Emily R. Fyfe

Department of Psychological and Brain Sciences
Indiana University
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EDUCATION

2015	Ph.D. in Psychological Sciences, concentration in Developmental Science Minor in Quantitative Methods Vanderbilt University
2012	M.S. in Psychological Sciences, concentration in Developmental Science Vanderbilt University
2010	B.A. in Psychology and Sociology University of Notre Dame [GPA: 4.0]

RESEARCH INTERESTS

I study cognitive development and the central processes of learning and transfer with a focus on how children think, learn, and solve problems in mathematics.

PROFESSIONAL POSITIONS

2016-	Assistant Professor, Department of Psychological and Brain Sciences Indiana University
2015-2016	Postdoctoral Fellow, Wisconsin Center for Education Research University of Wisconsin-Madison
2015-2016	Postdoctoral Consultant, SRI International, K-3 Formative Assessment Project
2015-2016	Postdoctoral Consultant, James S. McDonnell Foundation, Study Panel on the Translation of Cognitive Science Research to Education Practice and Policies
2010-2015	Graduate Research Assistant, Department of Psychology & Human Development Vanderbilt University
2008-2010	Undergraduate Research Assistant, Department of Psychology University of Notre Dame

SCHOLARSHIPS AND FELLOWSHIPS

2015-2016	Postdoctoral Fellowship, Program in Mathematical Thinking, Learning, and Instruction, Institute of Education Sciences [Stipend]
2014-2015	P.E.O. Scholarship, Philanthropic Educational Organization [$15,000]
2012-2015	Graduate Research Fellowship, National Science Foundation [Tuition & Stipend]
2010-2012	Pre-doctoral Fellowship, Experimental Education Research Training Program, Institute of Education Sciences [Tuition & Stipend]
2010-2015	University Graduate Fellowship, Vanderbilt University [Stipend]
2006-2009	Raytheon Scholarship, Scholarship Management Services [$4,000]
2006-2010	Eli Lilly Scholarship, Adams County Community Foundation [Tuition & Fees]

HONORS AND AWARDS

2017 Rising Star Award, Association for Psychological Science
2017 Outstanding Dissertation Award, Society for Research in Child Development
2015 Student at Latin American School for Education, Cognitive, and Neural Sciences
2013 Dissertation Research Award, American Psychological Association [$1,000]
2013 Graduate Student Travel Award, Vanderbilt University [$300]
2011 Poster Award Winner, Vanderbilt Kennedy Center Science Day [$250]
2010 Valedictorian Candidate, University of Notre Dame
2010 Senior Honors Thesis, Department of Psychology, University of Notre Dame
2010 Phi Beta Kappa Honors Society, University of Notre Dame
2010 John F. Santos Award for Distinctive Achievement in Psychology, Notre Dame
2010 Research and Materials Grant, University of Notre Dame [$1,950]
2009 Research and Materials Grant, University of Notre Dame [$1,190]
2009 Loughrey Award for Research and Materials, University of Notre Dame [$4,475]
2009 Alpha Kappa Delta Sociology Honors Society, University of Notre Dame

GRANTS AND SPONSORED PROGRAMS

2018-2024 James S. McDonnell Foundation, Understanding Human Cognition Scholar Award (role: PI) "Understanding the Development of Early Mathematics Knowledge." [$600,000]

2016-2019 Institute of Education Sciences, U.S. Department of Education, R305A160132 (role: Consultant) "Exploring the Roles of Pattern and Spatial Skills in Early Mathematics Development." (PI: Rittle-Johnson, Vanderbilt University)

2010-2015 Graduate Student Research Grants, Vanderbilt University [2 totaling $1300]

2008-2010 Undergraduate Research Grants, University of Notre Dame [3 totaling $7615]

ARTICLES IN REFEREED JOURNALS

1. **Fyfe, E. R.,** Matz, L., Hunt, K., & Alibali, M. W. (2019). Mathematical thinking in children with Developmental Language Disorder: The roles of pattern skills and verbal working memory. *Journal of Communication Disorders, 77,* 17-30. doi:10.1016/j.jcomdis.2018.11.001

2. **Fyfe, E. R.,** Rittle-Johnson, & Farran, D. C. (2018). Predicting success on high-stakes math tests from preschool math measures among children from low-income homes. *Journal of Educational Psychology.* doi:10.1037/edu0000298

3. **Fyfe, E. R.,** & Nathan, M. J. (2018). Making "concreteness fading" more concrete as a theory of instruction for promoting transfer. *Educational Review.* doi:10.1080/00131911.2018.1424116

4. **Fyfe, E. R.,** & Brown, S. A. (2018). Feedback influences children's reasoning about math equivalence: A meta-analytic review. *Thinking and Reasoning, 24,* 157-178. doi:10.1080/13546783.2017.1359208

5. **Fyfe, E. R.,** Matthews, P. G., Amsel, E., McEldoon, K. L., & McNeil, N. M. (2018). Assessing formal knowledge of math equivalence among algebra and pre-algebra students. *Journal of Educational Psychology, 110,* 87-101. doi:10.1037/edu0000208

6. **Fyfe, E. R.,** Evans, J. L, Matz, L., Hunt, K., & Alibali, M. W. (2017). Relations between patterning skill and differing aspects of early mathematics knowledge. *Cognitive Development, 44,* 1-11. doi:10.1016/j.cogdev.2017.07.003

7. **Fyfe, E. R.,** & Rittle-Johnson, B. (2017). Mathematics problem solving without feedback: A desirable difficulty in a classroom setting. *Instructional Science, 45,* 177-194. doi:10.1007/s11251-016-9401-1

8. Rittle-Johnson, B., **Fyfe, E. R.,** Hofer, K. G., & Farran, D. C. (2017). Early math trajectories: Low-income children's mathematics knowledge from age 4 to 11. *Child Development, 88,* 1727-1742. doi:10.1111/cdev.12662

9. Chu, J., Rittle-Johnson, B., & **Fyfe, E. R.** (2017). Diagrams benefit symbolic problem solving. *British Journal of Educational Psychology, 87,* 273-287. doi:10.1111/bjep.12149

10. **Fyfe, E. R.** (2016). Providing feedback on computer-based algebra homework in middle-school classrooms. *Computers in Human Behavior, 63,* 568-574. doi:10.1016.j.chb.2016.05.082

11. **Fyfe, E. R.,** & Rittle-Johnson, B. (2016a). Feedback both helps and hinders learning: The causal role of prior knowledge. *Journal of Educational Psychology, 108,* 82-97. doi:10.1037/edu0000053

12. **Fyfe, E. R.,** & Rittle-Johnson, B. (2016b). The benefits of computer-generated feedback for mathematics problem solving. *Journal of Experimental Child Psychology, 147,* 140-151. doi:10.1016/j.jecp.2016.03.009

13. Rittle-Johnson, B., **Fyfe, E. R.,** & Loehr, A. L. (2016). Improving conceptual and procedural knowledge: The impact of instructional content within a mathematics lesson. *British Journal of Educational Psychology, 86,* 576-591. doi:10.1111/bjep.12124

14. Miller, M. R., Rittle-Johnson, B., Loehr, A. L., & **Fyfe, E. R.** (2016). The influence of relational knowledge and executive function on preschoolers' repeating pattern knowledge. *Journal of Cognition and Development, 17*(1)*,* 85-104. doi:10.1080/15248372.2015.1023307

15. **Fyfe, E. R.,** McNeil, N. M., & Rittle-Johnson, B. (2015). Easy as ABCABC: Abstract language facilitates performance on a concrete patterning task. *Child Development, 86,* 927-935. doi:10.1111/cdev.12331

16. Fyfe, E. R., DeCaro, M. S., & Rittle-Johnson, B. (2015). When feedback is cognitively-demanding: The importance of working memory capacity. *Instructional Science, 43*(1), 73-91. doi:10.1007/s11251-014-9323-8

17. Fyfe, E. R., McNeil, N. M, & Borjas, S. (2015). Benefits of "concreteness fading" for children's mathematics understanding. *Learning and Instruction, 35,* 104-120. doi:10.1016/j.learninstruc.2014.10.004

18. McNeil, N. M., **Fyfe, E. R.,** & Dunwiddie, A. E. (2015). Arithmetic practice can be modified to promote understanding of mathematical equivalence. *Journal of Educational Psychology, 107,* 423-436. doi:10.1037/a0037687

19. Rittle-Johnson, B., **Fyfe, E. R.,** Loehr, A. L., & Miller, M. R. (2015). Beyond numeracy in preschool: Adding patterns to the equation. *Early Childhood Research Quarterly, 31,* 101-112. doi:10.1016/j.ecresq.2015.01.005.

20. Fyfe, E. R., DeCaro, M. S., & Rittle-Johnson, B. (2014). An alternative time for telling: When conceptual instruction prior to problem solving improves mathematical knowledge. *British Journal of Educational Psychology, 84*, 502-519. doi:10.1111/bjep.12035

21. Fyfe, E. R., McNeil, N. M., Son, J. Y., & Goldstone, R. L. (2014). Concreteness fading in mathematics and science instruction: A systematic review. *Educational Psychology Review, 26*(1), 9-25. doi:10.1007/s10648-014-9249-3

22. Loehr, A. L., **Fyfe, E. R.,** & Rittle-Johnson, B. (2014). Wait for it…Delaying instruction improves mathematics problem solving: A classroom study. *The Journal of Problem Solving, 7,* 36-49. doi:10.7771/1932-6246.1166

23. Chesney, D. L., McNeil, N. M., Matthews P. G., Byrd, C. E., Petersen, L. A., Wheeler, M. C., **Fyfe, E. R.,** & Dunwiddie, A. E. (2014). Organization matters: Mental organization of addition knowledge relates to understanding math equivalence in symbolic form. *Cognitive Development, 30,* 30-46. doi:10.1016/j.cogdev.2014.01.001

24. Rittle-Johnson, B., **Fyfe, E. R.**, McLean, L. E., & McEldoon, K. L. (2013). Emerging understanding of patterning in four-year-olds. *Journal of Cognition and Development, 14*(3), 376-396. doi:10.1080/15248372.2012.689897

25. Fyfe, E. R., Rittle-Johnson, B., & DeCaro, M. S. (2012). The effects of feedback during exploratory mathematics problem solving: Prior knowledge matters. *Journal of Educational Psychology, 104*(4), 1094-1108. doi:10.1037/a0028389

26. McNeil, N. M., & **Fyfe, E. R.** (2012). "Concreteness fading" promotes transfer of mathematical knowledge. *Learning and Instruction, 22,* 440-448. doi:10.1016/j.learninstruc.2012.05.001

27. McNeil, N. M., Chesney, D. L., Matthews, P. G., **Fyfe, E. R.,** Petersen, L. A., & Dunwiddie, A. E. (2012). It pays to be organized: Organizing arithmetic practice around

equivalent values facilitates understanding of math equivalence. *Journal of Educational Psychology, 104*(4), 1109-1121. doi:10.1037/a0028997

28. McNeil, N. M., **Fyfe, E. R.,** Petersen, L. A., Dunwiddie, A. E., & Brletic-Shipley, H. (2011). Benefits of practicing 4 = 2 + 2: Nontraditional problem formats facilitate children's understanding of mathematical equivalence. *Child Development, 82*(5), 1620-1633. doi:10.1111/j.1467-8624.2011.01622.x

ARTICLES UNDER REVIEW OR IN PREPARATION

1. **Fyfe, E. R.,** & Brown, S. A. (under review). Learning from feedback during problem solving: Set students' expectations high.

2. **Fyfe, E. R.,** Matthews, P. G., & Amsel, E. (in prep). College developmental math students' knowledge of the equal sign.

3. Nelson, L. J., & **Fyfe, E. R.** (under review). Metacognitive monitoring and help seeking on math equivalence problems.

4. Vest, N. A., **Fyfe, E. R.,** Nathan, M. J., & Alibali, M. W. (under review). Learning from an avatar video instructor: The role of gesture mimicry.

INVITED LECTURES AND ADDRESSES

2017 Purdue University, Department of Human Development and Family Studies Colloquia. Talk title: *Development of Pattern Knowledge*.

2017 Knox College, Faculty Workshop on Translating Cognitive Science to Pedagogy. Talk title: *Desirable Difficulties in the Classroom*.

CONFERENCE PROCEEDINGS

1. **Fyfe, E. R.** & Alibali, M. W. (2018). Seeing the math in patterns: Children's attention to numerical information in a repeating pattern task. In T. E. Hodges, G. J. Roy, & A. M. Tyminski, (Eds.), *Proceedings of the 40th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 229). Greenville, SC: University of South Carolina & Clemson University.

2. Ottmar, E. R., Melcer, E., Abrahamson, D., Nathan, M. J., **Fyfe, E. R.,** & Smith, C. (2018). Embodied mathematical imagination and cognition (EMIC) working group. In T. E. Hodges, G. J. Roy, & A. M. Tyminski, (Eds.), *Proceedings of the 40th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 229). Greenville, SC: University of South Carolina & Clemson University.

3. **Fyfe, E. R.,** & Brown, S. A. (2018). Task expectations influence learning from feedback. In T. Rogers, M. Rau, X. Zhu, & C. W. Kalish (Eds.), *Proceedings of the 40th Annual*

Conference of the Cognitive Science Society (pp. 396-401). Madison, WI: Cognitive Science Society.

4. **Fyfe, E. R.,** Matthews, P. G., & Amsel, E. (2017). College students' knowledge of the equal sign and its relation to solving equations. In E. Galindo & J. Newton (Eds.), *Proceedings of the 39th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 279-282). Indianapolis, IN: Hoosier Association of Mathematics Teacher Educators.

5. **Fyfe, E. R.,** Alibali, M. W., & Nathan, M. J. (2017). The promise and pitfalls of making connections in mathematics. In E. Galindo & J. Newton (Eds.), *Proceedings of the 39th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 717-724). Indianapolis, IN: Hoosier Association of Mathematics Teacher Educators.

6. **Fyfe, E. R.,** (2016). The benefits of feedback on computer-based algebra homework. In M. B. Wood, E. E. Turner, M. Civil, & J.A. Eli (Eds.), *Proceedings of the 38th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 581-588). Tucson, AZ: University of Arizona.

7. **Fyfe, E. R.** & Rittle-Johnson, B. (2016). Longitudinal predictions of sixth-grade geometry knowledge. In M. B. Wood, E. E. Turner, M. Civil, & J.A. Eli (Eds.), *Proceedings of the 38th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 270-273). Tucson, AZ: University of Arizona.

8. Chu, J., **Fyfe, E. R.,** & Rittle-Johnson, B. (2015). Diagrams benefit symbolic problem solving. In D. Noelle, R. Dale, A. Warlaumont, J. Yoshimi, T. Matlock, C. Jennings, & P. Maglio (Eds.), *Proceedings of the 37th Annual Conference of the Cognitive Science Society* (pp. 381-386). Pasadena, CA: Cognitive Science Society.

9. **Fyfe, E. R.,** & Rittle-Johnson, B. (2012). The effects of feedback during exploration depend on prior knowledge. In N. Miyake, D. Peebles, & R. P. Cooper (Eds.), *Proceedings of the 34th Annual Conference of the Cognitive Science Society* (pp. 348-354). Sapporo, Japan: Cognitive Science Society.

CONFERENCE PRESENTATIONS

1. Vest, N. A., & **Fyfe, E. R.** (2018, November). Feedback hinders performance on women's mathematics problem solving. Poster presented at the annual meeting of the Psychonomic Society, New Orleans, LA.

2. Macchione, A. L. & **Fyfe, E. R.** (2018, November). Gender predicts performance on six-year-olds' knowledge of place value. Poster presented at the annual meeting of the Indiana Psychological Association. Noblesville, IN.

3. Motz, B., de Leeuw, J., Carvalho, P., **Fyfe, E. R.,** & Goldstone, R. (2018, July). ManyClasses: A model for abstracting generalizable research principles from different

learning contexts. Presentation at *replicate.education: A Workshop on Large Scale Education Replication*. Buffalo, New York.

4. Vest, N. A., & **Fyfe, E. R.** (2018, May). Learning from an avatar video instructor: Gesture mimicry supports middle school students' algebra knowledge. Poster presented at the annual meeting of the Association for Psychological Science, San Francisco, CA.

5. Nelson, L. J., & **Fyfe, E. R.** (2018, May). Metacognitive monitoring on math equivalence problems. Poster presented at the Midwestern Cognitive Science Conference, Bloomington, IN.

6. Vest, N. A., & **Fyfe, E. R.** (2018, May). You are right! Feedback focused on the self enhances problem solving. Poster presented at the Midwestern Cognitive Science Conference, Bloomington, IN.

7. **Fyfe, E. R.,** & Rittle-Johnson, B. (2018, April). The Early Math Trajectories Model: Longitudinal predictors of middle school mathematics achievement. Paper presented at the American Education Research Association (AERA), New York, NY.

8. **Fyfe, E. R.,** Evans, J. L., & Alibali, M.W. (2017, October). Relations between patterning, calculation skill, and key concepts in early math. Poster presented at the Biennial Meeting of the Cognitive Development Society (CDS), Portland, OR.

9. Donovan, A. M., & **Fyfe, E. R.** (2017, October). Making concrete connections in math. Poster presented at the Biennial Meeting of the Cognitive Development Society (CDS), Portland, OR.

10. Rittle-Johnson, B., **Fyfe, E. R.,** & Zippert, E. (2017, September). Patterning knowledge is foundational to math achievement. Paper presented at the Meeting of the European Association for Research on Learning and Instruction (EARLI), Tampere, Finland.

11. **Fyfe, E. R.,** Brown, S. A., & Alibali, M. W. (2017, April). The effects of feedback on equivalence understanding in 6- to 11-year-old children. Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD), Austin, TX.

12. Rittle-Johnson, B., & **Fyfe, E. R.** (2017, April). Early math skills that predict low-income children's mathematics development from age 4 to 12. Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD), Austin, TX.

13. Matthews, P. G., & **Fyfe, E. R.** (2017, April). Assessing knowledge of mathematical equivalence among algebra and pre-algebra students. Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD), Austin, TX.

14. Rittle-Johnson, B., **Fyfe, E. R.,** & Farran, D. C. (2016, December). Predicting the future: Identifying early math skills that predict middle-school math achievement among low-income children. Poster presented at the Annual Research Conference of the Institute of Education Sciences (IES), Washington, DC.

15. **Fyfe, E. R.** & Nathan, M. J. (2016, July). Connecting concrete and abstract representations: What is "concreteness fading" and how does it work? Paper presented at the Fourth Annual Midwest Meeting on Mathematical Thinking (M3T), Madison, WI.

16. **Fyfe, E. R.** & Alibali, M. W. (2016, July). Patterning predicts some, but not all, aspects of early math knowledge. Poster presented at the Fourth Annual Midwest Meeting on Mathematical Thinking (M3T), Madison, WI.

17. **Fyfe, E. R.** (2016, April). When does feedback help? The impact of human- versus computer-generated feedback on mathematics problem solving. Poster presented at the American Education Research Association Conference (AERA), Washington DC.

18. **Fyfe, E. R.,** Rittle-Johnson, B., Hofer, K., & Farran, D. (2015, October). Pattern knowledge, but not shape knowledge, predicts fifth-grade math outcomes. Poster presented at the Biennial Meeting of the Cognitive Development Society (CDS), Columbus, OH.

19. Rittle-Johnson, B., **Fyfe, E. R.,** Loehr, A., & Miller, M. R. (2015, October). It's a pattern! The importance of early pattern knowledge for mathematics. In B. Rittle-Johnson (chair), *Development of number, shape, and pattern knowledge*. Symposium presented at the Biennial Meeting of the Cognitive Development Society (CDS), Columbus, OH.

20. **Fyfe, E. R.,** Rittle-Johnson, B., Hofer, K., & Farran, D. (2015, August). Early pattern knowledge predicts fifth-grade math achievement. Paper presented at the Third Annual Midwest Meeting on Mathematical Thinking (M3T), Minneapolis, MN.

21. **Fyfe, E. R.,** & Rittle-Johnson, B. (2015, March). Feedback both helps and hinders mathematics problem solving. Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD), Philadelphia, PA.

22. **Fyfe, E. R.,** McNeil, N. M., & Rittle-Johnson B. (2015, March). The effect of abstract versus concrete labels on children's relational reasoning. Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD), Philadelphia, PA.

23. Rittle-Johnson, B., **Fyfe, E. R.,** & Loehr, A. L. (2015, March). Just tell me how to solve it. The impact of including procedural instruction in conjunction with conceptual instruction. Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD), Philadelphia, PA.

24. Rittle-Johnson, B., Hofer, K., **Fyfe, E. R.,** & Farran, D. (2015, March). It's a pattern! The importance of early pattern knowledge for middle grade mathematics achievement. Poster presented at the Biennial Meeting of the Society for Research in Child Development (SRCD), Philadelphia, PA.

25. **Fyfe, E. R.,** & Rittle-Johnson, B. (2015, March). The timing of feedback on mathematics problem solving in a classroom setting. Paper presented at the Society for Research on Educational Effectiveness (SREE), Washington, DC.

26. Fyfe, E. R., Loehr, A. L., Rittle-Johnson, B., Miller, M. R. (2014, April). Enhancing the quality of children's explanations to promote patterning knowledge. Paper presented at the American Education Research Association Conference (AERA), Philadelphia, PA.

27. Fyfe, E. R., DeCaro, M. S., & Rittle-Johnson, B. (2014, April). The role of feedback type and working memory capacity during problem solving. Paper presented at the American Education Research Association Conference (AERA), Philadelphia, PA.

28. Loehr, A. L., **Fyfe, E. R.,** Miller, M. R., & Rittle-Johnson, B. (2014, April). Learning from explanations: Does it matter who provides them? Paper presented at the American Education Research Association Conference (AERA), Philadelphia, PA.

29. Rittle-Johnson, B., **Fyfe, E. R.,** Loehr, A. L., & DeCaro, M. S. (2014, April). Learning from explanation: The timing and source of explanations for learning early algebra. In B. Rittle-Johnson (chair), *Different perspectives on the role of explanation and exploration*. Symposium presented at the American Education Research Association Conference (AERA), Philadelphia, PA.

30. Miller, M. R., Rittle-Johnson, B., Loehr, A. L., & **Fyfe, E. R.** (2013, October). Importance of executive function for learning about patterns. Poster presented at the Biennial Meeting of the Cognitive Development Society (CDS), Memphis, TN.

31. Miller, M. R., Loehr, A. L., **Fyfe, E. R.,** Rittle-Johnson, B., McLean, L. E., & McEldoon, K. L. (2013, May). Preschoolers' knowledge of repeating patterns over time. Poster presented at the 25th Association for Psychological Science (APS) Annual Convention, Washington, DC.

32. Fyfe, E. R., & McNeil, N. M. (2013, April). The benefits of "concreteness fading" generalize across task, age, and prior knowledge. In K. Mix (chair), *Learning from concrete models*. Symposium presented at the Biennial Meeting of the Society for Research in Child Development (SRCD), Seattle, WA.

33. Chesney, D. L., McNeil, N. M., Matthews, P. G., Byrd, C. E., Petersen, L. A., Wheeler, M. C., **Fyfe, E. R.,** & Dunwiddie, A. E. (2013, April). Organization matters: Children's mental organization of arithmetic knowledge correlates with understanding of math equivalence. Paper presented at the Biennial Meeting of the Society for Research in Child Development (SRCD), Seattle, WA.

34. Fyfe, E. R., DeCaro, M. S., & Rittle-Johnson, B. (2013, March). An alternative time for telling: When conceptual instruction prior to exploration improves mathematical knowledge. Paper at the Society for Research on Educational Effectiveness (SREE), Washington, DC.

35. Rittle-Johnson, B., **Fyfe, E. R.,** McLean, L. E., & McEldoon, K. L. (2012, April). Algebra in preschool: Emerging understanding of patterns in four-year-olds. Paper presented at the American Education Research Association Conference (AERA), Vancouver, Canada.

36. Rittle-Johnson, B., **Fyfe, E. R.,** McLean, L. E., & McEldoon, K. L. (2011, October). Algebra in preschool: Emerging understanding of patterns in four-year-olds. NSF Research and Evaluation on Education in Science and Engineering (REESE) Principle Investigator Meeting, Washington, DC.

37. Fyfe, E. R., Rittle-Johnson, B., & DeCaro, M. S. (2011, September). The effects of feedback during exploratory math practice. Paper presented at the Society for Research on Educational Effectiveness (SREE), Washington, D.C.

38. McNeil, N. M., Dunwiddie, A. E., Petersen, L. A., **Fyfe, E. R.,** & Brletic-Shipley, H. (2010, June). Arithmetic practice that promotes conceptual understanding and computational fluency: Year 3. Poster presented at the Annual Meeting of the Institute of Education Sciences (IES), National Harbor, MD.

39. Fyfe, E. R., McNeil, N. M. (2009, October). Benefits of "concreteness fading" for children with low knowledge of mathematical equivalence. Poster presented at the Biennial Meeting of the Cognitive Development Society (CDS), San Antonio, TX.

40. McNeil, N. M., Dunwiddie, A. E., Petersen, L. A., **Fyfe, E. R.,** & Brletic-Shipley, H. (2009, June). Arithmetic practice that promotes conceptual understanding and computational fluency. Poster presented at the Annual Meeting of the Institute of Education Sciences (IES), Washington, D.C.

TEACHING EXPERIENCE

2016-2018 Professor, Indiana University
P155: Introduction to Psychological and Brain Sciences
P315: Developmental Psychology

2014-2015 Guest Lecturer, Vanderbilt University
Cognition in Infancy
Cognitive Development
Developmental Psychology
Educational Psychology

2013-2014 Academic Tutor, Stratton Foster Academic Center, Vanderbilt University

2013-2014 Graduate Teaching Assistant, Vanderbilt University

PROFESSIONAL SERVICE

Grant Reviewer
National Science Foundation, Education and Human Resources Core Research Panel (grant panel member), 2017

Editorial Board Member
Educational Psychology Review, 2018 to present
Journal of Educational Psychology, 2018 to present

Ad-hoc Manuscript Reviewer

Behavior Research Methods
British Journal of Educational Psychology
Child Development
Cognition and Instruction
Cognitive Development
Cognitive Psychology
Cognitive Science
Computers and Education
Computers in Human Behavior
Developmental Science
Early Childhood Research Quarterly
Educational Psychology Review
Instructional Science
Journal of Applied Research in Memory and Cognition
Journal of Cognition and Development
Journal of Experimental Education
Journal of Educational Psychology
Journal of Experimental Child Psychology
Journal of Numerical Cognition
Journal of The Learning Sciences
Learning and Individual Differences
Learning and Instruction
Mathematical Thinking and Learning
Memory and Cognition
Neural Plasticity
Review of Educational Research
School Psychology Quarterly

Conference Submission Reviewer
Proceedings of the Cognitive Science Society
Proceedings of the Psychology of Mathematics Education – North American Chapter

UNIVERSITY, COLLEGE, AND DEPARTMENTAL SERVICE

2018	Member, Student Learning Outcomes for Research Methods Committee
2018-present	Member, Space Committee
2018	Member, Psychological and Brain Sciences Search Committee for Senior Hire
2017-2018	Member, Student Awards Committee
2016-present	Member, Grant Support Faculty Committee
2016-present	Member, Undergraduate Program Committee
2016-2017	Chair, Student Learning Outcomes for Developmental Psychology Committee

OTHER SERVICE AND OUTREACH

2017-2018	Panel Member, Exhibit design for WonderLab Museum of Science
2017	Abstract Reviewer, Indiana Junior Academy of Sciences
2017	Mentor, Cox Scholar Interns, Indiana University

2017	Mentor, Service Learning Students at Bloomington High School North
2017	Mentor, Mentoring Program for Young Scholars, Cognitive Development Society
2013	Student Committee Member, ExpERT training program, Vanderbilt University
2012	Tutor, Martin Luther King Jr. Magnet School, Nashville TN
2011-2014	Volunteer, Hands on Nashville, Nashville TN
2011-2013	Volunteer, Graduate Student Council, Vanderbilt University
2008-2009	Health & Environmental Commissioner, Lyons Hall, University of Notre Dame
2008-2010	Volunteer, Logan's Center for People with Disabilities, South Bend, IN
2008-2010	Volunteer, Center for the Homeless, South Bend, IN

PROFESSIONAL AFFILIATIONS AND MEMBERSHIPS

American Educational Research Association
American Psychological Association
Cognitive Development Society
Cognitive Science Society
Society for Research in Child Development
Society for Research on Educational Effectiveness