

ANDREW C. BUTLER

CURRICULUM VITAE

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PROFESSIONAL EXPERIENCE

- 2024 Director of Graduate Studies, Department of Education
Washington University in St. Louis
- 2023-Present Program Director, Saint Louis Translational Fellows in Education
- 2019-2024 Chair, Department of Education
Washington University in St. Louis
- 2019-2022 Director of Graduate Studies, Department of Education
Washington University in St. Louis
- 2017-Present Associate Professor, Education and Psychological & Brain Sciences
Washington University in St. Louis
- 2015-2017 Assistant Professor, Educational Psychology
University of Texas at Austin
- 2012-2014 Postdoctoral Research Scholar, Psychology & Neuroscience
Duke University
Primary Advisor: David C. Rubin
- 2009-2012 Postdoctoral Research Associate, Psychology & Neuroscience
Duke University
Primary Advisor: Elizabeth J. Marsh
- 2002-2003 Research Assistant, Center for Research in Language
University of California, San Diego

EDUCATION

- 2009 Ph.D., Washington University in St. Louis
“Using repeated testing and variable encoding to promote transfer of learning”
Dissertation Committee: Henry L. Roediger, III (chair), David A. Balota, Mark A. McDaniel, Jeffrey M. Zacks, R. Keith Sawyer, James V. Wertsch (members)
- 2006 M.A., Washington University in St. Louis

Thesis: “Feedback enhances the positive effects and reduces the negative effects of multiple-choice testing”

Advisor: Henry L. Roediger, III

2002 B.A., Emory University (Summa cum laude; Psychology / Economics)

Thesis: “The role of emotional tone of voice in episodic memory”

Advisor: Lynne C. Nygaard

RESEARCH INTERESTS

I am interested in the malleability of memory – the cognitive processes and mechanisms that cause memories to change or remain stable over time. More specifically, my research focuses on how the process of retrieving memories affects the content (e.g., events, specific details, narrative structure, etc.) and phenomenological characteristics (e.g., confidence, emotional intensity, vividness, etc.) of those memories. Under this broad conceptual umbrella, I study a variety of different topics and phenomena, including higher-order learning, error-correction / knowledge revision, self-regulation of learning, the interplay between learning and motivation, and event memory, among others. I am particularly interested in understanding how contextual factors (e.g., knowledge domain, individual differences, time scale) influence these phenomena. My research addresses both theoretical issues in psychological science and practical applications to education (as well as other applied areas). I utilize many different methodological approaches in my research (quantitative, qualitative, mixed methods, experimental, experience sampling, longitudinal, etc.) and collect data in a variety of different contexts (laboratory, classroom, online crowd sourcing, educational technology, secondary datasets, etc.).

HONORS & AWARDS

2023 Top 10 Finalist, William H. Danforth St. Louis Confluence Award

2021 Emerson Excellence in Teaching Award

2019 Convocation Keynote Speaker, Fontbonne University

2018 Fellow, Association for Psychological Science

2016 Fellow, Psychonomic Society

2016 J. Don Read Early Career Award
Society for Applied Research in Memory and Cognition

2015 Nominated for APA Board of Scientific Affairs

2013 Outstanding Postdoc at Duke University

2011 “Rising Star” Award, Association for Psychological Science

- 2010 Paul Pintrich Outstanding Dissertation Award
American Psychological Association Division 15 (Educational Psychology)
- 2010 Student Marshal, Commencement Ceremony, Washington University in St. Louis
- 2008 Dean's Dissertation Fellowship, Washington University in St. Louis
- 2006 Erlbaum Award in Cognitive Science
Psi Chi, The National Honor Society in Psychology
- 2006 Student Leader of the Year Award
Graduate Professional Council, Washington University in St. Louis
- 2005 Julia A. Gehm Scholarship for Outstanding Student Leadership
Washington University in St. Louis
- 2004 Honorable Mention, National Science Foundation Graduate Fellowship

FUNDING

The James S. McDonnell Foundation, "Saint Louis Translational Fellowships in Education", 2023-2029. Postdoctoral Training Grant: \$3,562,246 total cost. **Andrew C. Butler** (PI), Saras Chung, Rowhea Elmesky, Evan Rhinesmith, Gary Ritter, & Rachel Ruggirello.

The James S. McDonnell Foundation, "Implementing principles from the science of learning within educational practice", 2016-2027. Collaborative Activity Grant: \$4,635,718 total cost; \$816,647 sub-award. Shana K. Carpenter (PI), **Andrew C. Butler**, Jeffrey D. Karpicke, David B. Miele, Timothy J. Nokes-Malach, & Sarah K. "Uma" Tauber.

Association for Psychological Science Fund for Teaching and Public Understanding of Psychological Science, "MythBusters: An intervention to correct misconceptions about psychology", 2016-2018. \$14,436 total cost. **Andrew C. Butler**.

Ruth L. Kirschstein National Research Service Award, National Institute of Mental Health, "The effects of repeated retrieval on autobiographical memories" (1F32MH095302-01A1), 2012-2014. \$161,802 total cost. **Andrew C. Butler**; Mentor: David C. Rubin, Co-Mentor: Elizabeth J. Marsh.

American Academy of Neurology Education Research Grant to Evaluate AAN Education Programs, "Test-enhanced learning in continuing medical education: Measuring and augmenting long-term retention from the AAN annual meeting." 2012. \$11,500 total cost. Douglas P. Larsen (PI) & **Andrew C. Butler**.

The Spencer Foundation, “Asking students questions during learning: Retrieval practice as a mechanism for promoting transfer of science concepts” (#201100093), 2011. \$35,800 total cost. Elizabeth J. Marsh (PI) & **Andrew C. Butler**.

American Academy of Neurology Educational Research Grant, “Do deep learning techniques combined with repeated testing prevent long-term forgetting? Investigation of a novel combination of cognitive and educational psychology concepts in neurological education.” 2009-2010. \$10,000 total cost. Douglas P. Larsen (PI), Henry L. Roediger, III, & **Andrew C. Butler**.

American Academy of Neurology Educational Research Grant, “Effects of repeated testing by simulation and written tests on long-term retention of neurological information: A randomized, controlled trial.” 2008-2009. \$10,000 total cost. Douglas P. Larsen (PI), Henry L. Roediger, III, **Andrew C. Butler**, & Amy L. Lawson.

JOURNAL ARTICLES (PEER-REVIEWED)

Reimer, C. K., Grantham, H., & **Butler, A. C.** (in press). The effect of retrieval practice on vocabulary learning for DHH children. *Journal of Deaf Studies and Deaf Education*.

Kim, Y., Zepeda, C. D., Martin, R. S., & **Butler, A. C.** (2023). Situating cost perceptions: How general cost and motivational regulation predict specific momentary cost dimensions. *Educational Psychology*, 43, 855-873.

Zepeda, C. D., Ortegren, F. R., & **Butler, A. C.** (2023). Learning from feedback in college courses: Student beliefs, practices, and preferences. *Applied Cognitive Psychology*, 37, 1238-1257.

*Kim, Y., *Zepeda, C. D., & **Butler, A. C.** (2023). An interdisciplinary review of self-regulation of learning: Bridging cognitive and educational psychology perspectives. *Educational Psychology Review*, 35, 92.
*Indicates co-first authors

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.

Martin, R. S., Zepeda, C. D., Lindstadt, C., Love, B., & **Butler, A. C.** (2022). The cultural career script: College students' expectations for a typical career. *Journal of Applied Research in Memory and Cognition*, 11, 66-75.

Zepeda, C. D., Martin, R. S., & **Butler, A. C.** (2020). Motivational strategies to engage learners in desirable difficulties. *Journal of Applied Research in Memory and Cognition*, 9, 468-474.

- Butler, A. C.,** Black-Maier, A. D., Campbell, K., Marsh, E. J., & Persky, A. M. (2020). Regaining access to marginal knowledge in a classroom setting. *Applied Cognitive Psychology, 34*, 1005-1012.
- Butler, A. C.** (2018). Multiple-choice testing in education: Are the best practices for assessment also good for learning? *Journal of Applied Research in Memory and Cognition, 7*, 323-331.
- Schell, J. A., & **Butler, A. C.** (2018). Insights from the science of learning can inform evidence-based implementation of Peer Instruction. *Frontiers in Education, 3*:33. doi: 10.3389/educ.2018.00033
- Butler, A. C.,** Black-Maier, A. D., Raley, N. D., & Marsh, E. J. (2017). Retrieving and applying knowledge to different examples promotes transfer of learning. *Journal of Experimental Psychology: Applied, 23*, 433-446.
- Butler, A. C.,** Rice, H. J., Wooldridge, C. L., & Rubin, D. C. (2016). Visual imagery in autobiographical memory: The role of repeated retrieval in shifting perspective. *Consciousness and Cognition, 42*, 237-253.
- Emke, A. R., **Butler, A. C.,** & Larsen, D. P. (2016). Effects of Team-Based Learning on short-term and long-term retention of factual knowledge. *Medical Teacher, 38*, 306-311.
- Muzyk, A. J., Fuller, S., Jiroutek, M. R., Grochowski, C. O., **Butler, A. C.,** & May, D. B. (2015). Implementation of a flipped classroom model to teach psychopharmacotherapy to third-year Doctor of Pharmacy (PharmD) students. *Pharmacy Education, 15*, 44-53.
- Larsen, D. P., **Butler, A. C.,** Aung, W. Y., Corboy, J. C., Friedman, D. I., & Sperling, M. R. (2015). The effects of test-enhanced learning on long-term retention in AAN annual meeting courses. *Neurology, 84*, 748-754.
- Mullet, H. G., **Butler, A. C.,** Verdin, B., von Borries, R., & Marsh, E. J. (2014). Delaying feedback promotes transfer of knowledge despite student preferences to receive feedback immediately. *Journal of Applied Research in Memory & Cognition, 3*, 222-229.
- Butler, A. C.,** Marsh, E. J., Slavinsky, J. P., & Baraniuk, R. G. (2014). Integrating cognitive science and technology improves learning in a STEM classroom. *Educational Psychology Review, 26*, 331-340.
- Zaromb, F., **Butler, A. C.,** Agarwal, P. K., & Roediger, H. L., III (2014). Collective memories of three wars in United States history in younger and older adults. *Memory & Cognition, 42*, 383-399.

- Larsen, D. P., **Butler, A. C.**, Lawson, A. L., & Roediger, H. L., III (2013). The importance of seeing the patient: Test-enhanced learning with standardized patients and written tests improves clinical application of knowledge. *Advances in Health Sciences Education, 18*, 409-425.
- Larsen, D. P., **Butler, A. C.**, & Roediger, H. L., III (2013). Comparative effects of test-enhanced learning and self-explanation on long-term retention. *Medical Education, 47*, 674-682.
- Butler, A. C.**, Godbole, N., & Marsh, E. J. (2013). Explanation feedback is better than correct answer feedback for promoting transfer of learning. *Journal of Educational Psychology, 105*, 290-298.
- Marsh, E. J., **Butler, A. C.**, & Umanath, S. (2012). Using fictional sources in the classroom: Applications from cognitive psychology. *Educational Psychology Review, 24*, 449-469.
- Umanath, S., **Butler, A. C.**, & Marsh, E. J. (2012). Positive and negative effects of monitoring popular films for historical inaccuracies. *Applied Cognitive Psychology, 26*, 556-567.
- Butler, A. C.**, Dennis, N. A., & Marsh, E. J. (2012). Inferring facts from fiction: Reading correct and incorrect information affects memory for related information. *Memory, 20*, 487-498.
- Butler, A. C.**, Fazio, L. F., & Marsh, E. J. (2011). The hypercorrection effect persists over a week, but high confidence errors return. *Psychonomic Bulletin & Review, 18*, 1238-1244.
- Roediger, H. L., III, & **Butler, A. C.** (2011). The critical role of retrieval practice in long-term retention. *Trends in Cognitive Sciences, 15*, 20-27.
- Butler, A. C.** (2010). Repeated testing produces superior transfer of learning relative to repeated studying. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 36*, 1118-1133.
- Larsen, D. P., **Butler, A. C.**, & Roediger, H. L., III (2009). Repeated testing improves long-term retention relative to repeated study: A randomized, controlled trial. *Medical Education, 43*, 1174-1181.
- Butler, A. C.**, Kang, S. H. K., & Roediger, H. L., III (2009). Congruity effects between materials and processing tasks in the survival processing paradigm. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 35*, 1477-1486.

- Butler, A. C.**, Zaromb, F., Lyle, K. B., & Roediger, H. L., III (2009). Using popular films to enhance classroom learning: The good, the bad, and the interesting. *Psychological Science, 20*, 1161-1168.
- Karpicke, J. D., **Butler, A. C.**, & Roediger, H. L., III (2009). Do students practice retrieval when they study on their own? *Memory, 17*, 471-479.
- Larsen, D. P., **Butler, A. C.**, & Roediger, H. L., III (2008). Test-enhanced learning in medical education. *Medical Education, 42*, 959-966.
- Butler, A. C.**, Karpicke, J. D., & Roediger, H. L., III (2008). Correcting a meta-cognitive error: Feedback increases retention of low confidence correct responses. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 34*, 918-928.
- Butler, A. C.**, & Roediger, H. L., III (2008). Feedback enhances the positive effects and reduces the negative effects of multiple-choice testing. *Memory & Cognition, 36*, 604-616.
- Butler, A. C.**, Karpicke, J. D., & Roediger, H. L., III (2007) The effect of type and timing of feedback on learning from multiple-choice tests. *Journal of Experimental Psychology: Applied, 13*, 273-281.
- Arevalo, A. L., Perani, D., Cappa, S. F., **Butler, A. C.**, Bates, E., & Dronkers, N. (2007). Action and object processing in aphasia: From nouns and verbs to the effect of manipulability. *Brain and Language, 100*, 79-94.
- Butler, A. C.**, & Roediger, H. L., III (2007). Testing improves long-term retention in a simulated classroom setting. *European Journal of Cognitive Psychology, 19*, 514-527.
- Butler, A. C.**, Marsh, E. J., Goode, M. K., & Roediger, H. L., III (2006). When additional multiple-choice lures aid versus hinder later memory. *Applied Cognitive Psychology, 20*, 941-956.
- Bulevich, J. B., Roediger, H. L., III, Balota, D. A., & **Butler, A. C.** (2006). Failures to find suppression of episodic memories in the think/no-think paradigm. *Memory & Cognition, 34*, 1569-1577.
- Szekely, S., Jacobsen, T., D'Amico, S., Devescovi, A., Andonova, E., Herron, D., Lu, C., Pechmann, T., Pleh, C., Wicha, N., Federmeier, K., Gerdjikova, I., Gutierrez, G., Hung, D., Hsu, J., Iyer, G., Kohnert, K., Mehotcheva, T., Orozco-Figueroa, A., Tzeng, A., Tzeng, O., Arevalo, A., Vargha, A., **Butler, A. C.**, Buffington, R., & Bates, E. (2004). A new on-line resource for psycholinguistic studies. *Journal of Memory and Language, 51*, 247-250.

MANUSCRIPTS SUBMITTED FOR PUBLICATION

Butler, A. C., Wang, L., Smith-Peirce, R., & Woodward, N. R. (submitted). The role of transfer-appropriate processing in observing the mnemonic benefits of retrieval practice. *Manuscript submitted for publication.*

Kim, Y., Zepeda, C. D., Martin, R. S., & **Butler, A. C.** (submitted). Motivational conflicts and emotions in daily life: Contextualizing the role of motivational regulation and cost. *Manuscript submitted for publication.*

Black-Maier, A. D., **Butler, A. C.**, & Marsh, E. J. (submitted). Retrieval practice produces superior transfer through increased retention and improved ability to apply knowledge. *Manuscript submitted for publication.*

Kim, Y., Smith-Peirce, R., & **Butler, A. C.** (submitted). Planning the use of learning and motivational strategies: Do students take context into account? *Manuscript submitted for publication.*

Zepeda, C. D., Giani, M. S., & **Butler, A. C.** (submitted). Individual differences in the use of motivational regulation strategies and their relation to course performance. *Manuscript submitted for publication.*

MANUSCRIPTS IN PREPARATION

Butler, A. C., Alarcón, C., Umanath, S., Dolan, P. O., Thomas, R. C., & Marsh, E. J. (in prep). Engaging in post-refutation retrieval practice increases the durability of conceptual change. *Manuscript in preparation.*

Butler, A. C., Alarcón, C., Een, E. N., Zepeda, C. D., & Schell, J. A. (in prep). Normative practices, knowledge, and beliefs about learning strategies among high school students. *Manuscript in preparation.*

Smith-Peirce, R. N., & **Butler, A. C.** (in prep). A scoping review of research on individual differences in the testing effect paradigm. *Manuscript in preparation.*

Butler, A. C., & Rubin, D. C. (in prep). The effect of repeated retrieval on memories for emotional events. *Manuscript in preparation.*

CHAPTERS

Bezdek, M. A., **Butler, A. C.**, & Zacks, J. M. (2024). Event memory in fact and fiction. In M. J. Kahana & A. Wagner (Eds), *Handbook on Human Memory* (Vol. 2, pp. 2189-2209). New York: Oxford University Press.

Schell, J. A., & **Butler, A. C.** (2023). Adapting Peer Instruction for online learning. In C. E. Overson, C. M. Hakala, L. L. Kordonowy, & V. A. 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. 263-279). Society for the Teaching of Psychology. <https://teachpsych.org/ebooks/itow>
- Lee, M. W., & **Butler, A. C.** (2022). The flipped classroom: A guide to making evidence-based decisions about implementation. In H. J. Witchel & M. W. Lee (Eds.), *Multimedia and Educational Technologies in the Biomedical and Life Sciences* (pp. 167-198). Cham, Switzerland: Springer.
- Zepeda, C. D., Een, E. N., & **Butler, A. C.** (2021). The mnemonic effects of retrieval practice. In L. Zhang (Ed.), *Oxford Encyclopedia of Educational Psychology*. New York: Oxford University Press.
- Loehr, A. M., & **Butler, A. C.** (2019). Designing interventions to combat misinformation based on factors that increase susceptibility. In P. Kendeou & D. H. Robinson (Eds.), *Misinformation and Fake News in Education* (pp. 133-156). Charlotte, NC: Information Age Publishing.
- Butler, A. C.**, & Woodward, N. R. (2018). Towards consilience in the use of task-level feedback to promote learning. In K. D. Federmeier (Ed.), *Psychology of Learning and Motivation* (Vol. 69, pp. 1-38). Cambridge, MA: Academic Press.
- Wang, L., & **Butler, A. C.** (2018). Transfer. In B. Frey (Ed.), *The SAGE encyclopedia of educational research, measurement, and evaluation* (pp. 1707-1710). Thousand Oaks, CA: SAGE Publications Inc.
- Larsen, D. P., & **Butler, A. C.** (2013). Test-enhanced learning. In Walsh, K. (Ed.), *Oxford textbook of medical education* (pp. 443-452). Oxford: Oxford University Press.
- Marsh, E. J., & **Butler, A. C.** (2013). Memory in educational settings. In D. Reisberg (Ed.), *Oxford handbook of cognitive psychology* (pp. 299-317). Oxford: Oxford University Press.
- Roediger, H. L., III, & **Butler, A. C.** (2013). Retrieval practice (testing) effect. In H. Pashler (Ed.), *Encyclopedia of the mind* (pp. 660-661). Los Angeles, CA: Sage Publications, Inc.
- Roediger, H. L., III, & **Butler, A. C.** (2011). Paradoxes of remembering and knowing. In N. Kapur, A. Pascual-Leone, & V. Ramachandran (Eds.), *The paradoxical brain* (pp. 151-176). Cambridge: Cambridge University Press.
- McDaniel, M. A., & **Butler, A. C.** (2010). A contextual framework for understanding when difficulties are desirable. In A. S. Benjamin (Ed.), *Successful remembering and successful forgetting: A festschrift in honor of Robert A. Bjork* (pp. 175-198). New York: Psychology Press.

Roediger, H. L., III, Zaromb, F., & **Butler, A. C.** (2009). The role of repeated retrieval in shaping collective memory. In P. Boyer and J. V. Wertsch (Eds.), *Memory in mind and culture* (pp. 29-58). Cambridge: Cambridge University Press.

COMMENTARIES

Butler, A. C. (2018). An introduction to the forum: Cognitive perspectives on the assessment of professional competence. *Journal of Applied Research in Memory and Cognition*, 7(2), 165-166.

Butler, A. C., & Raley, N. D. (2015). The future of medical education: Assessing the impact of interventions on long-term retention and clinical care. *Journal of Graduate Medical Education*, 7, 483-485.

Butler, A. C., & Carpenter, S. K. (2015). Separating myth from reality in education: Introduction to the special issue. *Educational Psychology Review*, 27, 563-565.

ABSTRACTS / TECHNICAL REPORTS

Slavinsky, J. P., Devenport, K. J., **Butler, A. C.,** Marsh, E. J., & Baraniuk, R. G. (2013). Open online platforms advancing DSP education. *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 8771-8775.

Larsen, D. P., **Butler, A. C.,** Roediger, H. L., III (2011). Testing or elaboration: Which one promotes better retention in neurological education? *Neurology*, 76, A381-A381.

Larsen, D. P., Lawson A. L., **Butler, A. C.,** & Roediger H. L., III (2010). Effects on knowledge retention produced by repeated testing with standardized patients in neurological education. *Neurology*, 74, A206-A206.

Arevalo, A. L., **Butler, A. C.,** Perani, D., Cappa, S., & Bates, E. (2005). Introducing the gesture norming study: A tool for understanding on-line word and picture processing. Technical Report CRL-0401, Center for Research in Language, University of California, San Diego.

Arevalo, A., Perani, D., Cappa, S., **Butler, A. C.,** & Bates, E. (2004). A deficit in naming and repeating words involving hand imagery in a group of brain-injured patients. *Brain and Language*, 91, 144.

TALKS

Butler, A. C. (2023, November). *Applying the science of learning to enhance economics education*. Keynote Address at the 21st Annual Federal Reserve Bank of St. Louis Professors Conference, St. Louis, MO.

- Butler, A. C., Wang, L., Smith-Peirce, R., & Woodward, N. R. (2023, August).** *Transfer-appropriate retrieval practice: Implications for theory and education.* Talk presented at the biannual meeting of the Society for Applied Research in Memory and Cognition, Nagoya, Japan.
- Butler, A. C. (2023, July).** *Facilitating the development of students as self-directed learners.* Keynote address at the annual McMaster Symposium on Education & Cognition, Hamilton, ON, Canada.
- Butler, A. C. (2023, May).** *Creating learning environments that support student motivation.* Keynote address at the annual Rutgers Active Learning Symposium, New Brunswick, NJ.
- Butler, A. C. (2023, May).** *Providing feedback on assignments and assessments: Type, timing, and other considerations.* Workshop at the annual Rutgers Active Learning Symposium, New Brunswick, NJ.
- Butler, A. C. (2023, April).** *Facilitating the development of students as self-directed learners.* Invited talk presented at CUNY School of Medicine, Virtual.
- Butler, A. C., Wang, L., Smith-Peirce, R., & Woodward, N. R. (2022, November).** *Transfer-appropriate retrieval practice.* Talk presented at the annual meeting of the Psychonomic Society, Boston, MA.
- Butler, A. C., & Schell, J. A. (2022, May).** *Guidance for implementing Peer Instruction based on learning science.* Talk co-presented at Perusall Exchange 2022, Virtual Conference.
- Schell, J. A., & **Butler, A. C. (2022, May).** *Tips and tricks for implementing Peer Instruction online using a science of learning framework.* Talk co-presented at Perusall Exchange 2022, Virtual Conference.
- Butler, A. C., & Zepeda, C. D. (2021, July).** *Individual differences in high school students' motivational strategies for learning.* Talk presented at the biannual meeting of the Society for Applied Research in Memory and Cognition, Virtual Conference (COVID-19).
- Butler, A. C. (2020, December).** *Motivating adult learners.* Talk presented in the Teaching Physician Pathway Program at the Washington University School of Medicine, St. Louis, MO.
- Butler, A. C. (2020, November).** *Motivational strategies to engage learners in desirable difficulties.* Talk presented at the annual meeting of the Psychonomic Society, Virtual Conference (COVID-19).

- Butler, A. C.** (2020, November). *Providing feedback to learners*. Talk presented in the Program in Physical Therapy Research Seminar Series at the Washington University School of Medicine, St. Louis, MO.
- Butler, A. C.** (2020, June). *Helping students learn effectively outside the classroom*. Talk presented at the UT OnRamps Virtual Summit.
- Butler, A. C.** (2019, November). *Analyzing the language used in course syllabi and its relationship with educational practice*. Talk presented at the annual meeting of the Psychonomic Society, Montreal, Quebec, Canada.
- Butler, A. C.** (2019, September). *Providing feedback to learners*. Talk presented in the Teaching Physician Pathway Program at the Washington University School of Medicine, St. Louis, MO.
- Butler, A. C.** (2019, May). *Collective memories of the U.S. Civil War in Northerners and Southerners*. Talk presented at the Conference on National Memory in a Time of Populism, St. Louis, MO.
- Butler, A. C.** (2019, April). *Facilitating the development of students as self-directed learners*. Society for the Teaching of Psychology Invited address at the annual meeting of the Midwestern Psychological Association, Chicago, IL.
- Butler, A. C.** (2019, April). *Student evaluation and feedback*. Invited talk at the Chicago Medical School of Rosalind Franklin University of Medicine and Science, Chicago, IL.
- Butler, A. C.** (2018, December). *Applying the science of learning to enhance dental education*. Talk presented at the Southern Illinois University School of Dental Medicine, Edwardsville, IL.
- Butler, A. C.** (2018, November). *Using retrieval practice to improve the durability of conceptual change*. Talk presented at the annual meeting of the Psychonomic Society, New Orleans, LA.
- Butler, A. C.** (2018, September). *Understanding normative educational practices can inform innovation in STEM learning*. Invited keynote presented at the Conference at the Interface of Discipline-Based Education Research (DBER) in STEM and Psychological Science, St. Louis, MO.
- Butler, A. C.** (2018, September). *Applying the science of learning to medical education*. Talk presented in the Teaching Physician Pathway Program at the Washington University School of Medicine, St. Louis, MO.

- Butler, A. C.** (2018, June). *Applying the science of learning to medical education*. Talk presented in the Pediatric Residents as Teachers Series at the Washington University School of Medicine, St. Louis, MO.
- Butler, A. C.** (2018, May). *Applying the science of learning to correct misconceptions about psychology*. Talk presented at the annual meeting of the Association for Psychological Science, San Francisco, CA.
- Butler, A. C.** (2018, May). *Engaging in post-refutation retrieval practice increases the durability of conceptual change*. Talk presented at the Show Me State Conference on Cognition, St. Louis, MO.
- Butler, A. C.** (2018, May). *Collective memories of the U.S. Civil War in Northerners and Southerners*. Talk presented at The Primary Source: An Interdisciplinary Conference on Memory and Identity, St. Louis, MO.
- Butler, A. C.** (2018, April). *Observations about measurement from the science of learning*. Talk presented at the annual meeting of the National Council on Measurement in Education, New York, NY.
- Butler, A. C.** (2018, April). *Engaging in post-refutation retrieval practice increases the durability of conceptual change*. Talk presented at the annual meeting of the American Educational Research Association, New York, NY.
- Butler, A. C.** (2018, April). *Facilitating the development of students as self-directed learners*. Invited talk presented at Colby College, Waterville, ME.
- Butler, A. C.** (2018, January). *Facilitating the development of students as self-directed learners*. Invited talk at Southwestern Illinois College, Belleville, IL.
- Butler, A. C., & Rubin, D. C.** (2017, November). *The effect of repeated retrieval on memories for emotional events*. Talk presented at the annual meeting of the Psychonomic Society, Vancouver, BC, Canada.
- Butler, A. C.** (2017, November). *Applying the science of learning to medical education*. Talk presented in the Teaching Physician Pathway Program at the Washington University School of Medicine, St. Louis, MO.
- Butler, A. C.** (2017, October). *Dissociating cognitive processes in the transfer of learning*. Invited talk at Iowa State University, Ames, IA.
- Butler, A. C.** (2017, September). *Dissociating cognitive processes in the transfer of learning*. Invited talk at Purdue University, West Lafayette, IN.

- Butler, A. C.** (2017, August). *Myth busters: A classroom intervention to correct misconceptions about psychology*. Talk presented at the Annual Meeting of the Society for Text & Discourse, Philadelphia, PA.
- Butler, A. C.** (2017, July). *Facilitating student learning through feedback*. Invited talk presented at the annual McMaster Symposium on Education & Cognition, Hamilton, ON, Canada.
- Butler, A. C.** (2017, July). *Facilitating the development of students as self-directed learners*. Invited talk presented at the UT OnRamps Teacher Summit, Austin, TX.
- Butler, A. C.** (2017, February). *Facilitating student learning through feedback*. Invited talk presented at the Science of Learning Conference, San Francisco, CA.
- Butler, A. C.** (2017, January). *Applying the science of learning to education: Small changes can make a big difference*. Early career award address at the biannual meeting of the Society for Applied Research in Memory and Cognition, Sydney, NSW, Australia.
- Butler, A. C.** (2016, October). *Applying the science of learning to STEM education: Small changes can make a big difference*. Invited talk presented at the TASA STEM Summit Conference, Houston, TX.
- Butler, A. C.** (2016, September). *Applying the science of learning to educational practice*. Invited talk at Washington University in St. Louis, St. Louis, MO.
- Butler, A. C.** (2016, June). *Applying the science of learning: Small changes can make a big difference*. Invited talk presented at the annual UT/TASA Summer Conference on Education, Austin, TX.
- Butler, A. C.** (2016, June). *How cognitive psychology can inform classroom teaching*. Talk presented at the annual meeting of the American College of Sports Medicine, Boston, MA.
- Butler, A. C., Krumm, A., Yeager, D., & Beattie, R.** (2016, March). *The subtle psychology of motivation and learning*. Symposium presented at the annual meeting of SXSWedu, Austin, TX.
- Butler, A. C.** (2016, February). *Applying the science of learning: Effective use of technology inside and outside of the classroom*. Invited talk at Trinity University, San Antonio, TX.
- Butler, A. C.** (2015, October). *Visual imagery in autobiographical memory: The role of repeated retrieval in shifting perspective*. Talk presented at the annual meeting of ARMADILLO, Waco, TX.

- Butler, A. C.** (2015, October). *Applying the science of learning to educational practice*. Invited talk at Pennsylvania State University, University Park, PA.
- Butler, A. C.** (2015, September). *Applying the science of learning to educational practice*. Invited talk at Texas A&M University, College Station, TX.
- Butler, A. C.** (2015, September). *Applying the science of learning to educational practice*. Invited talk at Trinity University, San Antonio, TX.
- Butler, A. C., Rice, H. J., Wooldridge, C. L., & Rubin, D. C.** (2015, June). *Visual imagery in autobiographical memory: The role of repeated retrieval in shifting perspective*. Talk presented at the biannual meeting of the Society for Applied Research in Memory and Cognition, Victoria, BC, Canada.
- Butler, A. C., Umanath, S., Dolan, P. O., Thomas, R. C., & Marsh, E. J.** (2015, June). *Myth Busters: A classroom intervention to correct misconceptions about psychology*. Talk presented at the biannual meeting of the Society for Applied Research in Memory and Cognition, Victoria, BC, Canada.
- Butler, A. C.** (2014, January). *A new approach to personalized learning*. Invited talk at Northwestern University, Evanston, IL.
- Butler, A. C.** (2013, December). *Improving student learning through retrieval practice*. Invited talk at University of Texas - Austin, Austin, TX.
- Butler, A. C.** (2013, December). *Improving student learning through retrieval practice*. Invited talk at Kent State University, Kent, OH.
- Butler, A. C.** (2013, November). *Improving student learning through retrieval practice*. Invited talk at University of Illinois - Chicago, Chicago, IL.
- Butler, A. C., Marsh, E. J., Slavinsky, J. P., & Baraniuk, R. G.** (2013, June). *Findings from a new cyberlearning system based on cognitive science*. Talk presented at the biannual meeting of the Society for Applied Research in Memory and Cognition, Rotterdam, The Netherlands.
- Butler, A. C.** (2013, May). *Applying cognitive science to enhance educational practice*. Invited talk at the Center for Faculty Excellence at University of North Carolina, Chapel Hill, NC.
- Butler, A. C., & Baraniuk, R. G.** (2013, March). *Personalized learning systems - Worthy of the hype?* Talk presented at the annual meeting of SXSWedu, Austin, TX.
- Butler, A. C.** (2012, November). *Applying cognitive science to enhance medical education*. Invited talk for Medical Education Grand Rounds at Duke University School of Medicine, Durham, NC.

- Butler, A. C.** (2013, February). *Improving student learning through retrieval practice*. Invited talk at The Johns Hopkins University, Baltimore, MD.
- Butler, A. C.** (2013, February). *Using feedback to correct misconceptions*. Invited talk at The Johns Hopkins University, Baltimore, MD.
- Butler, A. C.,** Godbole, N., & Marsh, E. J. (2012, April). *Using feedback to promote transfer of learning*. Talk presented at the annual meeting of the American Educational Research Association, Vancouver, B.C., Canada.
- Butler, A. C.** (2011, October). *Using fictional sources in the classroom: Benefits and costs of learning from novels and films*. Invited talk at University of North Carolina, Chapel Hill, NC.
- Butler, A. C.** (2011, August). *Applying cognitive science to enhance educational practice: The mnemonic benefits of retrieval practice*. Invited address at the annual meeting of the American Psychological Association, Washington, DC.
- Butler, A. C.,** Godbole, N., & Marsh, E. J. (2011, June). *Explanation feedback promotes superior transfer of learning*. Talk presented at the biannual meeting of the Society for Applied Research in Memory and Cognition, New York, NY.
- Umanath, S., **Butler, A. C.,** & Marsh, E. J. (2011, February). *Ironic effects of monitoring for misinformation in popular history films*. Talk co-presented at the annual meeting of the North Carolina Cognition Group, Winston-Salem, NC.
- Butler, A. C.** (2010, November). *Applying cognitive psychology to enhance educational practice: Using testing and feedback to promote long-term retention*. Invited talk at University of North Carolina - Greensboro, Greensboro, NC.
- Butler, A. C.** (2010, June). *The mnemonic benefits of retrieval practice: Implications for memory theory and educational practice*. Invited talk at University of Aarhus, Aarhus, Denmark.
- Butler, A. C.** (2010, February). *Repeated testing promotes transfer of learning*. Talk presented at the annual meeting of the North Carolina Cognition Group, Winston-Salem, NC.
- Butler, A. C.** (2009, October). *Test-enhanced learning: The mnemonic benefits of retrieval practice*. Invited talk at University of North Carolina, Chapel Hill, NC.
- Butler, A. C.,** Zaromb, F., Lyle, K. B., & Roediger, H. L., III (2009, May). *Using popular films to enhance classroom learning: The good, the bad, and the interesting*. Talk presented at the annual meeting of the Association for Psychological Science, San Francisco, CA.

- Butler, A. C.** (2008, December). *Test-enhanced learning: The mnemonic benefits of retrieval practice*. Invited talk at University of Utah, Salt Lake City, UT.
- Butler, A. C.** (2008, December). *Test-enhanced learning: The mnemonic benefits of retrieval practice*. Invited talk at University of Richmond, Richmond, VA.
- Butler, A. C., Karpicke, J. D., & Roediger, III, H. L.** (2007, July). *The effect of type and timing of feedback on learning from multiple-choice tests*. Talk presented at the biannual meeting of the Society for Applied Research in Memory and Cognition, Lewiston, ME.
- Butler, A. C., Karpicke, J. D., & Roediger, III, H. L.** (2007, April). *The effect of type and timing of feedback on learning from multiple-choice tests*. Talk presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Butler, A. C.** (2007, January). *Applying cognitive psychology to enhance educational practice*. Invited talk at Northwest Missouri State University, Maryville, MO.
- Butler, A. C., & Roediger, III, H. L.** (2006, May). *Testing improves long-term retention in a simulated classroom setting*. Talk presented at the annual meeting of the Midwestern Psychological Society, Chicago, IL.
- Butler, A. C., & Roediger, III, H. L.** (2006, April). *Exploring the mnemonic benefits of testing using complex verbal materials and situations that resemble college courses*. Talk presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

POSTERS

- Butler, A. C., Campbell, K., & Persky, A. M.** (2017, April). *Stabilizing access to marginal knowledge in a classroom setting*. Poster presented at the annual meeting of the American Educational Research Association, San Antonio, TX.
- Butler, A. C., & Raley, N. D.** (2016, November). *A new framework for understanding how feedback promotes learning*. Poster presented at the annual meeting of the Psychonomic Society, Boston, MA.
- Butler, A. C., Cantor, A. D., Raley, N. D., & Marsh, E. J.** (2016, May). *Applying knowledge to difference contexts during learning promotes subsequent transfer*. Poster presented at the annual meeting of the Association for Psychological Science, Chicago, IL.
- Butler, A. C., Umanath, S., Dolan, P. O., Thomas, R. C., & Marsh, E. J.** (2015, April). *Myth Busters: A classroom intervention to correct misconceptions about psychology*. Poster presented at the annual meeting of the American Educational Research Association, Chicago, IL.

- Butler, A. C.,** Cantor, A. D., & Marsh, E. J. (2015, April). *Applying knowledge to different contexts during learning promotes subsequent transfer*. Poster presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Butler, A. C.,** Mullet, H. G., Verdin, B., von Borries, R., & Marsh, E. J. (2013, November). *Delaying feedback promotes transfer of learning in a STEM classroom*. Poster presented at the annual meeting of the Psychonomic Society, Toronto, ON, Canada.
- Rose, N. S., **Butler, A. C.,** Nunes, L. D., & Roediger, H. L., III (2012, November). *Variability and testing during learning: Redundant or additive effects?* Poster presented at the annual meeting of the Psychonomic Society, Minneapolis, MN.
- Butler, A. C.,** & Marsh, E. J. (2012, November). *Retrieval variability promotes superior transfer of learning*. Poster presented at the annual meeting of the Psychonomic Society, Minneapolis, MN.
- Umanath, S., **Butler, A. C.,** & Marsh, E. J. (2011, June). *Mnemonic effects of monitoring for misinformation in popular history films*. Poster presented at the biannual meeting of the Society for Applied Research in Memory and Cognition, New York, NY.
- Butler, A. C.,** Dennis, N. A., & Marsh, E. J. (2011, November). *Inferring facts from fiction: Reading correct and incorrect information affects memory for related information*. Poster presented at the annual meeting of the Psychonomic Society, Seattle, WA.
- Butler, A. C.,** Godbole, N., & Marsh, E. J. (2011, May). *Explanation feedback promotes better transfer than correct answer feedback*. Poster presented at the annual meeting of the Association for Psychological Science, Washington, DC.
- Rice, H. J., & **Butler, A. C.** (2010, November). *Repeated retrieval slows shift from first- to third-person perspective*. Poster presented at the annual meeting of the Psychonomic Society, St. Louis, MO.
- Butler, A. C.,** Fazio, L. F., & Marsh, E. J. (2010, November). *The hypercorrection effect persists over a week, but high confidence errors return*. Poster presented at the annual meeting of the Psychonomic Society, St. Louis, MO.
- Rice, H. J., & **Butler, A. C.** (2010, June). *Repeated retrieval slows shift from first- to third-person perspective*. Poster presented at the Theoretical Perspectives on Autobiographical Memory Conference, Aarhus, Denmark.

- Butler, A. C.,** Zaromb, F. M., Agarwal, P. K., & Roediger, H. L., III (2010, June). *Similarities and differences in younger and older adults' collective memories of U.S. history.* Poster presented at the Theoretical Perspectives on Autobiographical Memory Conference, Aarhus, Denmark.
- Butler, A. C.,** Godbole, N. R., & Marsh, E. J. (2010, February). *Increasing the complexity of the feedback message promotes superior transfer of learning.* Poster presented at the annual meeting of the North Carolina Cognition Group, Winston-Salem, NC.
- Butler, A. C.** (2009, November). *Repeated testing promotes transfer of learning.* Poster presented at the annual meeting of the Psychonomic Society, Boston, MA.
- Butler, A. C.,** Larsen, D. P., & Roediger, H. L., III (2009, May). *Using test-enhanced learning to promote residents' long-term retention of medical information.* Poster presented at the annual meeting of the Association for Psychological Science, San Francisco, CA.
- Butler, A. C.,** Huelser, B. J., Caruso, C. A., & Roediger, III, H. L. (2008, May). *Examining Park's (2005) computer modified multiple-choice testing procedure.* Poster presented at the annual meeting of the Association for Psychological Science, Chicago, IL.
- Butler, A. C.,** Flanagan, P., Roediger, H. L., III, & McDaniel, M. A. (2007, November). *The benefit of generative study activities depends on the nature of the criterial test.* Poster presented at the annual meeting of the Psychonomic Society, Long Beach, CA.
- Butler, A. C.,** & Roediger, III, H. L. (2007, August). *Feedback enhances the benefits of testing.* Poster presented at the annual meeting of the American Psychological Association, San Francisco, CA.
- Butler, A. C.,** Karpicke, J. D., & Roediger, III, H. L. (2006, November). *The effect of type and timing of feedback on learning from multiple-choice tests.* Poster presented at the annual meeting of the Psychonomic Society, Houston, TX.
- Butler, A. C.,** & Roediger, III, H. L. (2006, May). *Feedback neutralizes the detrimental effects of multiple-choice testing.* Poster presented at the annual meeting of the Association for Psychological Science, New York, NY.
- Butler, A. C.,** & Roediger, III, H. L. (2005, November). *Feedback benefits correct answers made with low confidence.* Poster presented at the annual meeting of the Psychonomic Society, Toronto, Ontario, Canada.

Butler, A. C., & Roediger, III, H. L. (2005, May). *Individual-item and summary feedback facilitate performance on a delayed critical test*. Poster presented at the annual meeting of the Association for Psychological Science, Los Angeles, CA.

Goode, M. K., Steinle, A., Roediger, III, H. L., & **Butler, A. C.** (2005, May). *The effects of increasing the number of lures on a multiple-choice test*. Poster presented at the annual meeting of the Association for Psychological Science, Los Angeles, CA.

Butler, A. C., Marsh, E. J., & Roediger, III, H. L. (2005, May). *Distractor items on multiple-choice tests: Helpful or harmful?* Poster presented at the annual meeting of the Midwestern Psychological Society, Chicago, IL.

TALKS & POSTERS BY MENTEES

Smith-Peirce, R., & **Butler, A. C.** (2023, November). *How does spacing affect the mnemonic benefits of variable retrieval practice?* Poster presented at the annual meeting of the Psychonomic Society, San Francisco, CA.

Kim, Y., Zepeda, C. D., Martin, R. S., & **Butler, A. C.** (2023, August). *The role of motivational regulation in reducing students' momentary cost perceptions in daily life*. Poster presented at the American Psychological Association, Washington, D.C.

Kim, Y., Zepeda, C. D., Martin, R. S., & **Butler, A. C.** (2023, May). *How motivational regulation reduces students' momentary cost perceptions in daily life*. Paper presented at the annual meeting of American Educational Research Association, Virtual.

Kim, Y., Zepeda, C. D., Martin, R. S., & **Butler, A. C.** (2023, April). *In-the-moment motivational conflicts and emotions: The role of motivational regulation and cost in everyday life*. Paper presented at the annual meeting of American Educational Research Association, Chicago, Illinois.

Smith-Peirce, R., & **Butler, A. C.** (2023, April). *A scoping review of research on individual differences in the testing effect paradigm*. Poster presented at the annual meeting of American Educational Research Association, Chicago, Illinois.

Zepeda, C. D., Rozek, C. S., Wade, J., Boyle, A., & **Butler, A. C.** (2022, November). *The impact of students' utility values on their study strategies*. Poster presented at the annual meeting of the Psychonomic Society, Boston, MA.

Smith-Peirce, R., Woodward, N. R., & **Butler, A. C.** (2022, November). *The effects of retrieval practice, variability, and spacing on the transfer of knowledge*. Poster presented at the annual meeting of the Psychonomic Society, Boston, MA.

- Kim, Y., & **Butler, A. C.** (2022, April). *Effective planning of strategy use: Can students match learning and motivational strategies to specific contextual demands?* Talk presented at the annual meeting of the American Educational Research Association, San Diego, CA.
- Martin, R. S., Elmesky, R. E., & **Butler, A. C.** (2022, April). *The impact of instructor care on college students' academic help-seeking.* Roundtable presented at the annual meeting of the American Educational Research Association, San Diego, CA.
- Martin, R. S., & **Butler, A.C.** (2021, November). *The impact of instructor support on college students' academic help-seeking.* Talk presented at the annual meeting of the Association for the Study of Higher Education, San Juan, Puerto Rico.
- Kim, Y., & **Butler, A. C.** (2021, November). *Planning the use of learning and motivational strategies: Do students take context into account?* Poster presented at the annual meeting of the Psychonomic Society, New Orleans, LA.
- Zepeda, C. D., Kim, Y., & **Butler, A. C.** (2021, November). *Bridging cognitive and educational psychology perspectives on the self-regulation of learning.* Talk presented at the annual meeting of the Psychonomic Society, New Orleans, LA.
- Fang, W., Zepeda, C. D., & **Butler, A. C.** (2021, April). *The effects of question difficulty order during a test on metacognitive judgements.* Roundtable presented at the annual meeting of the American Educational Research Association, Virtual Conference (COVID-19).
- Martin, R. S., Zepeda, C. Z., & **Butler, A.C.** (2021, July). *The cultural career script: College students' expectations for a typical career.* Poster presented at the biannual meeting of the Society for Applied Research in Memory and Cognition, Virtual Conference (COVID-19).
- Martin, R. S., Zepeda, C. D., Lindstadt, C., Love, B., & **Butler, A. C.** (2021, April). *The cultural career script: College students' expectations for a typical career.* Poster presented at the annual meeting of the American Educational Research Association, Virtual Conference (COVID-19).
- Zepeda, C. D., & **Butler, A. C.** (2021, April). *Individual differences in high school students' motivational strategies: A metamotivational investigation.* Talk presented at the annual meeting of the American Educational Research Association, Virtual Conference (COVID-19).
- Zepeda, C. D., & **Butler, A. C.** (2021, April). *Investigating how students change their motivational learning strategies and its relation to course performance.* Talk presented at the annual meeting of the American Educational Research Association, Virtual Conference (COVID-19).

- Martin, R. S., Zepeda, C. D., Lindstadt, C., Love, B., & **Butler, A. C.** (2020, November). *The cultural career script: College students' expectations for a typical career.* Poster presented at the annual meeting of the Psychonomic Society, Virtual Conference (COVID-19).
- Zepeda, C. D., & **Butler, A. C.** (2020, November). *Students' motivational learning strategies: Use and effectiveness.* Poster presented at the annual meeting of the Psychonomic Society, Virtual Conference (COVID-19).
- Een, E. N., Zepeda, C. D., & **Butler, A. C.** (2019, November). *Changes in student use of learning strategies during a rigorous academic experience.* Poster presented at the annual meeting of the Psychonomic Society, Montreal, Quebec, Canada.
- Loehr, A. M., Smith Zbarsky, E., Miele, D.B., & **Butler, A. C.** (2019, November). *Cognitive ability predicts academic performance in a college calculus course.* Poster presented at the annual meeting of the Psychonomic Society, Montreal, Quebec, Canada.
- Zepeda, C. D., Ortegren, F. R., & **Butler, A. C.** (2019, November). *Learning from feedback in college courses: Student beliefs, practices, and preferences.* Poster presented at the annual meeting of the Psychonomic Society, Montreal, Quebec, Canada.
- Wang., L., Raley, N. D., Lee, M. W., & **Butler, A. C.** (2017, November). *Test-enhanced learning in health sciences education: A meta-analysis.* Poster presented at the annual meeting of the Psychonomic Society, Vancouver, BC, Canada.
- Alarcón, C., Barger, M., Linnenbrink-Garcia, L., & **Butler, A. C.** (2016, November). *Investigating the use of retrieval practice to improve the efficacy of a refutation text.* Poster presented at the annual meeting of the Psychonomic Society, Boston, MA.
- Raley, N. D., **Butler, A. C.**, Cantor, A. D., & Marsh, E. J. (2016, November). *Applying knowledge to difference contexts during learning promotes subsequent transfer.* Poster presented at the annual meeting of the Psychonomic Society, Boston, MA.
- Wang., L., Raley, N. D., & **Butler, A. C.** (2016, November). *Investigating transfer-appropriate processing as a theoretical account for the testing effect.* Poster presented at the annual meeting of the Psychonomic Society, Boston, MA.
- Raley, N. D., Black-Maier, A. D., **Butler, A. C.**, & Marsh, E. J. (2016, October). *Variability during study and retrieval promotes transfer of learning.* Poster presented at the 24th Armadillo Southwest Cognition Conference, Waco, TX.

EDITORIAL / REVIEWING EXPERIENCE

Associate Editor, *Journal of Applied Research in Memory and Cognition*, 2016-2020

Editorial Boards:

Educational Psychology Review, 2023-Present

Journal of Experimental Psychology: Applied, 2019-Present

Journal of Experimental Psychology: Learning, Memory, and Cognition, 2016-Present

Journal of Educational Psychology, 2016-2017; 2020-Present

Journal of Applied Research in Memory and Cognition, 2021-Present

Guest Editor, Special Issue of *Educational Psychology Review*, 2015

Ad Hoc Manuscript Reviewer (52 Journals):

• *Acta Psychologica* • *Advances in Methods and Practices in Psychological Science* • *Advances in Physiology Education* • *Advances in Health Sciences Education* • *AERA Open* • *Aging, Neuropsychology, and Cognition* • *American Journal of Psychology* • *Applied Cognitive Psychology* • *Behavioral Research Methods* • *BMC Medical Education* • *Brain and Cognition* • *British Journal of Educational Psychology* • *Canadian Journal of Experimental Psychology* • *Cognition* • *Cognitive, Affective, & Behavioral Neuroscience* • *Cognitive Research: Principles and Implications* • *Cognitive Science* • *Computers & Education* • *Contemporary Educational Psychology* • *Current Directions in Psychological Science* • *Developmental Psychology* • *Discourse Processes* • *Educational Psychology* • *Educational Psychologist* • *Emotion* • *Experimental Psychology* • *Frontiers in Cognition* • *Instructional Science* • *Journal of Applied Developmental Psychology* • *Journal of Behavioral Decision Making* • *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, & Cognition* • *Journal of Memory and Language* • *Language, Cognition, and Neuroscience* • *Learning and Individual Differences* • *Learning and Instruction* • *Memory & Cognition* • *Metacognition and Learning* • *Motivation & Learning* • *Neuropsychological Rehabilitation* • *PLOS ONE* • *Proceedings of the National Academy of Sciences* • *Psychological Bulletin* • *Psychological Science* • *Psychonomic Bulletin & Review* • *Quarterly Journal of Experimental Psychology* • *Review of Educational Research* • *Social Psychology* •

Ad Hoc Grant Proposal Reviewer:

French National Research Agency (ANR) • German Research Foundation (DFG) • Israel Science Foundation (ISF) • Natural Sciences and Engineering Research Council of Canada (NSERC) • National Science Foundation (NSF) • Social Sciences and Humanities Research Council of Canada (SSHRC) • United States – Israel Binational Science Foundation (BSF) •

PROFESSIONAL ORGANIZATIONS & AFFILIATIONS

• American Association for the Advancement of Science (AAAS) • American Educational Research Association (AERA) • American Psychological Association (APA) • Association for Psychological Science (APS) • European Association for Research on Learning and Instruction (EARLI) • Federation of Associations in Behavioral and Brain Sciences (FABBS) • Psychonomic Society • Psi Chi • Society for Applied Research in Memory and Cognition (SARMAC) • Society for Text & Discourse • Society for the Teaching of Psychology •

2021-Present Affiliated Researcher, PRiME Center, Saint Louis University

PROFESSIONAL SERVICE

2024-Present Member, Governing Board of the Society for Applied Research in Memory and Cognition

2023-Present Member, Fellows Committee of the Psychonomic Society

2022-Present Co-Chair, St. Louis Schools Research-Practice Collaborative Advisory Board

2022 Panelist, German Research Foundation (DFG)

2021-2022 Visiting Scholar, New City School

2021 Member, St. Louis Schools Research-Practice Collaborative Design Council

2021 Panelist, National Science Foundation

2020 Panelist, Institute of Education Sciences

2018 Reviewer, APA Scientific Awards

2018 Panelist, National Science Foundation

2016 Participant, Cognitive Science - Discipline Based Education Research (CS-DBER) Workshop, National Science Foundation

2015 Participant, Computer-Aided Personalized Education (CAPE) Workshop Computing Community Consortium

2015 Panelist, National Science Foundation

2014-2015 Publications Committee

- Society for Applied Research in Memory and Cognition
- 2012-2013 Member, SARMAC X Conference Planning Committee
- 2012-2013 Chair, Advances in Educational Psychology Conference (APA Division 15) Planning Committee
- 2011-2012 Chair, Ad Hoc Committee on Creating an APA Division 15 Conference
- 2010 Panelist, National Science Foundation
- 2007-2008 Past-President, Association for Psychological Science Student Caucus
- 2006-2007 President, Association for Psychological Science Student Caucus

UNIVERSITY SERVICE

Washington University in St. Louis

- 2023 Chair, Innovation in Teaching & Learning Committee (Strategic Plan Implementation for Undergraduate Education)
- 2022-2024 Member, Arts & Sciences Undergraduate Education Advisory Committee
- 2021-2022 Member, Center for Teaching & Learning Review Committee
- 2021 Member, Sub-Group on PK-12 Education, Working Group for St. Louis Initiative (Strategic Planning)
- 2021 Member, Institute for School Partnership Strategic Planning Advisory Committee
- 2021 Member, Future of Instruction Task Force
- 2021 Member, Working Group for Graduate and Professional Education (Strategic Planning)
- 2021 Member, Olin Fellowship Selection Committee
- 2020-2021 Member, Executive Committee of the Graduate Council
- 2020-2022 Member, HHMI Inclusion & Equity Project Advisory Board
- 2020 Member, University Faculty Training & Support Committee
- 2020 Co-Chair, Arts & Sciences Instructional Planning Task Force

- 2020-2021 Member, Center for Teaching & Learning Faculty Advisory Board
- 2020 Member, Teaching Center Review Committee
- 2019-2020 Member, Policies and Services Committee of the Graduate Council
- 2019 Member, Better Together Review Committee
- 2019 Member, Graduate Education Task Force
- 2019 Member, Cornerstone Review Committee
- 2017-2024 Member, IT for Teaching and Learning Committee

University of Texas at Austin

- 2015-2020 Member, UT OnRamps Advisory Council

Washington University in St. Louis (During Graduate School)

- 2006-2007 Graduate Student Representative to the Washington University in St. Louis Board of Trustees
- 2005-2007 Professional and Graduate Student Coordinating Committee Member, School of Arts & Sciences, Washington University in St. Louis
- 2005-2006 Vice President, Graduate Student Senate, School of Arts & Sciences, Washington University in St. Louis,
- 2005 Appointed Representative for Washington University in St. Louis, National Conference on Graduate Student Leadership
- 2004-2006 Graduate Council Member, Washington University in St. Louis

DEPARTMENTAL SERVICE

Department of Education, Washington University in St. Louis

- 2017-Present Member, Executive Committee
- 2017-Present Member, Curriculum Committee
- 2017-Present Member, Doctoral Studies Committee

Department of Educational Psychology, University of Texas at Austin

2015-2017 Member, Undergraduate Curriculum/Minor Committee

2015-2017 Member, Subject Pool Committee

2015-2017 Member, Student Evaluations Committee

TEACHING EXPERIENCE

2017-Present Instructor, Washington University in St. Louis,
Courses: Educational Psychology; Central Topics in Psychological
Research on Teaching and Learning; Complex Learning in Education;
Doctoral Seminar; Myths & Mysteries of Memory

2015-2017 Instructor, University of Texas at Austin,
Courses: Cognition, Learning, & Motivation; Instructional Psychology;
Complex Cognitive Processes; Myths & Mysteries of Memory

2008 Instructor, Washington University in St. Louis,
Course: Introductory Psychological Statistics

2008 Teaching Citation, Washington University in St. Louis,
Advanced pedagogical training beyond doctoral requirements

2006-2007 Teaching Assistant, Washington University in St. Louis,
Course: Quantitative Methods I & II, Instructor: Martha Storandt

2005 Teaching Assistant, Washington University in St. Louis,
Course: Experimental Psychology, Instructor: Pascale Michelon

2004 Teaching Assistant, Washington University in St. Louis,
Course: Human Memory & Learning, Instructor: Kathleen B. McDermott

TEACHING INTERESTS

- Human memory and learning • Educational psychology • Research methods • Statistics
- Strategies for effective learning • Higher-order learning • Applied cognitive psychology

MENTORING / SUPERVISION

Postdoctoral Researchers:

Yeo-eun Kim (2020-2023)

Cristina Zepeda (2018-2022)

Abbey Loehr (2018-2020)

Translational Fellows

Margaret Wallace (2023-2025)

Pallavi Chhabra (2023-2025)

Doctoral Students:

Danae Gaytan (Expected 2028)

Zubeiru Mahama (Expected 2027)

Maegan Ruiz (Expected 2026)

Rachel Smith-Peirce (Expected 2026)

Rachel Martin (2023)

Lisi Wang (2021)

Nathaniel Raley Woodward (2018)

Master's Students:

Wei-Chieh Fang (2021)

Emily Een (2021)

Cynthia Alarcón (2017)

Nayantara Kurpad (2017)

Undergraduate Honors Theses:

Andrea Zuzarte (2020-21)

Anna Schoenfeld (2019-20)

Morgan Solender (2019-20)

Le'Aysha Pearson (2018-19)

Hava Kane (2016-17)

Amberly Tenney (2012-13)

Amanda Gill (2010-11)

STUDENT COMMITTEE WORK

Dissertation Committee Member:

Steven Dessenberger (2022-23)

Ruth Caputo (2022-23)

Lisa Kuehne (2021-22)

David Barnes (2021-22)

Kyle Featherston (2020-21)

Wenbo Lin (2019-21)

Öykü Üner (2019-21)
Elif Eylül Tekin (2019-21)
Reshma Gouravajhala (2019-20)
Siera Stoen (2019-20)
Toshi Miyatsu (2018-19)
Casey Reimer (2017-19)
Haley Dolosic (2017-19)
Nathaniel Diede (2017-18)
Jessie-Raye Bauer (2016-18)
Susan Broyles (2016-18)

External Dissertation Examiner:

Nikolas Williams, Macquarie University (2017)

Qualifying Exam Committee Member:

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