

POOJA K. AGARWAL, Ph.D.

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EDUCATION

Ph.D. , Cognitive Psychology Washington University in St. Louis (Advisor: Henry L. Roediger, III)	2011
M.A. , Cognitive Psychology Washington University in St. Louis	2009
B.A. , Cognitive Neuroscience & Elementary Teacher Certification Washington University in St. Louis (<i>Magna cum laude</i>)	2005

PROFESSIONAL EXPERIENCE

Assistant Professor Berklee College of Music	2016 – Present Boston, MA
<ul style="list-style-type: none">▪ Designing and teaching Introduction to Psychology seminars for 40+ exceptional undergraduate musicians	
Founder of RetrievalPractice.org	2016 – Present
<ul style="list-style-type: none">▪ Founder of RetrievalPractice.org, a hub of research and resources about the science of learning for educators and students▪ Guiding and implementing applied retrieval practice research in collaboration with numerous organizations worldwide	
Research Scientist University of South Florida	2015 – 2016 Boston, MA
<ul style="list-style-type: none">▪ Spearheaded an extensive review of research on retrieval practice conducted in authentic classroom settings▪ Authored and produced an Interleaving Practice Guide, translating 10 years of cognitive science research for educators	
Project Lead, HarvardX Harvard University	2014 – 2015 Boston, MA
<ul style="list-style-type: none">▪ Contributed to Massive Open Online Courses (MOOCs) by writing assessment items and editing content on edX▪ Produced a Small Private Online Course (SPOC) for HarvardX staff on best practices in writing assessment items	
Post-Doctoral Research Associate Washington University in St. Louis	2012 – 2014 St. Louis, MO
<ul style="list-style-type: none">▪ Directed applied research on retrieval practice in collaboration with K-12 teachers and more than 1,500 students▪ Authored and produced a Retrieval Practice Guide, translating 10 years of cognitive science research for educators▪ Managed \$5 million in federal grants and trained 17 research assistants in project design, statistics, and scientific writing	
Director of K-12 Student Assessment Illinois State Board of Education	2011 – 2012 Springfield, IL
<ul style="list-style-type: none">▪ Directed the development and administration of Illinois's 7 standardized tests for 2.1 million students statewide▪ Pioneered and authored Illinois's No Child Left Behind Waiver Request for an innovative accountability system▪ Managed a \$43 million budget, 15 employees, numerous contracts with testing companies, and a division reorganization	

TEACHING EXPERIENCE

Adjunct Professor, Washington University in St. Louis Spring 2013

- *The Science of Effective Study Strategies*: Proposed, developed, and led a 100-level seminar for 15 undergraduate students; Course topics included a review of research in the field of cognitive psychology
- *The Science & Politics of Testing in the U.S.*: Developed and led a 400-level seminar for 25 advanced undergraduate and graduate students; Course topics included the history of standardized testing, college admissions, psychometrics, No Child Left Behind, and the future of the American education system

Teaching Assistant, Washington University, Cognitive Psychology Spring 2009

- Guest lectured and facilitated a 300-level course for 80 undergraduate students

Student Teacher, St. Louis County Public Schools, Grades 4-5 2004 – 2005

- Developed and taught differentiated curriculum in math, science, and history

Curriculum Coordinator, IMSA Kids Institute, Grades 2-12 1999 – 2005

- Developed and taught 400+ hours of hands-on science workshops and summer courses

POLICY EXPERIENCE

Fellow, Office of Federal Policy Summer 2008
 The College Board (Advisor: John “Jay” Cole) Washington, DC

- Led an analysis of the strengths and weaknesses of 3 international assessments (PISA, TIMSS, and PIRLS)

Intern, Institute of Education Sciences (IES) Summer 2006
 U.S. Department of Education (Advisor: Elizabeth R. Albro) Washington, DC

- Created summaries, brochures, and spreadsheets of awarded grants (200+) and publications (80+)

Intern, Office of Educational Technology Summer 2003
 U.S. Department of Education (Advisor: John Bailey) Washington, DC

- Investigated K-12 students’ technology use and contributed to the 2004 National Education Technology Plan

HONORS & AWARDS

Association for Psychological Science (APS) Rising Star Award 2017

American Psychological Association (APA) Graduate Researcher Student Award (\$1,000) 2009

Illinois Mathematics & Science Academy (IMSA) Alumni Titan Award 2009

Washington University Graduate Research Symposium, 1st Place in Social Sciences (\$250) 2009

National Science Foundation (NSF) Graduate Research Fellowship (\$120,000) 2007

Harry S. Truman Scholarship (\$30,000) 2005

Washington University Undergraduate Research Grants (\$5,000) 2005

PEER-REVIEWED PUBLICATIONS

- Agarwal, P. K.** (2017). *Retrieval practice enhances higher order learning for middle school students and college students*. Manuscript submitted for publication.
- Agarwal, P. K.**, Finley, J. R., Rose, N. S., & Roediger, H. L. (in press). Benefits from retrieval practice are greater for students with lower working memory capacity. *Memory*.
- Agarwal, P. K.**, D'Antonio, L., Roediger, H. L., McDermott, K. B., & McDaniel, M. A. (2014). Classroom-based programs of retrieval practice reduce middle school and high school students' test anxiety. *Journal of Applied Research in Memory and Cognition*, 3, 131-139.
- McDermott, K. B., **Agarwal, P. K.**, D'Antonio, L., Roediger, H. L., & McDaniel, M. A. (2014). Both multiple-choice and short-answer quizzes enhance later exam performance in middle and high school classes. *Journal of Experimental Psychology: Applied*, 20, 3-21.
- Zaromb, F., Butler, A. C., **Agarwal, P. K.**, & Roediger, H. L. (2014). Collective memories of three wars in United States history in younger and older adults. *Memory & Cognition*, 42, 383-399.
- McDaniel, M. A., Thomas, R. C., **Agarwal, P. K.**, McDermott, K. B., & Roediger, H. L. (2013). Quizzing in middle-school science: Successful transfer performance on classroom exams. *Applied Cognitive Psychology*, 27, 360-372.
- Agarwal, P. K.** (2012). Advances in cognitive psychology relevant to education: Introduction to the special issue. *Educational Psychology Review*, 24, 353-354.
- Agarwal, P. K.**, Bain, P. M., & Chamberlain, R. W. (2012). The value of applied research: Retrieval practice improves classroom learning and recommendations from a teacher, a principal, and a scientist. *Educational Psychology Review*, 24, 437-448.
- Agarwal, P. K.**, & Roediger, H. L. (2011). Expectancy of an open-book test decreases performance on a delayed closed-book test. *Memory*, 19, 836-852.
- McDaniel, M. A., **Agarwal, P. K.**, Huelser, B. J., McDermott, K. B., & Roediger, H. L. (2011). Test-enhanced learning in a middle school science classroom: The effects of quiz frequency and placement. *Journal of Educational Psychology*, 103, 399-414.
- Roediger, H. L., **Agarwal, P. K.**, McDaniel, M. A., & McDermott, K. B. (2011). Test-enhanced learning in the classroom: Long-term improvements from quizzing. *Journal of Experimental Psychology: Applied*, 17, 382-395.
- Fazio, L. K., **Agarwal, P. K.**, Marsh, E. J., & Roediger, H. L. (2010). Memorial consequences of multiple-choice testing on immediate and delayed tests. *Memory & Cognition*, 38, 408-418.
- Marsh, E. J., **Agarwal, P. K.**, & Roediger, H. L. (2009). Memorial consequences of answering SAT II questions. *Journal of Experimental Psychology: Applied*, 15, 1-11.
- 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.

ADDITIONAL PUBLICATIONS

- Rohrer, D., Dedrick, R. F., & **Agarwal, P. K.** (2017). Interleaved mathematics practice: Giving students a chance to learn what they need to know. University of South Florida, Tampa, FL.
- Agarwal, P. K.**, Roediger, H.L., McDaniel, M. A., & McDermott, K. B. (2013). How to use retrieval practice to improve learning. Washington University in St. Louis, St. Louis, MO.
- Agarwal, P. K.**, Lange, R., & Metcalf, L. A. (2012). Illinois's growth model approach using the value table method. Illinois State Board of Education, Springfield, IL.
- Agarwal, P. K.** (2011). Examining the relationship between fact learning and higher order learning via retrieval practice. Doctoral dissertation, Washington University in St. Louis, St. Louis, MO.
- White, B. R., & **Agarwal, P. K.** (2011). The principal report: The state of school leadership in Illinois. Illinois Education Research Council, Edwardsville, IL.
- Agarwal, P. K.** (2003, October/November). College life in the Internet age. *Upgrade*, 14-15.
- Agarwal, P. K.** (2001). If I could make a school. *Learning & Leading with Technology*, 29, 28-31.

INVITED BOOK CHAPTERS

- Pyc, M. A., **Agarwal, P. K.**, & Roediger, H. L. (2014). Test-enhanced learning. In V. A. Benassi, C. E. Overson, & C. M. Hakala (Eds.), *Applying science of learning in education: Infusing psychological science into the curriculum*. APA Society for the Teaching of Psychology.
- Roediger, H. L., **Agarwal, P. K.**, Kang, S. H. K., & Marsh, E. J. (2010). Benefits of testing memory: Best practices and boundary conditions. In G. M. Davies & D. B. Wright (Eds.), *New frontiers in applied memory* (pp. 13-49). Brighton, U.K.: Psychology Press.
- Roediger, H. L., Weinstein, Y., & **Agarwal, P. K.** (2010). Forgetting: Preliminary considerations. In S. Della Sala (Ed.), *Forgetting* (pp. 1-22). Hove, U.K.: Psychology Press.

EDITORIAL & REFEREE EXPERIENCE

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| Consulting Editor , <i>Scholarship of Teaching and Learning in Psychology</i> | 2014 – Present |
| Guest Editor , <i>Educational Psychology Review</i> (Special Issue in September 2012) | 2010 – 2012 |
| Ad Hoc Reviewer | 2009 – Present |
- American Educational Research Journal; American Psychologist; Applied Cognitive Psychology; BMC Medical Education; Current Directions in Psychological Science; Educational Psychology; Educational Psychology Review; Educational Researcher; International Journal of Testing; Journal of Applied Research on Memory and Cognition; Journal of Geoscience Education; Journal of Educational Psychology; Journal of Experimental Psychology: Learning, Memory, & Cognition; Learning and Individual Differences; Learning and Instruction; Memory; Mind, Brain, & Education; Psychonomic Bulletin & Review; Review of Educational Research; Scholarship of Teaching and Learning in Psychology*

INVITED WORKSHOPS & PRESENTATIONS FOR K-12 EDUCATORS

- Agarwal, P. K.** (2017, July). *Make it stick: Harness the science of learning & transform teaching*. Invited keynote to be delivered at the 11th Annual Teaching with Technology Symposium, Little Rock, AR.
- Agarwal, P. K.** & Bain, P. B. (2016, July). *Make it stick: How to teach economics & personal finance so students will remember*. Invited workshop delivered at the Federal Reserve Bank, St. Louis, MO.
- Agarwal, P. K.** (2016, June). *Retrieval practice: Learning to learn*. Invited workshop delivered at the Character Lab Toolbox Workshop, Philadelphia, PA.
- Agarwal, P. K.** (2015, February). *The science of effective learning: Retrieval as an effective and efficient strategy in your classroom*. Invited keynote delivered at the Milton Academy Math Teachers Conference, Milton, MA.
- Agarwal, P. K.** (2014, August). *Teaching strategies + cognitive science = student success*. Invited talk delivered at the IES Regional Education Laboratory Mid-Atlantic Bridge Event, Chambersburg School District, Chambersburg, PA.
- Agarwal, P. K.** (2014, January). *Student engagement and academic outcomes: Evidence from cognitive research*. Invited talk delivered at the National Association of State Boards of Education Study Group Conference, Arlington, VA.
- Agarwal, P. K.** (2013, December). *Organizing instruction and study to improve student learning*. Invited talk delivered at the IES Regional Education Laboratory Mid-Atlantic Bridge Event, Laurel Public School District, Laurel, DE.
- Agarwal, P. K.,** Obenhaus, A., & McDoniel, M. (2013, October). *How to use retrieval practice to improve learning*. Invited talk delivered at the Teach for America Teacher Development Day at the University of Missouri, St. Louis, MO.
- Agarwal, P. K.** (2013, September). *Organizing instruction and study to improve student learning*. Invited talk delivered at the IES Regional Education Laboratory Mid-Atlantic Bridge Event for Local K-12 School Districts, Delaware State University, Dover, DE.
- Agarwal, P. K.** (2013, April). *The science of learning: How to use retrieval practice to improve learning*. Invited talk delivered at Columbia High School, Columbia, IL.
- Agarwal, P. K.** (2013, April). *The science of learning: How to use retrieval practice to improve learning*. Invited talk delivered at Metro Academic and Classical High School, St. Louis, MO.
- Dufault, C., & **Agarwal, P. K.** (2013, January). *Make learning stick: Applying cognitive science research to improve teaching and learning*. Invited talk delivered at McKinley Middle School Classical Leadership Academy, St. Louis, MO.
- McDaniel, M. A., & **Agarwal, P. K.** (2010, September). *How to use retrieval practice to improve your students' learning*. Invited talk delivered at Columbia Middle School, Columbia, IL.

INVITED WORKSHOPS & PRESENTATIONS FOR HIGHER EDUCATION

- Agarwal, P. K.** (2017, May). *Make it stick: Translating the science of learning and transforming student learning*. Invited keynote delivered at Husson University, Bangor, ME.
- Agarwal, P. K.** (2017, April). *Make it stick: Applying the science of learning and transforming student learning*. Invited keynote delivered at the 23rd Annual Conference of the Association for University Regional Campuses of Ohio, Bowling Green State University Firelands, Huron, OH.
- Agarwal, P. K.** (2017, March). *Make it stick: Harnessing the science of learning and transforming teaching*. Invited talk delivered at Fontbonne University, St. Louis, MO.
- Agarwal, P. K.** (2016, October). *Retrieval practice: A powerful study strategy for improving long-term learning*. Invited talk delivered at Dartmouth College, Hanover, NH.
- Agarwal, P. K.** (2016, October). *The science of learning: How to teach so students learn*. Invited workshop delivered at Rutgers University, New Brunswick, NJ.
- Agarwal, P. K.** (2016, March). *The science of learning: Retrieval as an effective and efficient classroom strategy*. Invited talk delivered at the Massachusetts Institute of Technology, Boston, MA.
- Agarwal, P. K.** (2014, November). *Applying cognitive psychology research at school, work, home, and life*. Invited keynote delivered at the Lindenwood University 10th Annual Missouri Undergraduate Psychology Conference, Saint Charles, MO.
- Agarwal, P. K.** (2013, November). *Retrieval practice improves learning: Evidence from applied research in middle schools and high schools*. Invited talk delivered at the McMaster University Symposium on Cognition, Learning, and Education, Hamilton, Ontario, Canada.
- Agarwal, P. K.** (2013, September). *Research-based strategies for studying effectively*. Invited talk delivered at Saint Louis University Medical School, St. Louis, MO.
- Agarwal, P. K.** (2012, August). *Retrieval practice is a powerful strategy for improving classroom learning*. Invited talk delivered at the UT Center for Teaching and Learning, Austin, TX.
- Agarwal, P. K.** (2012, August). *Research-based cognitive strategies enhance college readiness*. Invited talk delivered at the University of Texas OnRamps Faculty Meeting, Austin, TX.
- Agarwal, P. K.** (2012, June). *Research-based cognitive strategies for enhancing college readiness*. Invited talk delivered at the University of Texas CRAFT Summer Institute, Austin, TX.
- Agarwal, P. K.** (2011, June). *Examining the relationship between fact learning and higher order learning via retrieval practice*. Invited talk delivered at the Universidade de Lisboa, Portugal, Lisbon.
- Agarwal, P. K.** (2007, October). *The secret benefit of classroom testing*. Invited talk delivered at the University of Missouri, Columbia, MO.

ACADEMIC CONFERENCE PRESENTATIONS

- Agarwal, P. K.** (2013, May). *Advances in cognitive psychology relevant to education & lessons from applied research* (Chair). Symposium presented at the 25th Annual Meeting of the Association for Psychological Science, Washington, DC.
- Agarwal, P. K.**, Roediger, H. L., McDaniel, M. A., & McDermott, K. B. (2013, May). *How to use retrieval practice to improve classroom learning*. Talk delivered at the 25th Annual Meeting of the Association for Psychological Science, Washington, DC.
- Roediger, H. L., Sanches, J. B., & **Agarwal, P. K.** (2011, November). *Does variable encoding affect learning and retention relative to constant encoding?* Talk delivered at the 52nd Annual Meeting of the Psychonomic Society, Seattle, WA.
- Roediger, H. L., Zaromb, F. M., Butler, A. C., & **Agarwal, P. K.** (2011, August). *Collective memories and national narcissism in younger and older adults*. Talk delivered at the 5th International Conference on Memory, York, England.
- Agarwal, P. K.**, McDaniel, M. A., Thomas, R. C., McDermott, K. B., & Roediger, H. L. (2011, March). *Quizzing promotes deeper acquisition in middle school science: Transfer of quizzed content to summative exams*. Talk delivered at the Annual Conference of the Society for Research on Educational Effectiveness, Washington, DC.
- Roediger, H. L., McDaniel, M. A., McDermott, K. B., **Agarwal, P. K.**, & Huelser, B. J. (2009, May). *Applying retrieval-enhanced learning in the classroom: The Columbia Middle School Project*. Invited talk delivered at the 21st Annual Meeting of the Association for Psychological Science, San Francisco, CA.
- Agarwal, P. K.** & Bowden, E. C. (2002, June). *Integrating technology into science curriculum "by kids, for kids."* Talk delivered at the National Educational Computing Conference, San Antonio, TX.
- Agarwal, P. K.**, Droste, R., Xi, S.C., & Wat, M. (2000, October). *Empowering high school students to become elementary school teachers of science*. Talk delivered at the National Association of Biology Teachers Convention, Orlando, FL.

ACADEMIC CONFERENCE POSTER PRESENTATIONS

- Agarwal, P. K.** (2017, May). *Retrieval practice enhances fact learning and higher order learning in a K-12 classroom*. Poster to be presented at the 29th Annual Meeting of the Association for Psychological Science, Boston, MA.
- Saddawi-Konefka, D., Cottral, J., **Agarwal, P. K.**, Karpicke, J. D., Oettingen, G., Gollwitzer, P., & Baker, K. (2016, May). *Can strategies from cognitive psychology improve self-directed learning in residents? A two-center multidisciplinary randomized comparative effectiveness trial*. Poster presented at the Executive Committee on Teaching and Education Symposium, Boston, MA.
- Agarwal, P. K.**, Rose, N. S., & Roediger, H. L. (2010, November). *Testing levels the playing field for students with lower working memory capacity*. Poster presented at the 51st Annual Meeting of the Psychonomic Society, St. Louis, MO.

ACADEMIC CONFERENCE POSTER PRESENTATIONS (continued)

- Agarwal, P. K.**, Roediger, H. L., McDaniel, M. A., & McDermott, K. B. (2010, June). *Improving student learning with classroom quizzes: Three years of evidence from Columbia Middle School*. Poster presented at the 5th Annual Institute of Education Sciences Research Conference, Washington, DC.
- Butler, A. C., Zaromb, F. M., **Agarwal, P. K.**, & Roediger, H. L. (2010, June). *Individual and collective memories of U.S. history in younger and older adults*. Poster presented at the Theoretical Perspectives on Autobiographical Memory Conference, Aarhus, Denmark.
- Agarwal, P. K.**, Roediger, H. L., McDaniel, M. A., & McDermott, K. B. (2010, March). *Improving student learning through the use of classroom quizzes: Three years of evidence from the Columbia Middle School project*. Poster presented at the Annual Conference of the Society for Research on Educational Effectiveness, Washington, DC.
- Agarwal, P. K.**, Roediger, H. L., McDaniel, M. A., & McDermott, K. B. (2009, November). *Feedback increases middle school students' resolution and retention of correct responses*. Poster presented at the 50th Annual Meeting of the Psychonomic Society, Boston, MA.
- Roediger, H. L., McDaniel, M. A., McDermott, K. B., **Agarwal, P. K.**, & Huelser, B. J. (2009, June). *What is an effective quizzing schedule for middle school students?* Poster presented at the 4th Annual Institute of Education Sciences Research Conference, Washington, DC.
- Agarwal, P. K.**, Huelser, B. J., McDaniel, M. A., & McDermott, K. B., & Roediger, H. L. (2009, May). *Test-enhanced learning: Transfer of knowledge in middle school classrooms*. Poster presented at the 21st Annual Meeting of the Association for Psychological Science, San Francisco, CA.
- Roediger, H. L., McDaniel, M. A., McDermott, K. B., & **Agarwal, P. K.** (2008, June). *Test-enhanced learning in the classroom: The Columbia Middle School project, year 2*. Poster presented at the 3rd Annual Institute of Education Sciences Research Conference, Washington, DC.
- Agarwal, P. K.**, Roediger, H. L., McDaniel, M. A., & McDermott, K. B. (2008, May). *Improving student learning using classroom quizzes*. Poster presented at the 20th Annual Meeting of the Association for Psychological Science, Chicago, IL.
- Roediger, H. L., McDaniel, M. A., McDermott, K. B., & **Agarwal, P. K.** (2007, November). *Test-enhanced learning in the classroom: The Columbia Middle School project*. Poster presented at the 48th Annual Meeting of the Psychonomic Society, Long Beach, CA.
- Roediger, H. L., McDaniel, M. A., McDermott, K. B., & **Agarwal, P. K.** (2007, June). *Test-enhanced learning in the classroom: The Columbia Middle School project*. Poster presented at the 2nd Annual Institute of Education Sciences Research Conference, Washington, DC.
- Agarwal, P. K.**, Karpicke, J. D., Kang, S. H. K., Roediger, H. L., & McDermott, K. B. (2006, November). *Long term retention is greater following closed-book tests than open book tests*. Poster presented at the 47th Annual Meeting of the Psychonomic Society, Houston, TX.
- Agarwal, P. K.**, Karpicke, J. D., Kang, S. H. K., Roediger, H. L., & McDermott, K. B. (2006, May). *Open-book or closed-book tests? Effects of testing on learning depend on feedback*. Poster presented at the 18th Annual Meeting of the Association for Psychological Science, New York, NY.