**Pooja Gupta Sidney**

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**EMPLOYMENT**

Assistant Professor, Department of Psychology, University of Kentucky 2018 - Present

Postdoctoral Research Associate, Kent State University 2016 - 2018

*Funded by a US Department of Education Institute of Education Sciences Grant: Cognitive Support for Fraction Magnitudes; PI: John Opfer, (The Ohio State University), Co-PI: Clarissa A. Thompson (Kent State University)*

Advisor: Dr. Clarissa A. Thompson

**EDUCATION**

PhD, Psychology, University of Wisconsin – Madison 2016

Dissertation: *Does new learning provide new perspectives on familiar concepts?*

*Exploring the role of analogical instruction in conceptual change in arithmetic*

Major Advisor: Dr. Martha W. Alibali

MS, Psychology, University of Wisconsin – Madison 2009

BS, Psychology, University of North Carolina – Chapel Hill 2008

**AWARDS, HONORS, AND FELLOWSHIPS**

Marian Schwartz Fellowship 2014

*A competitive $4,000 research fellowship to support graduate student research in cognitive and experimental psychology, UW-Madison Psychology Department*

University Fellowship 2008 & 2014

*A competitive, two-year fellowship award, including a 9-month stipend and tuition remission, UW-Madison Graduate School*

IES Interdisciplinary Training Program in the Education Sciences Entry Fellowship 2008 – 2013

*A competitive fellowship; this program aimed to train social scientists (i.e., in psychology, sociology, social work, political science, and economics) to conduct*

*field-based experimental research on topics in education; fellows receive a yearly stipend, tuition remission, and research and travel support, UW-Madison*

University Housing Honored Instructor Award 2012

*An award for “outstanding classroom instructors” nominated by an undergraduate student living in university housing, UW-Madison University Housing*

NSF Graduate Research Fellowship Program, Honorable Mention 2009 & 2010

*The NSF awards an Honorable Mention for graduate students whose research*

*proposals had great merit, but did not receive the fellowship, NSF*

Dashiell-Thurstone Prize 2008

*An award for best senior honors thesis in Psychology,*

*University of North Carolina at Chapel Hill Psychology Department*

**JOURNAL ARTICLES**

**\*Undergraduate Student Authors**

**Sidney, P. G.,** Thalluri, R.\*, Buerke, M.\*, & Thompson, C. A. (2018). Who uses more strategies? Linking mathematics anxiety to adults’ strategy variability and performance on fraction magnitude tasks. *Thinking and Reasoning*. DOI: 10.1080/13546783.2018.1475303

Cooper, J. L., **Sidney, P. G.**, & Alibali, M. W. (2018). Who benefits from diagrams and illustrations in math problems? Ability and attitudes matter. *Applied Cognitive Psychology, 32*(1), 24-38. DOI: 10.1002/acp.3371

Thompson, C. A., Morris, B., & **Sidney, P. G.** (2017). Are books like number lines? Children spontaneously encode spatial-numeric relationships in a novel spatial estimation task. *Frontiers in Psychology*, 8. DOI: 10.3389/fpsyg.2017.02242

**Sidney, P. G.,** & Alibali, M. W. (2017). Creating a context for learning: Activating children’s whole number knowledge prepares them to understand fraction division. *Journal of Numerical Cognition, 3*(1), 31-57. DOI: 10.5964/jnc.v3i1.71

Grammer, J. K., Coffman, J. L.**, Sidney, P. G.**, & Ornstein, P. A. (2016). Linking teacher instruction and student achievement in mathematics: The role of teacher language. *Journal of Cognition and Development*, *17*(3), 468-485. DOI: 10.1080/15248372.2015.1068777 (2 citations)

Hattikudur, S., **Sidney, P. G.**, & Alibali, M. W. (2016). Does comparing informal and formal procedures promote mathematics learning? The benefits of bridging depend on attitudes towards mathematics. *Journal of Problem Solving, 9*(1), Article 2. DOI: 10.7771/1932-6246.1180 (1 citation)

**Sidney, P. G.**, Hattikudur, S., & Alibali, M. W. (2015). How do contrasting cases and self-explanation promote learning? Evidence from fraction division*. Learning and Instruction, 40,* 29-38. DOI: [10.1016/j.learninstruc.2015.07.006](http://dx.doi.org/10.1016/j.learninstruc.2015.07.006) (9 citations)

**Sidney, P. G.**, & Alibali, M. W. (2015). Making connections in math: Activating a prior knowledge analogue matters for learning. *Journal of Cognition and Development, 16*(1) 160-185. DOI:10.1080/15248372.2013.792091 (14 citations)

**INVITED COMMENTARY**

1These authors contributed equally to conceptualization.

**Sidney, P. G.1,** Thompson, C. A.1, Matthews, P. G.1, & Hubbard, E. M.1 (2017). From continuous magnitudes to symbolic numbers: The centrality of ratio. *Behavioral and Brain Sciences.* DOI: 10.1017/S0140525X16002284

Alibali, M. W., & **Sidney, P. G.** (2015). Variability in the natural number bias: Who, when, how, and why?. *Learning and Instruction*, *37*, 56-61. DOI: 10.1016/j.learninstruc.2015.01.003 (14 citations)

**BOOK CHAPTERS**

**Sidney, P. G.,** Thompson, C. A., & Opfer, J. E. (in press). Development of fraction understanding. Chapter to appear in Dunlosky, J. & Rawson, K. (Eds.) *Cambridge Handbook of Cognition and Education*.

Alibali, M. W., & **Sidney, P. G.** (2015). The role of intraindividual variability in learning in childhood and adolescence. In M. Diehl, K. Hooker, & M. Sliwinski (Eds.) *Handbook of intraindividual variability across the lifespan* (pp. 84-102). New York, NY: Taylor and Francis.

**PUBLISHED CONFERENCE PROCEEDINGS**

**Sidney, P. G.,** Thompson, C. A., & Rivera, F. D. (2018). Using visual models in fraction division: Number lines support children’s accuracy and conceptual understanding. *Proceedings of the 40th annual meeting North American Chapter of the International Group for the Psychology of Mathematics Education*.

**Sidney, P. G.**, & Alibali, M. W. (2013). Children's and adults' models of whole number division: Consistency or variability?.In M. V. Martinez, & A. C. Superfine (Eds.) *Proceedings of the 35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Chicago, IL: University of Illinois at Chicago.

**Sidney, P. G.**, & Alibali, M. W. (2012). Supporting conceptual representations of fraction division by activating prior knowledge domains.In L.R. Van Zoest, J.-J. Lo, & J. L. Kratky (Eds.) *Proceedings of the 34th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (1012). Kalamazoo, MI: Western Michigan University.

Hattikudur, S., **Sidney, P. G.**, & Alibali, M. W. (2010, August). Unique and additive effects of self-explaining and contrasting cases on learning fraction division [Abstract]. *Proceedings of the 32nd Annual Conference of the Cognitive Science Society* (p584). Portland, OR: Cognitive Science Society.

**INVITED TALKS**

Interdisciplinary Training Program in Education Sciences Seminar February 2016

University of Wisconsin –Madison

Cognitive Brown Bag, Department of Psychological Sciences January 2016

Kent State University

Psychology Department January 2016

Carnegie Mellon University

Interdisciplinary Training Program in Education Sciences Seminar March 2012

University of Wisconsin –Madison

**CONFERENCE PRESENTATIONS**

**\*Undergraduate Student Authors**

**Sidney, P. G.,** Thompson, C. A., & Rivera, F. D. (2019, March). Number lines, but not area diagrams, support children’s fraction division problem solving. Paper to be presented at the annual meeting of Society for Research in Child Development, Baltimore, MD.

Choi, S. S.\*, Taber, J. M., Thompson, C. A., & **Sidney, P. G.** (2019, March). Experimentally-induced incidental stress does not influence objective or subjective numeracy. Poster to be presented at the annual meeting of Society of Behavioral Medicine, Washington, DC.

Opfer, J. E., Kim, D., **Sidney, P. G.,** Fitzsimmons, C. F., & Thompson, C. A. (2018, July). *Taking Whorf to school: Does language reform improve student learning*? Poster presented at the annual meeting of the Cognitive Science Society, Madison, WI.

Opfer, J. E., **Sidney, P. G.,** Yu, S., & Thompson, C. A. (2017, October). *Effects of cognitive supports for learning fractional magnitudes by analogy.* Poster presented at the biennial meeting of the Cognitive Development Society, Portland, OR.

Thalluri, R.\*, Buerke, M.\*, **Sidney, P. G.,** &Thompson, C. A.(2017, April). *The role of mathematics anxiety in students’ fraction magnitude comparison.* Poster presented at the annual meeting of the Midwestern Psychological Association, Chicago, IL.

**Sidney, P. G.,** & Alibali, M. W. (2017, April). *Learning about fraction division via implicit and explicit analogies to whole numbers.* Poster presented at the biennial meeting of the Society for Research in Child Development, Austin, TX.

**Sidney, P. G.**, & Alibali, M. W. (2015, October). *Conceptual change in children’s number categories: The integration of fraction and whole number knowledge*. Poster presented at the biennial meeting of the Cognitive Development Society in Columbus, OH.

**Sidney, P. G.,** & Alibali, M. W. (2015, April). *Creating contexts for fraction learning by activating relevant prior knowledge.* Paper presented at the annual meeting of the American Educational Research Association in Chicago, IL.

**Sidney, P. G.** & Alibali, M. W. (2015, March). *Measuring conceptual change in mathematics: Could learning about fractions provoke changes in arithmetic categories?.* Poster presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.

**Sidney, P. G.**, Brown, S. A., Crooks, N. M., & Alibali, M.W. (2013, October). *Beyond instruction: Sources of conceptual knowledge and new strategies in mathematics*. Poster presented at the biennial meeting of the Cognitive Development Society in Memphis, TN.

Alibali, M. W. & **Sidney, P. G.** (2013, August). Paths of continuity and change in mathematics learning: Evidence from perceptual and analogical learning. In T. Nunes & S. Vosniadou (Chairs), *Continuity and change in the growth of children’s mathematical understanding*. Invited symposium conducted at the 15th Biennial EARLI Conference for Research on Learning and Instruction, Munich, Germany.

**Sidney, P. G.** & Alibali, M. W. (2013, July). *Conceptual change in mathematics: Learning about fractions may provoke changes in children’s prior whole number knowledge.* Poster presented at the Midwestern Meeting for Mathematical Thinking, Minneapolis, MN.

**Sidney, P. G.**, Chan, Y.-C.\*, & Alibali, M. W. (2013, April). *Developing operation sense: Children’s and adults’ arithmetic with countable and uncountable amounts.* Poster presented at the biennial meeting of the Society for Research in Child Development, Seattle, WA.

Cooper, J. L., Nathan, M. J., Clinton, V., **Sidney, P. G**., & Alibali, M. W. (2012, April).  Design principles for the integration of visual and verbal information in a math curriculum. In M.J. Nathan (Chair), *Bridging research and practice: From cognitive principles to design principles of curriculum, instruction, and assessment*.  Symposium conducted at the meeting of the American Educational Research Association, Vancouver, Canada.

Cooper, J., Clinton, V., **Sidney, P.**, Alibali, M., Nathan, M. (2011, October). *Visuals in mathematics problem solving: When are the benefits?* Poster presented at the 7th biennial meeting of the Cognitive Development Society in Philadelphia, PA.

Crooks, N. M., **Sidney, P. G.**, Hattikudur, S., Alibali, M. W. (2011, October) *Sources of conceptual knowledge in the development of mathematical reasoning.* Poster presented at the 7th biennial meeting of the Cognitive Development Society in Philadelphia, PA.

**Sidney, P. G.** & Alibali, M. W. (2011, April). *Making connections in math: Effects of analogue choice, linking, and prior knowledge on learning.* Poster presented at the meeting of the Society for Research in Child Development, Montreal, CA.

**Sidney, P. G.**, Hattikudur, S., & Alibali, M. W. (2011, April). *Unique and additive effects of self-explaining and contrasting cases on learning fraction division.* Poster presented at the meeting of the Society for Research in Child Development, Montreal, CA.

Hattikudur, S., **Sidney, P. G.**, & Alibali, M. W. (2010, August). *Unique and additive effects of self-explaining and contrasting cases on learning fraction division.* Poster presented at the 32nd Annual Conference of the Cognitive Science Society in Portland, OR.

**Sidney, P. G.** & Alibali, M. W. (2010, June) *Building mathematical understanding through analogical transfer.* Poster presented at the 5th Annual IES Research Conference in Washington, DC.

Hattikudur, S., **Sidney, P. G.**, & Alibali, M. W. (2009, October) *Making connections: Activating students’ prior knowledge during a new lesson.* Poster presented at the 6th biennial meeting of the Cognitive Development Society in San Antonio, TX.

Nathan, M. J., Church, R. B. **Sidney, P. G.**, Wolfgram, M., Johnson, C. V., Bieda, K., Hostetter, A.B., Jacobs, S., Knuth, E., & Alibali, M. (2009, June). *How teachers link mathematical ideas during instructional communication*. Poster presented at the 5th Annual IES Research Conference in Washington, DC.

Grammer, J. K., **Sidney, P. G.**, Mugno, A. P., Lee, S., Langley, H. A., Coffman, J. L., & Ornstein, P. A. (2009, April). *A longitudinal exploration of children’s multiple strategy use in the context of the elementary school classroom*. Poster presented at the meeting of the Society for Research in Child Development, Denver, CO.

Coffman, J. L., **Gupta, P.**, Grammer, J. K., & Ornstein, P. A. (2008, March). *Classroom contexts and children's cognitive growth: A longitudinal picture of memory strategies and academic achievement.* Poster presented at the meeting of the American Educational Research Association, New York, NY.

**PROFESSIONAL DEVELOPMENT**

Summit on Women Faculty at Kent State Spring 2018

*A day-long conference on women’s issues in academia during which*

*I co-presented “Women’s Weekly Support for Writing”,*

*KSU Women’s Collaborative*

Writing Club Workshop by Prof. John Dunlosky Summer 2017

*A weekly summer workshop in which we discussed strategies for*

*improving manuscript writing, KSU Dept. of Psychological Sciences*

Roundtable on "Flipping the Classroom: Benefits and Challenges" Fall 2012

*A round table discussion of the philosophy and implementation of*

*“flipped” instruction, UW-Madison Delta Program*

Symposium on Grading: From Philosophy to Practice Fall 2012

*A day-long seminar discussing the purpose of testing and grading,*

*the role of grades in the university and beyond, and assessments*

*that meet university goals*, *UW- Madison Teaching Academy*

Doing Bayesian Data Analysis by Prof John K. Kruschke Summer 2012

*A two-day seminar on doing Bayesian data analyses for psychological*

*Experiments in R, UW-Madison Psychology Department*

Graduate Assistants' Equity Workshops for Teaching Assistants Spring 2012

*A workshop addressing the role of diversity in classroom learning and*

*the rights of protected classes of students, UW- Madison Office for Equity and Diversity*

**TEACHING EXPERIENCE**

Developmental Psychology (Instructor, University of Kentucky) 2019

Processes of Psychological Development (Instructor, University of Kentucky) 2018, 2019

Psychological Foundations of Education (Instructor, Kent State University) 2017

Graduate Course in General Linear Modeling I, II (Lab Instructor, UW-Madison) 2013, 2014

Experimental Psychology (Teaching Assistant, UW-Madison) 2012

Cognitive Development Depth Course (Teaching Assistant, UW-Madison) 2011, 2012

**MENTORSHIP**

Undergraduate Research Assistants, Kent State University

Name Current Position Years Mentored

Carly Nelson Undergraduate, KSU 2016 – 2018

Rajaa Thalluri Research Technician, Cleveland Clinic 2016 – 2017

Morgan Buerke Undergraduate, KSU 2016 – 2017

Undergraduate Research Assistants, University of Wisconsin – Madison

Name Current Position Years Mentored

Jenny Chan PhD candidate in Developmental Psych., U of Minnesota 2010 – 2012

Joana Bielefeld PhD student in Kinesiology, UW-Milwaukee 2013

Samantha Azuma Masters student, Social Work, UW-Madison 2014 – 2015

Laura Newman Private sector 2014 – 2015

Beatrice Lee PhD student, Rehab Psych. and Special Ed., UW-Madison 2014 – 2015

Kayla Diffee Masters student, Mental Health Counseling, Valparaiso 2014 – 2015

Jessica Foley EdS student, School Psychology, Illinois State 2015 – 2016

Haley Beers Undergraduate, UW-Madison 2015 – 2016

UW Pre-College Enrichment Opportunity Program for Learning Excellence – Program Interns

*The UW PEOPLE program serves middle- and high-school students of color and/or those from low-income families with the mission to support students’ successful transition to college. The internship occurs during the summer before students apply to college, in a field of their choice at the UW-Madison.*

2 students in 2009

3 students in 2010

**SERVICE**

Graduate student representative to the Climate and Diversity Committee, 2011 - 2014

UW-Madison Psychology

Presided sessions at a meeting of Psychology of Mathematics Education – 2012

North American Chapter

**AD HOC JOURNAL REVIEWS**

*Child Development, Developmental Psychology, Developmental Science*, *Learning and Individual Differences, Learning and Instruction, Journal of Experimental Psychology: Applied, Journal of Numerical Cognition*