Collaborative Activity Award (220020483). *Implementing Principles from the Science of Learning within Educational Practice*. (PI: S. K. Carpenter, Iowa State University.) December 2016 – November 2021. Total costs: \$4,635,718. Total costs to Purdue: \$599,995.
- Principal Investigator. Spencer Foundation (201700034). *Training Effective Self-Regulated Learning with a Retrieval Practice Intervention*. (Co-PI: R. Ariel, Purdue University.) August 2016 – July 2017. Total costs: \$50,000.
- *Co-Investigator. National Institutes of Health, NIDCD (R01DC014708). *Retrieval-Based Word Learning in Specific Language Impairment*. (PI: L. B. Leonard, Purdue University.) July 2016 – June 2021. Total costs: \$2,631,935.
- *Principal Investigator. Institute of Education Sciences, U.S. Department of Education (R305A150546). *Computer-Based Guided Retrieval Practice for Elementary School Children*. (Co-PI: M. N. Jones, Indiana University.) July 2015 – June 2018. Total costs: \$1,499,697.
- Principal Investigator. National Science Foundation (DUE-1245476). *Structured Retrieval Practice to Enhance Conceptual Learning*. September 2013 – August 2017. Total costs: \$200,000.
- *Principal Investigator. National Science Foundation (DRL-1149363). *CAREER: Retrieval-Enhanced Learning of Foundational Conceptual Knowledge*. August 2012 – July 2018. Total costs: \$866,808.
- Principal Investigator. Institute of Education Sciences, U.S. Department of Education (R305A110903). *Retrieval-Oriented Learning Strategies*. July 2011 – June 2016. Total costs: \$1,600,000.
- Principal Investigator. National Science Foundation (DUE-0941170). *Structured Retrieval Practice to Enhance Conceptual Learning*. May 2010 – April 2013. Total costs: \$200,000.

Intramural:

- Principal Investigator. Purdue Research Foundation, Purdue University. August 2013 – July 2014. Total costs: \$25,148.
- Principal Investigator. Discovery Learning Research Center, Purdue University. May 2008 – December 2008. Total costs: \$25,000.

Publications

- Ariel, R., & Karpicke, J. D. (2018). Improving self-regulated learning with a retrieval practice intervention. *Journal of Experimental Psychology: Applied*, 24, 43-56.
- Karpicke, J. D. (2018). Concept mapping. In B. Frey (Ed.), *The SAGE Encyclopedia of Educational Research, Measurement, and Evaluation* (pp. 351-354). Thousand Oaks, CA: SAGE Publishing, Inc.
- Roediger, H. L., & Karpicke, J. D. (2018). Reflections on the resurgence of interest in the testing effect. *Perspectives on Psychological Science*, 13, 236-241.

- Karpicke, J. D. (2017). Retrieval-based learning: A decade of process. In J. T. Wixted (Ed.), *Cognitive psychology of memory, Vol. 2 of Learning and memory: A comprehensive reference* (J. H. Byrne, Series Ed.) (pp. 487-514). Oxford: Academic Press.
- Whiffen, J. W., & Karpicke, J. D. (2017). The role of episodic context in retrieval practice effects. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *43*, 1036-1046.
- Karpicke, J. D., Blunt, J. R., & Smith, M. A. (2016). Retrieval-based learning: Positive effects of retrieval practice in elementary school children. *Frontiers in Psychology*, *7*, 350: 1-8.
- Lehman, M., & Karpicke, J. D. (2016). Elaborative retrieval: Do semantic mediators improve memory? *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *42*, 1573-1591.
- Smith, M. A., Blunt, J. R., Whiffen, J. W., & Karpicke, J. D. (2016). Does providing prompts during retrieval practice improve learning? *Applied Cognitive Psychology*, *30*, 544-553.
- Weinstein, Y., Nunes, L. D., & Karpicke, J. D. (2016). On the placement of practice questions during study. *Journal of Experimental Psychology: Applied*, *22*, 72-84.
- Grimaldi, P. J., Poston, L., & Karpicke, J. D. (2015). How does creating a concept map affect item-specific encoding? *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *41*, 1049-1061.
- Karpicke, J. D., & Aue, W. R. (2015). The testing effect is alive and well with complex materials. *Educational Psychology Review*, *27*, 317-326.
- Nunes, L. D., & Karpicke, J. D. (2015). Retrieval-based learning: Research at the interface between cognitive science and education. In R. A. Scott & S. M. Kosslyn (Eds.), *Emerging Trends in the Social and Behavioral Sciences* (pp. 1-16). John Wiley & Sons, Inc.
- Blunt, J. R., & Karpicke, J. D. (2014). Learning with retrieval-based concept mapping. *Journal of Educational Psychology*, *106*, 849-858.
- Grimaldi, P. J., & Karpicke, J. D. (2014). Guided retrieval practice of educational materials using automated scoring. *Journal of Educational Psychology*, *106*, 58-68.
- Karpicke, J. D., Blunt, J. R., Smith, M. A., & Karpicke, S. S. (2014). Retrieval-based learning: The need for guided retrieval in elementary school children. *Journal of Applied Research in Memory and Cognition*, *3*, 198-206.
- Karpicke, J. D., & Lehman, M., & Aue, W. R. (2014). Retrieval-based learning: An episodic context account. In B. H. Ross (Ed.), *Psychology of Learning and Motivation, Vol. 61* (pp. 237-284). San Diego, CA: Elsevier Academic Press.
- Lehman, M., Smith, M. A., & Karpicke, J. D. (2014). Toward an episodic context account of retrieval-based learning: Dissociating retrieval practice and elaboration. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *40*, 1787-1794.
- Smith, M. A., & Karpicke, J. D. (2014). Retrieval practice with short-answer, multiple-choice, and hybrid test formats. *Memory*, *22*, 784-802.
- Karpicke, J. D., & Lehman, M. (2013). Human memory. In D. S. Dunn (Ed.), *Oxford Bibliographies Online: Psychology*. New York: Oxford University Press.

- Smith, M. A., Roediger, H. L., & Karpicke, J. D. (2013). Covert retrieval practice benefits retention as much as overt retrieval practice. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *39*, 1712-1725.
- Grimaldi, P. J., & Karpicke, J. D. (2012). When and why do retrieval attempts enhance subsequent encoding? *Memory & Cognition*, *40*, 505-513.
- Karpicke, J. D. (2012). Retrieval-based learning: Active retrieval promotes meaningful learning. *Current Directions in Psychological Science*, *21*, 157-163.
- Karpicke, J. D., & Grimaldi, P. J. (2012). Retrieval-based learning: A perspective for enhancing meaningful learning. *Educational Psychology Review*, *24*, 401-418.
- Karpicke, J. D., & Smith, M. A. (2012). Separate mnemonic effects of retrieval practice and elaborative encoding. *Journal of Memory and Language*, *67*, 17-29.
- Karpicke, J. D., & Bauernschmidt, A. (2011). Spaced retrieval: Absolute spacing enhances learning regardless of relative spacing. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *37*, 1250-1257.
- Karpicke, J. D., & Blunt, J. R. (2011). Response to comment on "Retrieval practice produces more learning than elaborative studying with concept mapping." *Science*, *334*, 453.
- Karpicke, J. D., & Blunt, J. R. (2011). Retrieval practice produces more learning than elaborative studying with concept mapping. *Science*, *331*, 772-775.
- McCabe, D. P., Roediger, H. L., & Karpicke, J. D. (2011). Automatic processing influences free recall: Converging evidence from the process dissociation procedure and remember-know judgments. *Memory & Cognition*, *39*, 389-402.
- Roediger, H. L., & Karpicke, J. D. (2011). Intricacies of spaced retrieval: A resolution. In A. S. Benjamin (Ed.), *Successful Remembering and Successful Forgetting: Essays in Honor of Robert A. Bjork* (pp. 23-48). New York: Psychology Press.
- Karpicke, J. D., & Roediger, H. L. (2010). Is expanding retrieval a superior method for learning text materials? *Memory & Cognition*, *38*, 116-124.
- Karpicke, J. D., & Zaromb, F. M. (2010). Retrieval mode distinguishes the testing effect from the generation effect. *Journal of Memory and Language*, *62*, 227-239.
- Zaromb, F. M., Karpicke, J. D., & Roediger, H. L. (2010). Comprehension as a basis for metacognitive judgments: Effects of effort after meaning on recall and metacognition. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *36*, 552-557.
- Karpicke, J. D. (2009). Metacognitive control and strategy selection: Deciding to practice retrieval during learning. *Journal of Experimental Psychology: General*, *138*, 469-486.
- Karpicke, J. D., Butler, A. C., & Roediger, H. L. (2009). Metacognitive strategies in student learning: Do students practice retrieval when they study on their own? *Memory*, *17*, 471-479.
- Agarwal, P. K., Karpicke, J. D., Kang, S. H. K., Roediger, H. L., & McDermott, K. B. (2008). Examining the testing effect with open- and closed-book tests. *Applied Cognitive Psychology*, *22*, 861-876.
- Butler, A. C., Karpicke, J. D., & Roediger, H. L. (2008). Correcting a metacognitive error: Feedback increases retention of low confidence correct responses. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *34*, 918-928.

- Karpicke, J. D., McCabe, D. P., & Roediger, H. L. (2008). False memories are not surprising: The subjective experience of an associative memory illusion. *Journal of Memory and Language*, *58*, 1065-1079.
- Karpicke, J. D., & Roediger, H. L. (2008). The critical importance of retrieval for learning. *Science*, *319*, 966-968.
- Butler, A. C., Karpicke, J. D., & Roediger, H. L. (2007). The effect of type and timing of feedback on learning from multiple-choice tests. *Journal of Experimental Psychology: Applied*, *13*, 273-281.
- Karpicke, J. D., & Roediger, H. L. (2007). Expanding retrieval promotes short-term retention, but equal interval retrieval enhances long-term retention. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *33*, 704-719.
- Karpicke, J. D., & Roediger, H. L. (2007). Repeated retrieval during learning is the key to long-term retention. *Journal of Memory and Language*, *57*, 151-162.
- Roediger, H. L., & Karpicke, J. D. (2006). The power of testing memory: Basic research and implications for educational practice. *Perspectives on Psychological Science*, *1*, 181-210.
- Roediger, H. L., & Karpicke, J. D. (2006). Test-enhanced learning: Taking memory tests improves long-term retention. *Psychological Science*, *17*, 249-255.
- Roediger, H. L., & Karpicke, J. D. (2005). Learning and memory. In K. Kempf-Leonard (Ed.), *Encyclopedia of Social Measurement*, Vol. 2 (pp. 479-486). San Diego, CA: Academic Press.
- Karpicke, J. D., & Pisoni, D. B. (2004). Using immediate memory span to measure implicit learning. *Memory & Cognition*, *32*, 956-964.

Other Publications

- Carmichael, M., Reid, A.-K., & Karpicke, J. D. (2018). *Assessing the Impact of Educational Video on Student Engagement, Critical Thinking and Learning: The Current State of Play* (White Paper). Thousand Oaks, CA: SAGE Publishing, Inc.
- Karpicke, J. D. (2016). A powerful way to improve learning and memory. *APA Psychological Science Agenda*. <http://www.apa.org/science/about/psa/2016/06/learning-memory.aspx>
- Computing Community Consortium (2016). *Computer-aided personalized education*. Workshop Report. (Contributing author) <http://cra.org/ccc/resources/workshop-reports/>

Conference Presentations

- Ariel, R., Nunes, L. D., Karpicke, J. D. (2017). *Students' self-regulated use of retrieval practice predicts academic performance*. Poster presented at the 58th Annual Meeting of the Psychonomic Society, Vancouver, B.C.
- Aue, W. R. & Karpicke, J. D. (2017) *Do stimuli with different properties benefit differentially from testing?* Poster presented at the 58th Annual Meeting of the Psychonomic Society, Vancouver, B.C.
- Aue, W. R. & Karpicke, J. D. (2017) *Do stimuli with different properties benefit differentially from testing?* Poster presented at the 50th Annual Meeting of the Society for Mathematical Psychology and International Conference on Cognitive Modeling, Coventry, UK.

- Bedwell, J. P. & Karpicke, J. D. (2017). *Retrieval practice enhances learning regardless of material complexity*. Poster presented at the 58th Annual Meeting of the Psychonomic Society, Vancouver, B.C.
- Bedwell, J. P. & Karpicke, J. D. (2017). *Improving students' self-scoring accuracy with delayed judgments*. Poster presented at the 29th Annual Meeting of the Association for Psychological Science, Boston, MA.
- Dachapally, P. R., Asr, F. T., Aue, W. R., Karpicke, J. D., & Jones, M. N. (2017). *Automated keyword extraction from short passages using pre-trained neural embeddings*. Paper presented at the 47th Annual Meeting of the Society for Computers in Psychology, Vancouver, B.C.
- Jayamoorthy, S., Asr, F. T., Aue, W. R., Karpicke, J. D., & Jones, M. N. (2017). *Automatic question and answer generation from texts for retrieval-based learning*. Paper presented at the 47th Annual Meeting of the Society for Computers in Psychology, Vancouver, B.C.
- Karpicke, J. D. (2017). *Retrieval-based learning in elementary school: Techniques for scaffolding retrieval practice*. Talk at the 29th Annual Meeting of the Association for Psychological Science, Boston, MA.
- Karpicke, J. D. (2017). *Taking cognitive science from the lab to the classroom: Implications for education policy*. Symposium talk at the 125th Annual Meeting of the American Psychological Association, Washington DC.
- O'Day, G. M., & Karpicke, J. D. (2017). *Does self-scoring enhance learning?* Poster presented at the 58th Annual Meeting of the Psychonomic Society, Vancouver, B.C.
- Ariel, R. & Karpicke, J. D. (2016). *Improving self-regulated learning with a retrieval practice intervention*. Talk presented at the 57th Annual Meeting of the Psychonomic Society, Boston, MA.
- Asr, F. T., Karpicke, J. D., & Jones, M. N. (2016). *Experimenting with keyword matching approaches to automated short answer scoring*. Paper presented at the Midwest Computational Linguistics Conference (MCLC), Bloomington, IN.
- Aue W. R., & Karpicke, J. D. (2016). *Evaluating the fate of within and across list order memory following retrieval practice*. Poster presented at the 57th Annual Meeting of the Psychonomic Society, Boston, MA.
- Daley, N., Whiffen, J., Karpicke, J. D. (2016). *The effect of recall while reading on learning*. Poster presented at the 88th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Karpicke, J. D., Whiffen, J. W., Smith, M. A., Blunt, J. R., & Karpicke, S. S. (2016). *Retrieval-based learning in elementary school: Techniques for scaffolding retrieval practice*. Paper presented at the Annual Meeting of the American Educational Research Association, Washington, DC.
- Lim, S. W., Heng, A. Q., Nunes, L. D., & Karpicke, J. D. (2016). *Does retrieval practice improve question generation?* Poster presented at the 57th Annual Meeting of the Psychonomic Society, Boston, MA.
- Nunes, L. D., Karpicke, J. D., & Lim, S. W. (2016). *Features of educational videos that create illusions of learning*. Poster presented at the 28th Annual Meeting of the Association for Psychological Science, Chicago, IL.

- Aue, W. R., Criss, A. H., Spangler, S. A., Karpicke, J. D., & Mehanovic, I. (2015). *Examining the relationship between testing effects and output interference in recognition memory*. Poster presented at the 56th Annual Meeting of the Psychonomic Society, Chicago, IL.
- Nunes, L. D., Smith, M. A., & Karpicke, J. D. (2015). *Beliefs and practices about learning: An online survey*. Poster presented at the 27th Annual Meeting of the Association for Psychological Science, New York, NY.
- Nunes, L. D., Whiffen, J., Blunt, J., & Karpicke, J. D. (2015). *Negative effects of self-explanation on learning from expository texts*. Poster presented at the 56th Annual Meeting of the Psychonomic Society, Chicago, IL.
- Whiffen, J., & Karpicke, J. D. (2015). *How is the mnemonic benefit of retrieval practice affected by dividing attention?* Poster presented at the 56th Annual Meeting of the Psychonomic Society, Chicago, IL.
- Blunt, J., Nunes, L. D., Karpicke, S., & Karpicke, J. D. (2014). *Retrieval practice with children in the classroom*. Poster presented at the 55th Meeting of the Psychonomic Society, Long Beach, CA.
- Lehman, M. & Karpicke, J. D. (2014). *Elaborative retrieval: Do semantic mediators improve memory?* Poster presented at the 55th Annual Meeting of the Psychonomic Society, Long Beach, CA.
- Nunes, L. D., Smith, M. A., & Karpicke, J. D. (2014). *Matching learning styles and retrieval activities*. Poster presented at the 55th Annual Meeting of the Psychonomic Society, Long Beach, CA.
- Nunes, L. D., & Karpicke, J. D. (2014). *Watching educational videos: Illusions of learning and actual learning*. Talk at the 86th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Nunes, L. D., & Karpicke, J. D. (2014). *Watching online videos: Learning and illusions of learning*. Poster presented at the 26th Annual Meeting of the Association for Psychological Science, San Francisco, CA.
- Weinstein, Y., Nunes, L. D., & Karpicke, J. D. (2014). *The Ideal Placement of Practice Quiz Questions*. Poster presented at the 55th Annual Meeting of the Psychonomic Society, Long Beach, CA.
- Whiffen, J., Karpicke, J. D. (2014). *The pretesting effect and retrieval practice*. Poster presented at the 55th Annual Meeting of the Psychonomic Society, Long Beach, CA.
- Blunt, J. R. & Karpicke, J. D. (2013). *Relational and item specific processing in retrieval practice*. Poster at the 25th Annual Meeting of the Association for Psychological Science, Washington, D.C.
- Blunt, J. R. & Karpicke, J. D. (2013). *Individual differences in retrieval practice with children*. Poster at the 54th Annual Meeting of the Psychonomic Society, Toronto, ON.
- Grimaldi, P. J. & Karpicke, J. D. (2013). *Retrieval Practice Enhances Performance on Relational and Application Questions*. Talk at the 85th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Karpicke, J. D., & Bauernschmidt, A. (2013). *An interest heuristic: When interesting materials produce illusions of learning*. Invited Symposium Talk, "Knowing What You Don't Know: Science and Applications of Metamemory Research," at the 121st Annual Convention

of the American Psychological Association, Honolulu, HI.

- Karpicke, J. D., Blunt, J. R., Smith, M. A., Nunes, L. D., Grimaldi, P. J., & Karpicke, S. S. (2013). *Retrieval-based learning in elementary children: Preliminary findings*. Presentation at the Fall 2013 Institute of Education Sciences Principal Investigator Meeting, Washington, D. C.
- Karpicke, J. D., Grimaldi, P. J., Blunt, J. R., Smith, M. A., & Karpicke, S. S. (2013). *Retrieval-based learning: The need for guided retrieval practice*. Symposium talk presented at the 25th Annual Meeting of the Association for Psychological Science, Washington, D.C.
- Karpicke, J. D., Grimaldi, P. J., Blunt, J. R., Smith, M. A., & Karpicke, S. S. (2013). *Retrieval-based learning: effectiveness of guided retrieval*. Talk presented at the 121st Annual Convention of the American Psychological Association, Honolulu, HI.
- Kievit-Kylar, B., Grimaldi, P. J., Karpicke, J. D., & Jones, M. N. (2013). *A Semantic Model Supported Memory Retrieval Based Infrastructure for Education*. Paper presented at the Society for Computers in Psychology.
- Lehman, M. & Karpicke, J. D. (2013). *Pathfinder: An alternative method for assessing knowledge*. Presented at the 85th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Lehman, M., Smith, M. A., & Karpicke, J. D. (2013). *The retrieval practice effect: The unique benefits of retrieval mode*. Talk presented at the 59th Annual Meeting of the Southeastern Psychological Association, Atlanta, GA.
- Lehman, M, Smith, M. A., & Karpicke, J. D. (2013). *Identifying the mechanism behind the retrieval practice effect: The role of temporal context*. Poster presented at the 54th Annual Meeting of the Psychonomic Society, Toronto, Canada.
- Lehman, M., Smith, M. A., & Karpicke, J.D. (2013). *The role of context in the retrieval practice effect*. Poster presented at the 9th Annual Context and Episodic Memory Symposium, Philadelphia, PA.
- Nunes, L. D., & Karpicke, J. D. (2013). *Illusions of learning produced by watching educational videos*. Poster at the 54th Annual Meeting of the Psychonomic Society, Toronto, ON.
- Poston, L. P., Smith, M. A., & Karpicke, J. D. (2013). *Individual differences in the effectiveness of structured retrieval activities*. Poster presented at the 85th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Poston, L. P., Smith, M. A., & Karpicke, J. D. (2013). *Individual differences locus of control and the effectiveness of structured retrieval activities*. Poster to be presented at the 54th Annual Meeting of the Psychonomic Society, Toronto, ON.
- Smith, M. A., Blunt, J. R., Karpicke, S. S., & Karpicke, J. D. (2013). *Generating cues for retrieval practice improves learning in elementary students*. Poster presented at the 85th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Smith, M. A., Blunt, J. R., Karpicke, S. S. & Karpicke, J. D. (2013). *Generating cues for retrieval practice improves learning in elementary students*. Poster presented at the 121st Annual Convention of the American Psychological Association, Honolulu, HI.
- Smith, M. A., & Karpicke, J. D. (2013). *How students (should) study*. Symposium talk presented at the 121st Annual Convention of the American Psychological Association,

Honolulu, HI.

- Whiffen, J., Karpicke, J. (2013). *The Role of Temporal Context in Retrieval Practice*. Poster at the 54th Annual Meeting of the Psychonomic Society, Toronto, ON.
- Whiffen, J., Karpicke, J. (2013). *The Role of Temporal Context in Retrieval Practice*. Poster presented at the 85th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Bauernschmidt, A., Blunt, J. R., Karpicke, J. D. (2012). *Does training on concept mapping improve learning?* Poster at the 24th Annual Meeting of the Association of Psychological Science, Chicago, IL.
- Bauernschmidt, A., & Karpicke, J. D. (2012). *Repeated retrieval improves problem solving*. Talk at the 84th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Blunt, J. R., Rahman, A., & Karpicke, J. D. (2012). *Individual and collaborative retrieval practice effects on long-term learning*. Poster at the 53rd Annual Meeting of the Psychonomic Society, Minneapolis, MN.
- Cogdill, M. H., Karpicke, J. D., & Balensiefer, K. B. (2012). *Studying in ambient noise and music*. Poster at the 84th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Grimaldi, P. J., Poston, L. P., & Karpicke, J. D. (2012). *Concept mapping: Item-specific and relational processing*. Talk at the 84th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Grimaldi, P. J. & Karpicke, J. D. (2012). *Retrieval practice enhances performance on relational and application questions*. Poster at the 24th Annual Meeting of the Association for Psychological Science, Chicago, IL.
- Grimaldi, P. J. & Karpicke, J. D. (2012). *Guided Retrieval Practice of Complex Educational Materials*. Poster at the 120th Annual Meeting of the American Psychological Association, Orlando, FL.
- Karpicke, J. D. (2012). *Retrieval-based learning: Active retrieval promotes meaningful learning*. Invited Talk at the 24th Annual Meeting of the Association for Psychological Science, Chicago, IL.
- Karpicke, J. D., & Grimaldi, P. J. (2012). *Guided retrieval practice of educational materials with automated scoring*. Talk at the 53rd Annual Meeting of the Psychonomic Society, Minneapolis, MN.
- Lehman, M., Smith, M. A., & Karpicke, J. D. (2012). *Dissociative effects of retrieval practice and elaboration on proactive interference*. Poster at the 24th Annual Meeting of the Association for Psychological Science, Chicago, IL.
- Lehman, M., Smith, M. A., & Karpicke, J. D. (2012). *Dissociative effects of retrieval practice and elaboration on proactive interference*. Poster at the 53rd Annual Meeting of the Psychonomic Society, Minneapolis, MN.
- Lehman, M., Cogdill, M., & Karpicke, J. D. (2012). *Evidence against an elaborative retrieval hypothesis of the testing effect*. Talk at the 84th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.

- Smith, M. A., Blunt, J. R., & Karpicke, J. D. (2012). *Cueing students' retrieval practice results in greater conceptual understanding*. Poster at the 24th Annual Meeting of the Association for Psychological Science, Chicago, IL.
- Bauernschmidt, A., Taylor, J. E. T., & Karpicke, J. D. (2011). *Embodied memory: Embodied retrieval cues enhance recall*. Poster at the 52nd Annual Meeting of the Psychonomic Society, Seattle, WA.
- Blunt, J. R., & Karpicke, J. D. (2011). *Concept mapping as a retrieval practice activity*. Poster at the 52nd Annual Meeting of the Psychonomic Society, Seattle, WA.
- Cross, K. M., & Karpicke, J. D. (2011). *Effects of cue generation and retrieval practice on complex learning*. Poster at the 83rd Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Grimaldi, P. J., & Karpicke, J. D. (2011). *Guided retrieval practice of complex educational materials using computerized scoring*. Talk at the 83rd Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Grimaldi, P. J., Poston, L., & Karpicke, J. D. (2011). *Elaborative studying with concept mapping: Relational and item-specific processing*. Poster at the 52nd Annual Meeting of the Psychonomic Society, Seattle, WA.
- Karpicke, J. D. (2011). *Retrieval practice and student learning*. Invited Talk at the 83rd Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Karpicke, J. D. (2011). *Retrieval practice and complex learning*. Invited Talk at the 23rd Annual Meeting of the Association for Psychological Science, Washington DC.
- Karpicke, J. D. (2011). *Retrieval-based learning: A new perspective on meaningful learning*. Keynote Address at the W. Edwards Deming Institute Conference on Learning, Purdue University.
- Grimaldi, P. J., & Karpicke, J. D. (2010). *Repeated retrieval potentiates encoding by enhancing organizational processing*. Poster at the 82nd Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Grimaldi, P. J., & Karpicke, J. D. (2010). *When and why does pretesting enhance subsequent encoding?* Poster at the 51st Annual Meeting of the Psychonomic Society, St. Louis, MO.
- Karpicke, J. D., & Bauernschmidt, A., (2010). *Spaced retrieval: Absolute spacing enhances learning regardless of relative spacing*. Talk at the 82nd Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Karpicke, J. D., & Blunt, J. R. (2010). *Retrieval practice produces more learning than elaborative studying with concept mapping*. Invited symposium talk at the 20th Annual Meeting of the Society for Text and Discourse, Chicago, IL.
- Bauernschmidt, A., & Karpicke, J. D. (2009). *Effects of text-based interest on metacognition and learning*. Poster at the 50th Annual Meeting of the Psychonomic Society, Boston, MA.
- Clase, K. L., Adamo-Villani, N., Gooding, S. L., Yadav, A., Karpicke, J. D., & Gentry, M. (2009). *Enhancing creativity in synthetic biology with interactive virtual environments*. Paper at the 39th Annual Frontiers in Education Conference, San Antonio, TX.

- Clase, K. L., Adamo-Villani, N., Gooding, S. L., Yadav, A., Karpicke, J. D., & Gentry, M. (2009). *Enhancing creativity in synthetic biology with interactive virtual environments*. Paper at the Gordon Research Conference on Visualization in Science and Education, Oxford, UK.
- Karpicke, J. D., Smith, M. A., & Grimaldi, P. (2009). *Learning with flashcards: You're probably doing it wrong*. Poster at the 81st Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Smith, M. A., & Karpicke, J. D. (2009). *The testing effect with short-answer, multiple-choice, and hybrid formats*. Poster at the 81st Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Smith, M. A., & Karpicke, J. D. (2009). *Retrieval practice with short-answer, multiple-choice, and hybrid tests*. Poster at the 50th Annual Meeting of the Psychonomic Society, Boston, MA.
- Zaromb, F. M., Karpicke, J. D., & Roediger, H. L. (2008). *The effects of effort after meaning on recall and metacognition*. Poster at the 49th Annual Meeting of the Psychonomic Society, Chicago, IL.
- Butler, A. C., Karpicke, J. D., & Roediger, H. L. (2007). *The effect of type and timing of feedback on learning from multiple-choice tests*. Talk at the Annual Meeting of the American Educational Research Association, Chicago, IL.
- Agarwal, P. K., Karpicke, J. D., Kang, S. H. K., Roediger, H. L., & McDermott, K. B. (2006). *Open-book or closed-book tests? Effects of testing on learning depend on feedback*. Poster at the 18th Annual Meeting of the Association for Psychological Science, New York, NY.
- Agarwal, P. K., Karpicke, J. D., Kang, S. H. K., Roediger, H. L., & McDermott, K. B. (2006). *Long-term retention is greater following closed-book tests than open-book tests*. Poster at the 47th Annual Meeting of the Psychonomic Society, Houston, TX.
- Butler, A. C., Karpicke, J. D., & Roediger, H. L. (2006). *The effect of type and timing of feedback on learning from multiple-choice tests*. Poster at the 47th Annual Meeting of the Psychonomic Society, Houston, TX.
- Karpicke, J. D., McCabe, D. P., & Roediger, H. L. (2006). *Testing enhances recollection: Process dissociation estimates and metamemory judgments*. Poster at the 47th Annual Meeting of the Psychonomic Society, Houston, TX.
- Karpicke, J. D., & Roediger, H. L. (2006). *Repeated retrieval during learning is the key to enhancing later retention*. Poster at the Institute of Education Sciences (IES) Research Conference, Washington D. C.
- Roediger, H. L., & Karpicke, J. D. (2006). *Repeated retrieval during learning is the key to enhancing later retention*. Talk at the 47th Annual Meeting of the Psychonomic Society, Houston, TX.
- Karpicke, J. D., & Roediger, H. L. (2005). *Does expanding retrieval work?* Poster at the 76th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
- Karpicke, J. D., & Roediger, H. L. (2005). *Test-enhanced learning in multitrial free recall*. Poster at the 17th Annual Meeting of the American Psychological Society, Los Angeles, CA.
- Karpicke, J. D., & Roediger, H. L. (2005). *Expanding retrieval does not improve long-term retention*. Poster at the 46th Annual Meeting of the Psychonomic Society, Toronto, ON.

- McCabe, D. P., Roediger, H. L., & Karpicke, J. D. (2005). *Estimating recollection and familiarity in recall using process dissociation*. Talk at the 46th Annual Meeting of the Psychonomic Society, Toronto, ON.
- Roediger, H. L., Karpicke, J. D., & Marsh, E. J. (2005). *The power of testing in improving educational performance*. Talk at the 6th Biennial Meeting of the Society for Applied Research in Memory and Cognition (SARMAC), Wellington, New Zealand.
- Roediger, H. L., Karpicke, J. D., & Marsh, E. J. (2003). *Positive and negative effects of testing in retention of general knowledge*. Talk at the 44th Annual Meeting of the Psychonomic Society, Vancouver, B.C.

Invited Addresses

Distinguished Lectures and Keynote Addresses:

- Plenary Session, International Association of Medical Science Educators, Burlington, VT, 2017
- Claude Bernard Distinguished Lecture, American Physiological Society, Chicago, IL, 2017
- B. F. Skinner Lecture, Association for Behavior Analysis International, San Antonio, TX, 2015
- Keynote Address, Cognition in the Classroom: The Application of Strategies from Cognitive Psychology in Education, Erasmus University Rotterdam, 2015
- Keynote Address, Experimental Biology Conference, San Diego, CA, 2014
- Keynote Address, Educational Affairs Session, American Association of Clinical Anatomists, Denver, CO, 2013
- Keynote Address, Francisco Manuel dos Santos Foundation Conference on Education, Coimbra and Lisbon, Portugal, 2012
- Keynote Address, Symposium on Learning, Radboud University Nijmegen Medical Center and Donders Institute for Brain, Cognition, and Behaviour, Netherlands, 2012
- Keynote Address, W. Edwards Deming Institute Conference on Learning, 2011

Invited Conference Addresses:

- Invited Talk, Midwestern Psychological Association, Chicago, IL, 2016
- Invited Talk, Dawn or Doom: The New Technology Revolution, 2014
- Invited Talk, Personalized Learning Workshop, Houston, TX, 2014
- Invited Talk, Association for Psychological Sciences, Student Caucus Symposium, "The Science Behind Excellence in Teaching and Learning," Chicago, IL, 2012
- Invited Talk, Association for Psychological Sciences, Washington DC, 2011
- Invited Talk, Midwestern Psychological Association, Chicago, IL, 2011
- Invited Talk, Society for Text and Discourse, Chicago, IL, 2010

Invited Colloquia at Other Universities:

- Chicago Medical School at Rosalind Franklin University of Medicine and Science, 2018
- Benos Lecture, University of Alabama, Department of Cell, Developmental and Integrative Biology, 2018
- Michigan Medical School Faculty Network (Michigan State University, University of Michigan, Oakland University, Western Michigan University, Central Michigan University), 2018
- IUPUI, Office of the Vice Chancellor for Research, NSF CAREER Award Panel, 2018
- University of Louisville, School of Medicine, 2018
- IUPUI, Office of the Vice Chancellor for Research, NSF CAREER Award Panel, 2017
- University of Notre Dame, Department of Psychology, 2017
- Quinnipiac University, Frank H. Netter School of Medicine, 2017
- Quinnipiac University, Center for Teaching and Learning, 2017
- University of Wisconsin, Wisconsin Center for Educational Research, 2016
- Georgetown University, Department of Psychology, 2016
- IUPUI, Office of the Vice Chancellor for Research, NSF CAREER Award Panel, 2016
- University of Central Florida, College of Medicine, 2015
- Indiana University School of Medicine Anatomy Seminar, 2015
- Michigan State University, Department of Psychology, 2015
- Umea University, Department of Psychology, 2014
- Illinois State University, Department of Psychology, 2014
- Northwestern University, Learning Sciences, 2014
- Saarland University, Department of Psychology, 2012
- University of Illinois at Urbana-Champaign, 2012
- University of Mississippi Medical Center, 2011
- DePauw University, Department of Psychology, 2011
- University of Illinois, Chicago, Department of Psychology, 2011
- Northwestern University, Department of Psychology, 2011
- University of Louisville, Department of Psychology, 2010
- University of Chicago, Department of Psychology, 2008
- University of California, San Diego, Department of Psychology, 2007
- Michigan State University, Department of Psychology, 2007
- Indiana University, Department of Psychology, 2006

Invited Talks at Purdue University on the Science of Learning:

- School of Nursing, 2017
- University Graduate Teaching Assistant Orientation, 2017
- Purdue President's Colloquium at Westwood, 2017
- Chemistry Education and Science Education Seminar, 2015
- Physics Education Research Seminar, 2014
- Department of Political Science Guest Lecture, 2014
- Department of Human Development and Family Studies, 2014
- Supplemental Instruction Program, 2014
- Keynote Address, Teaching Academy Induction Ceremony, 2013
- School of Veterinary Medicine, Faculty Forum, 2013
- School of Veterinary Medicine, Grand Rounds, 2013
- Department of Human Development and Family Studies, 2012
- Department of Engineering Education, 2012
- Supplemental Instruction Program, 2012
- College of Health and Human Sciences Research Day, 2011
- Louis Stokes Alliance for Minority Participation Program, 2011
- Howard Hughes Medical Institute Faculty Learning Community, 2011
- President's Council Back-to-Class Weekend, 2010
- Chemistry Education and Science Education Seminar, 2010
- Center for Instructional Excellence Teaching Workshop Series, 2010
- College of Pharmacy, Nursing, and Health Sciences, 2009
- Discovery Learning Center PI Summit, 2009
- Indiana University School of Medicine – Lafayette, 2008
- Department of Basic Medical Sciences, School of Veterinary Medicine, 2008

Editorial Activities

Associate Editor:

- *Applied Cognitive Psychology*, 2012-2015
- *Journal of Experimental Psychology: Applied*, 2013-2014

Editorial Board:

- *Applied Cognitive Psychology*, 2015-present
- *Educational Psychology Review*, 2017-present
- *Journal of Educational Psychology* (Principal Reviewer), 2014-2017

- *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 2012-present
- *Memory & Cognition*, 2009-present
- *Scholarship of Teaching and Learning in Psychology*, 2014-present

Ad Hoc Reviewer (48 Journals):

Advances in Physiology Education • American Journal of Psychology • Applied Cognitive Psychology • Behavior Research Methods • Cerebral Cortex • Child Development • Cognition • Cognition and Instruction • Cognitive, Affective, and Behavioral Neuroscience • Cognitive Science • Cognitive Research: Principles and Implications • Consciousness and Cognition • Current Directions in Psychological Science • Developmental Science • Educational Policy • Educational Psychology Review • European Journal of Psychology of Education • Experimental Psychology • Frontiers in Psychology • Instructional Science • Journal of Applied Research in Memory and Cognition • Journal of Cognitive Education and Psychology • Journal of Cognitive Psychology • Journal of Educational Psychology • Journal of Experimental Child Psychology • Journal of Experimental Psychology: Applied • Journal of Experimental Psychology: General • Journal of Experimental Psychology: Learning, Memory, and Cognition • Journal of the International Neuropsychological Society • Journal of Memory and Language • Journal of Neuroscience • Learning and Individual Differences • Learning and Instruction • Learning and Motivation • Memory • Memory & Cognition • Motivation Science • Nature Human Behavior • NeuroImage • PLOS ONE • Proceedings of the National Academy of Science • Psychological Science • Psychonomic Bulletin & Review • Quarterly Journal of Experimental Psychology • Scholarship of Teaching and Learning in Psychology • Science • Trends in Neuroscience and Education • Zeitschrift fur Psychologie

Grant Panel Activities

Panelist:

- Institute of Education Sciences, U.S. Department of Education (two times), 2011, 2012
- National Science Foundation, Division of Information and Intelligent Systems (IIS), 2011
- National Science Foundation, Division of Research on Learning (DRL) (three times), 2011, 2012, 2014
- National Science Foundation Graduate Research Fellowship Program (two times), 2011, 2014

Ad Hoc Grant Reviewer:

- Economic & Social Research Council (UK)
- Israeli Science Foundation
- National Science Foundation, Division of Behavioral and Cognitive Sciences (BCS)
- National Science Foundation, Division of Research on Learning (DRL)
- NWO Dutch Programme Council for Educational Research

National Activities and Service

- Member, National Center for Education Research (NCER) Technical Working Group on Neuroeducation, 2018-present
- Member, National Academy of Sciences, Engineering, and Medicine Committee on the Science and Practice of Learning (authoring *How People Learn II: Learners, Contexts, and Cultures*), 2015-present
- Organizing Committee, Computing Community Consortium (CCC) Visioning Workshop on Computer-Aided Personalized Education (CAPE), 2015-2016

University Activities and Service

University Committees:

- Faculty Awards and Recognition Committee, 2017-present
- Scholarship of Online Education Committee, 2017-present

Honors College:

- Honors College Faculty Governance Committee, 2012-2016
- Presenter, Honors College Golden Honors Day, 2013
- Search Committee, Dean of the Honors College, 2012-2013
- Honors College Governance Committee, Curriculum Subcommittee, 2012-2013
- Honors College Task Force, 2011-2012
- Chair, Curriculum Subcommittee of the Honors College Task Force, 2011-2012
- Presenter, University Honors Program Freshman Retreat, Fall 2011
- University Honors and Student Success (UHSS) Task Force, 2010-2011
- Chair, Honors Subcommittee of the UHSS Task Force, 2010-2011

Discovery Learning Research Center:

- Affiliate, Discovery Learning Research Center, 2008-2016
- Strategic Planning Committee, Discovery Learning Research Center, 2013
- Reviewer, Discovery Learning Research Center Faculty Fellows Program, 2012
- Internal Advisory Board, Discovery Learning Research Center, 2008-2014

University Student Success Initiatives:

- Steven C. Beering and Stamps Foundation Scholarship Selection Committee, 2013-2015
- Co-Organizer, Lesson Plan on "Academic Success," Boiler Gold Rush, 2014
- Academic Success Center Learning Think Tank, 2013-2014
- Keynote Speaker, Teaching Academy Induction Ceremony, 2013
- Provost Fellow, 2013-2014
- Co-Chair, Purdue University Student Growth Assessment Task Force, 2013-2014

- Judge, Purdue Undergraduate Research Symposium, 2013
- Search Committee, Director of the Center for Instructional Excellence, 2011-2012
- Foundations of Excellence in the First College Year Committee, 2011-2012

College Activities and Service

- Reviewer, College of Health and Human Sciences Awards, 2012
- College of Health and Human Sciences Honors Program Task Force, 2011-2013
- Reviewer, College of Liberal Arts Distinguished Dissertation Award, 2010

Department Activities and Service

- Undergraduate Committee, 2011-2013; 2014-2017
- Human Subjects Committee, 2013-2017
- Coordinator, Cognitive Colloquium Series, 2013-2014, 2017
- Workshop on the NSF Graduate Research Fellowship Program, annually each Fall, 2013-present
- Special Committee on Funding for Psychology Graduate Students, 2014
- Chair, Search Committee, Cognitive Psychology, 2012-2013
- Director, Research Focused Honors Program, 2010-2011; 2012-2013
- Teaching Excellence Committee, 2010-2011
- Bradley Lab Committee, 2010-2012
- Search Committee, Head of the Department of Psychological Sciences, 2008-2009

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