Marina Vasilyeva
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Education

1995 - 2000	University of Chicago, Chicago, IL Ph.D., Psychology
1986-1992	University of Krasnoyarsk, Russia B.A., Psychology

Research and Teaching Experience

2009 – present	Associate Professor Lynch School of Education, Boston College
2004-2009	Assistant Professor Lynch School of Education, Boston College
2000 – 2004	Post-Doctorate Research Associate Department of Psychology, University of Chicago
1992-1993	Lecturer University of Krasnoyarsk, Russia

Grants and Awards

Institute of Educational Sciences (Cognition and Student Learning Program),
Research grant # R305A200315, PI, 2020-2024
Boston College Teaching and Mentoring Grant (Course Design), 2020
Spencer Foundation, Research grant #201900051, PI, 2018-2020
Caplan Foundation for Early Childhood, PI, 2018-2020
National Science Foundation, HER, Research grant #156217 (Consultant), 2016-2019
Russian Scientific Fund, Research grant #16-18-00073, PI, 2016-2018
American Montessori Foundation, Research grant, PI, 2014 -2015
National Science Foundation, Grant #HRD-0522491, co-PI, 2005-2008
Research Expense Grants, Boston College, PI, 2005-2006, 2011-2012
McCormick Tribune Early Childhood Research Seed Grant, PI, 2002-2004
John Dewey Lectureship Award, 1999
Charles Hubbard Judd Award, 1996
University of Chicago Century Fellowship, 1995-1999

Publications

Peer-reviewed journal articles:

1. Vasilyeva, M., Antipkina, I., Coughlan, M, & Kardanova, E. (in press).Sex differences in first graders' literacy skills are mediated by parental input. *Journal of Applied*

Developmental Psychology.
2. Vasilyeva, M., Laski, E.V., Veraksa, A., & Bukhalenkova, D. (2020). Leveraging measurement instruction to develop kindergartners' numerical magnitude knowledge. *Journal of Educational Psychology*.
3. Miele, D. B., Browman, A. S., Shen, C., & Vasilyeva, M., Tyumeneva, Y. (2020). Domain-general and math-specific self-perceptions of perseverance as predictors of behavioral math persistence. *Journal of Experimental Education*.
4. Gámez, P. B., & Vasilyeva, M. (2020). Shared syntactic representations in balanced bilinguals: Cross-linguistic priming with and without verb overlap. *Language Learning and Development*, *16*(1), 89-106.
5. Miele, D. B., Browman, A. S., & Vasilyeva, M. (2020). Individual differences in students' effort source beliefs predict their judgments of ability. *Motivation Science*, *6*(2), 110-132.
6. Vasilyeva, M., Laski, E., Veraksa, A., Weber, L., & Bukhalenkova, D. (2018). Distinct pathways from parental beliefs and practices to children's numeric skills. *Journal of Cognition and Development*, *19*(4), 345-366.
7. Vasilyeva, M. Weber, L., Crawford, L., & Veraksa, A. (2018). Early symbolic knowledge of numbers: A window into children's understanding of numeric structure. *Bordón. Revista de Pedagogía (Journal of Education*), *70*(3), 139-155.
8. Vasilyeva, M., Dearing, E., Ivanova, A., Shen, C., & Kardanova, E. (2017). Testing the family investment model in Russia: Estimating indirect effects of SES and parental beliefs on the literacy skills of first-graders. *Early Childhood Research Quarterly*, *42*, 11-20.
9. Gómez, L., Vasilyeva, M., Dulaney, A. (2017). Teachers' read-aloud practices as predictors of children's vocabulary: The case of Chilean preschools. *Journal of Applied Developmental Psychology*, *52*, 149-158.
10. Foley, A., Vasilyeva, M., & Laski, E. (2017). Children's use of decomposition strategies mediates the visuospatial memory and arithmetic accuracy relation. *British Journal of Developmental Psychology*, *35*, 303-309.
11. Vasilyeva, M., Laski, E., Veraksa, A., & Shen, C. (2016). Development of children's early understanding of numeric structure. *Psychology in Russia: State of the Art*, *9*(3), 77-96.
12. Shen, C., Miele, D., & Vasilyeva, M. (2016) The relation between college students' academic mindsets and their persistence during math problem solving. *Psychology in Russia: State of the Art*, *9*(3), 39-57.
13. Laski, E. V., Schiffman, J., Shen, C., & Vasilyeva, M. (2016). Kindergartners' base-10 knowledge predicts arithmetic accuracy concurrently and longitudinally. *Learning and Individual Differences*.
14. Shen, C., Vasilyeva, M., & Laski, E. (2016). Here, but not there: Cross-national variability of gender effects in arithmetic. *Journal of Experimental Child Psychology*, *146*, 50-65.
15. Laski, E., Schiffman, J., Vasilyeva, M., & Ermakova, A. (2016). Arithmetic accuracy in children from high- and low-income schools: What do strategies have to do with it? *AERA Open*, *2*, 1-14.
16. Laski, E.V., Vasilyeva, M., & Schiffman, J. (2016). Longitudinal comparison of Montessori versus non-Montessori students' place-value and arithmetic knowledge. *Journal of Montessori Research*, *2*, 1-15.

17. Vasilyeva, M., Laski, E., & Shen, C. (2015). Computational fluency and strategy choice predict individual and cross-national differences on complex arithmetic. *Developmental Psychology, 51(10),* 1489-1500.
18. Solomon, T., Vasilyeva, M., Levine, S., & Huttenlocher, J. (2015). Minding the gap: Children's difficulty conceptualizing spatial intervals as linear measurement units. *Developmental Psychology, 51(11),* 1564-1573.
19. Vasilyeva, M., Laski, E., Ermakova, A., Lai, W.-F., Jeong, Y., & Hachigian, A. (2015). Re-examining the language account of cross-national differences in number representations. *Journal of Experimental Child Psychology, 129,* 12-25.
20. Vasilyeva, M., & Gámez, P. (2015). Exploring interactions between semantic and syntactic processes: The role of animacy in syntactic priming. *Journal of Experimental Child Psychology*, *138,* 15-30.
21. Gámez, P., & Vasilyeva, M. (2015). Increasing second language learners' production and comprehension of developmentally-advanced syntactic forms. *Language Learning and Development, 11,* 128-151.
22. Nezhnov, P., Kardanova, E., Vasilyeva, M., & Ludlow, L. (2015). Operationalizing levels of academic mastery based on Vygotsky's theory: The study of mathematical knowledge. *Educational and Psychological Measurement, 75,* 235-259.
23. Dulaney, A., Vasilyeva, M., O'Dwyer, L. (2015). Individual differences in cognitive resources and elementary school mathematics achievement: Examining the roles of storage and attention. *Learning and Individual Differences, 37,* 55-63.
24. Ganley, C. M., & Vasilyeva, M. (2014). The role of anxiety and working memory in gender differences in mathematics. *Journal of Educational Psychology, 106* (1), 105-120.
25. Ganley, C., Vasilyeva, M., & Dulaney, A. (2014). Spatial ability mediates the gender difference in middle-school students' science performance. *Child Development, 85* (4), 1419-1432.
26. Laski, E., Ermakova, A., & Vasilyeva, M. (2014). Early use of decomposition strategy for addition and its relation to base-10 knowledge. *Journal of Applied Developmental Psychology*, *35*, 444-454.
27. Vasilyeva, M., Ganley, C., Casey, B., Dulaney, A., Tillinger, M., & Anderson, K. (2013). How children solve volume problems: Investigating factors influencing strategy choice. *Cognition and Instruction, 31,* 29-61.
28. Ganley, C., Mingle, L. A., Ryan, A., Ryan, K., Vasilyeva, M., & Perry, M. (2013). An examination of stereotype threat effects on girls' mathematics performance. *Developmental Psychology*, *49*, 1886-1897.
29. Vasilyeva, M., & Lourenco, S. (2012). The development of spatial cognition. *Wiley Interdisciplinary Reviews: Cognitive Science*, *3*, 349-362.
30. Vasilyeva, M., & Waterfall, H. (2012). Beyond syntactic priming: Evidence for activation of alternative syntactic structures. *Journal of Child Language, 39,* 258-283.
31. Ganley, C., & Vasilyeva, M. (2011). Sex differences in the relation between math performance, spatial skills, and attitudes. *Journal of Applied Developmental Psychology, 32*, 235-242.
32. Bowers, E., & Vasilyeva, M. (2011). The relation between teacher input and lexical growth of preschoolers. *Applied Psycholinguistic*s, *32*, 221-241.
33. Casey, B., Dearing, E., Vasilyeva, M., Ganley, C., & Tine, M. (2011). Spatial and

numerical predictors of measurement performance: The moderating effects of community poverty and gender. *Journal of Educational Psychology, 103, 296-311.*

34. Vasilyeva, M., Waterfall, H., Gamez, P., Gomez, L. E., Bowers, E., & Shimpi, M. (2010). Cross-linguistic syntactic priming in bilingual children. *Journal of Child Language, 37,* 1037-1064.
35. Vasilyeva, M., & Bowers, E. (2010). Exploring the effects of similarity on mapping spatial relations. *Journal of Experimental Child Psychology, 106,* 221-239.
36. Huttenlocher, J., Waterfall, H., Vasilyeva, M., Vevea, J., & Hedges, L. (2010). Sources of variability in children's language growth. *Cognitive Psychology, 61,* 343-365.
37. Vasilyeva, M., Casey, B., Dearing, E., & Ganley, C. (2009). Measurement skills in low-income elementary school students: Exploring the nature of gender differences. *Cognition and Instruction, 27,* 401-428.
38. Vasilyeva, M., Ludlow, L. H., Casey, B. M., & St. Onge, C. (2009). Examination of the psychometric properties of the measurement skills assessment. *Educational and Psychological Measurement,* 69, 106-131.
39. Vasilyeva, M., Waterfall, H., & Huttenlocher, J. (2008). Emergence of syntax: Commonalities and differences across children. *Developmental Science, 11,* 84-97.
40. Huttenlocher, J., Vasilyeva, M., Newcombe, N., & Duffy, S. (2008). Developing symbolic capacity one step at a time. *Cognition, 106,* 1-12.
41. Vasilyeva, M., Duffy, S., & Huttenlocher, J. (2007). Developmental changes in the use of absolute and relative information: The case of spatial extent. *Journal of Cognition and Development, 8,* 455-471.
42. Huttenlocher, J., Vasilyeva, M., Waterfall, H., Vevea, J., & Hedges, L. (2007). The varieties of speech to young children. *Developmental Psychology, 43,* 1062-1083.
43. Shimpi. P.M., Gamez, P., Huttenlocher, J., & Vasilyeva, M. (2007) Syntactic priming in 3- and 4-year-old children: Evidence for abstract representations of transitive and dative forms. *Developmental Psychology, 43,* 1334-1346.
44. Vasilyeva, M., & Bowers, E. (2006). Children's use of geometric information in mapping tasks. *Journal of Experimental Child Psychology, 95,* 255-277.
45. Vasilyeva, M., Huttenlocher, J., & Waterfall, H. (2006). Effects of language intervention on syntactic skill levels of preschoolers. *Developmental Psychology, 42,* 164-174.
46. Klibanoff, R., Levine, S., Huttenlocher, J., Vasilyeva, M., & Hedges, L. (2006). Preschool children's mathematical knowledge: The effect of teacher "math talk". *Developmental Psychology, 42,* 59-69.
47. Levine, S., Vasilyeva, M., Lourenco, S., Newcombe, N., & Huttenlocher, J. (2005). Socioeconomic status modifies the sex difference in spatial skill. *Psychological* P*sc*i*ence, 16,* 841-845.
48. Lourenco, S.F., Huttenlocher, J., & Vasilyeva, M. (2005). Toddlers' representations of space: The role of viewer perspective. *Psychological Science, 16,* 255-260.
49. Vasilyeva, M. & Huttenlocher, J. (2004). Early development of scaling ability. *Developmental Psychology, 40,* 682-690.
50. Huttenlocher, J., Vasilyeva, M., Shimpi, P. (2004). Syntactic priming in young children. *Journal of Memory and Language, 50,* 182-195.
51. Huttenlocher, J. & Vasilyeva, M. (2003). How toddlers represent enclosed spaces. *Cognitive Science, 27,* 749-766.
52. Vasilyeva, M. (2002). Solving spatial tasks with unaligned layouts: The difficulty of dealing with conflicting information. *Journal of Experimental Child Psychology, 83,* 291-303.

53. Huttenlocher, J., Vasilyeva, M., Cymmerman, E., & Levine, S. (2002). Language input and child syntax. *Cognitive Psychology, 45*, 337-374.
54. Huttenlocher, J., Newcombe, N., & Vasilyeva, M. (1999). Spatial scaling in young children. *Psychological Science, 10*, 393-398.

***Book chapters**:*

1. Congdon, E. L., Vasilyeva, M., Mix, K. S., Levine, S. C. (2018). From intuitive spatial measurement to understanding of units. In K. S. Mix & M. T, Battista (Eds.), *Visualizing mathematics: The role of spatial reasoning in mathematical thought*.
2. Vasilyeva, M., & Veraksa, A. (2018). Executive functions development in early years. In S. Sheridan & N. Veraksa (Eds.), *Vygotsky's theory in preschool education and early childhood research: Russian and Western views.* Oxford, UK: Taylor & Francis/Routledge.
3. Vasilyeva, M., Waterfall, H., & Gomez, L. (2011). Using priming procedures with children. In E. Hoff (Ed.), *The guide to research methods in child language*. Oxford, UK: Blackwell Publishing.
4. Vasilyeva, M., & Waterfall, H. (2011). Variability in language development: Relation to SES and environmental input. In S. Neuman and D. Dickinson (Eds.), *Handbook of Early Literacy Research*, pp. 36-48. New York, NY: Guilford Press.
5. Vasilyeva, M., & Lourenco, S. F. (2010). Spatial development. In W. F. Overton (Ed.), Cognition, biology, and methods across the life-span. *Volume 1 of the Handbook of life-span development*, pp. 720-753. Hoboken, NJ: Wiley.
6. Huttenlocher, J., Lourenco, S. F., & Vasilyeva, M. (2010). Perspectives on spatial development. In K. S. Mix, L. B. Smith, & M. Gasser (Eds.), *The spatial foundations of cognition and language*, pp. 87-101. New York, NY: Oxford University Press.
7. Vasilyeva, M. (2005). Spatial cognition and perception. *Encyclopedia of Social Measurement, Vol. 3*, pp. 591-597. San Diego, CA: Elsevier Inc.

Submitted Manuscripts:

Laski, E., Ermakova, A., Vasilyeva, M., & Halloran, K. Changing strategies: Promoting the use of a decomposition strategy in arithmetic. Revision submitted in July 2021

Vasilyeva, M., Laski, E., Veraksa, A., & Bukhalenkova, D. What children's number naming errors tell us about early understanding of multidigit numbers. Paper submitted to Journal of Experimental Child Psychology in August2021

Tyumeneva, Y., & Vasilyeva, M. Provide students with a solution principle or encourage them to induce it? Exploring effects of instruction type on transfer in problem solving.

Vasilyeva, M., Coughlan, M., Bukhalenkova, D., & Veraksa, A. Cognitive predictors of symbolic number skills in preschoolers: Interaction between executive function and intelligence.

<u>Selected Conference Presentations, Invited Talks</u>

Vasilyeva, M., Coughlan, M., Crawford, L., Bukhalenkova, D., & Veraksa, A. (2019). Cognitive predictors of symbolic number skills in preschoolers: Interaction between executive functions and intelligence. Paper presented at the annual meeting of the *AERA*, Toronto, Canada.

Shen, C., Miele, D., Vasilyeva, M., Li, Q., & Zhou, J. (2019). The role of math ability

and effort mindsets in predicting math persistence in two countries. Paper presented at the annual meeting of the *AERA*, Toronto, Canada.

Vasilyeva, M., Laski, E., Veraksa, A., & Bukhalenkova, D. (2019). Developing numerical magnitude knowledge through measurement activities. Paper presented at the biennial meeting of the *SRCD*, Baltimore, USA.

Vasilyeva, M., Laski, E., Veraksa, A., & Bukhalenkova, D. (2019). Specificity of the relation between parental beliefs, home activities, and children's math skills. Paper presented at the biennial meeting of the *SRCD*, Baltimore, USA.

Vasilyeva, M., Laski, E., Veraksa, A., & Bukhalenkova, D. (2019). Using measurement instruction to improve number sense in kindergarten students. Paper presented at the International Conference, *Psychology in Math Education*, Moscow, Russia.

Veraksa, A., Vasilyeva, M., & Bukhalenkova, D. (2019). Development of symbolic number skills in preschool. Paper presented at the International Conference, *Psychology in Math Education*, Moscow, Russia.

Vasilyeva, M. (2017). The relation of parents' education and beliefs to children's school readiness. Paper presented at the VI International Conference on *Early Childhood Care and Education*, Moscow, Russia.

Vasilyeva, M., Ivanova, A., & Kardanova, E. (2016). Development of reading skills in pre-school students: Role of parental investments Paper presented at the Annual *European Conference of the Association for Educational Assessment*. Limassol, Cyprus.

Vasilyeva, M. (2016). Emergence of questions: commonalities and differences across children. Talk at the Radcliffe Institute for Advanced Study, Harvard University, Cambridge, MA.

Schiffman, J., Laski, E. V., & Vasilyeva, M. (2015). What do strategies have to do with it? Examining the income gap in early addition. Poster presented at the Biennial Meeting of the *Cognitive Development Society*. Columbus, Ohio.

Vasilyeva, M., & Laski, E. (2015). Using strategies as a crystal ball: Which strategies predict mathematics achievement? Symposium organized at the 2015 biennial meeting of the *SRCD*, Philadelphia, USA.

Vasilyeva, M., & Laski, E. (2015). Strategy choice mediates cross-national differences on complex arithmetic tasks. Paper presented at the 2015 biennial meeting of the *SRCD*, Philadelphia, USA.

Vasilyeva, M., Laski, E., & Ermakova, A. (2015). Cross-national differences in number representations. Poster presented at the 2015 biennial meeting of the *SRCD*, Philadelphia, USA.

Vasilyeva, M. (2013). Diagnostic toolkit for the assessment of procedural and conceptual skills in primary school students. Paper presented at the *World Bank Symposium* "Assessment for Global Learning," Washington, DC, USA.

Vasilyeva, M. (2012). Gender differences in STEM achievement and the role of spatial skills. Paper presented at the *Learning and Brain* conference sponsored by the Mind, Brain & Education Program, Harvard Graduate School of Education, Boston, USA.

Vasilyeva, M., & Gomez, L. (2011). Interaction between syntactic and semantic processes in children's sentence production. Paper presented at the 2011 biennial meeting of the *SRCD*, Montreal, Canada.

Ganley, C., & Vasilyeva, M. (2011). Relation between gender, anxiety and math performance: A developmental perspective. Paper presented at the 2011 biennial meeting of the *SRCD*, Montreal, Canada.

Solomon, T., Vasilyeva, M., Levine, S., & Huttenlocher, J. (2011). Abilities and limitations in elementary school children's understanding of measurement. Poster presented at the 2011 biennial meeting of the *SRCD*, Montreal, Canada.

Huttenlocher, J., Waterfall, H., Vasilyeva, M., Vevea, J., Hedges, L. (2011). Sources of language growth. Paper presented at the 2011 biennial meeting of the *SRCD*, Montreal, Canada.

Vasilyeva, M., Waterfall, H., & Gamez, P. (2009). Cross-linguistic structural priming in bilingual children. Paper presented at the 2009 biennial meeting of the *SRCD*, Denver, CO.

Casey, B., Vasilyeva, M., & Dearing, E. (2008). Spatial and numerical predictors of measurement performance in boys and girls from lower- and higher-income communities. Paper presented at the *Conference on Research and Training in Spatial Intelligence*, Chicago, IL.

Vasilyeva, M., & Casey, B. (2007). Gender differences in measurement skills in low-income students. Poster presented at the Joint Annual Meeting of the *National Science Foundation*, Washington, DC.

Vasilyeva, M., & Casey, B. (2007). Measurement skills in elementary school students: Exploring the nature of individual differences. Paper presented at the 2007 biennial meeting of the *SRCD*, Boston, MA.

Bowers, E., & Vasilyeva, M. (2007). Language development of native and non-native English speakers in multilingual classrooms. Poster presented at the 2007 biennial meeting of the *SRCD*, Boston, MA.

Bowers, E., & Vasilyeva, M. (2007). Language growth in students attending multilingual preschools. Poster presented the 2007 meetings of the *AERA*, Chicago, IL.

Vasilyeva, M. (2005). Early ability to use geometric information on mapping tasks. Paper presented at the biennial meeting of the *SRCD*, Atlanta, GA.

Vasilyeva, M., & Elston, H. (2005). Examining the effect of specific features of language input in a preschool setting. Paper presented at the biennial meeting of the *SRCD*, Atlanta, GA.

Levine, S., Vasilyeva, M., Lourenco, S., Newcombe, N., & Huttenlocher, J. (2005). The sex difference in spatial skill: sensitivity to socioeconomic status. Poster presented at the biennial meeting of the *SRCD*, Atlanta, GA.

Vasilyeva, M. (2003). The development of scaling in two-dimensional space. Poster presented at the biennial meeting of the *SRCD*, Tampa, FL.

Shimpi, P., & Vasilyeva, M. (2003). Syntactic priming in young children. Poster presented at the biennial meeting of the *SRCD*, Tampa, FL.

Vasilyeva, M. (2002). Difficulty of dealing with conflicting spatial information in preschoolers. Paper presented at the annual meeting of the *Midwestern Psychological Association*, Chicago, IL.

Vasilyeva, M. (2001). Development of understanding of the relational correspondence between spaces. Poster presented at the biennial meeting of the *SRCD*, Minneapolis, MN.

Ad Hoc Manuscript Review

Reviewed manuscripts for: *British Journal of Development Psychology, Child Development, Cognition, Cognitive Psychology, Developmental Psychology, Early Childhood Research Quarterly, Early Education and Development, First Language, Infancy, Journal of Child Language, Journal of Educational Psychology, Journal of*

Experimental Child Psychology, Language Learning and Development, Learning and Individual Differences, Merrill-Palmer Quarterly, PLOS One, Psychological Science, Psychological Bulletin and Review.

Grant Review Panels, Advisory Boards, Editorial Boards

Member of Advisory Board (2017). National Science Foundation grant #1561214. Collaborative proposal: *Foundations of Quantitative Thought: Number, Space, Time, and Probability*

Member of Review Panel (2016). Austrian Science Foundation, Humanities and Social Sciences section, *Interregional Project Networks*

Member of Review Panel (2007, 2008, 2010). National Science Foundation, panel on *Research on Gender in Science and Engineering*

Member of Editorial Board (2018). Journal *Early Child Research Quarterly*.

Membership in Professional Societies

Society for Research in Child Development
Cognitive Development Society