Kristin Michod Gagnier, Ph.D.

Senior Research Scientist

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Dr. Kristin Gagnier's scholarship and professional activities are devoted to advancing the science of education, with a particular focus on Science, Technology, Engineering, and Mathematics (STEM). She partners with scientists, educational institutions, and professional and community organizations to connect science, practice, and policy to maximize educational outcomes for students and teachers across diverse contexts, spanning formal and informal educational environments. She has extensive experience in research-practice partnerships where she works with educational stakeholders to identify learning needs, develop usable, feasible, and scalable interventions to address those needs, and evaluate their effectiveness for improving student and teacher outcomes.

Experience

Senior Research Scientist, AnLar (Arlington, VA) 2021–present

Plans and executes large-scale, educational program development and evaluation research projects

- Directs the development and evaluation of the SPACE-IT program to support teaching and learning in elementary science. Funded by the Institute of Education Sciences, SPACE-IT is a novel professional development program that utilizes workshops and coaching to facilitate 5th grade teachers' effective science instruction and students' spatial thinking skills, interest, and science achievement.
- Directs an Institute of Education Sciences-funded project to develop and pilot test an evidence-informed science curriculum for third grade. Using an iterative development process involving focus groups with teachers, measures of implementation fidelity and curriculum usability and feasibility, this project will refine and examine the effectiveness of the curriculum on student interest and achievement in science.
- Co-Directs the Experiencing STEM FirstHand Program. This program, funded by the Department of Education's Education, Innovation, and Research (EIR) program, FirstHand is a novel approach to bolstering scientific identify, interest, and knowledge in middle school underrepresented students.
- Engages with educational stakeholders to understand their STEM education challenges and works collaboratively with them to develop innovative solutions and evaluate their effectiveness
- Leads interdisciplinary teams to develop and improve programs, conduct STEM education research, provide technical assistance to educational clients
- Works collaboratively with states, districts, postsecondary institutions, and community organizations to evaluate novel approaches for improving teaching and learning in schools
- Provides thought leadership to guide AnLar's dissemination of research in

professional, practitioner, and research settings

- Leads and supports business development and proposals for new projects for the US Department of Education, other government agencies, and foundations
- Provides quality control on products and deliverables and project management of teams, including supervising and mentoring junior researchers and staff.

Director of Dissemination, Translation, and Education, Science of Learning Institute, Johns Hopkins University (Baltimore, MD) 2019–2021

Oversaw the Institute's strategic direction and operations related to research, partnerships, and programming

- Identified growth opportunities and secured funding to support new initiatives
- Developed and implemented the Institute's strategic vision for dissemination, translation, and education portfolio
- Assessed and guided the Institute's progress towards goals
- Oversaw financial operations of the Institute, ensuring all products are accomplished within the allocated budget
- Managed personnel and conduct quality reviews to ensure all products are timely and of high-quality
- Authored peer-reviewed publications, technical reports, and annual reports for scientific, practitioner, and funder audiences

Assistant Director of Dissemination, Translation, and Education, Science of Learning Institute, Johns Hopkins University (Baltimore, MD)
2017–2019

Oversaw the Institute's mission of connecting science to practice through the development of strategic educational partnerships.

- Cultivated and maintained strategic partnerships with schools, museums, and government and community originations to advance research on learning and translate science of learning research into evidence-informed programs and resources
- Developed and executed innovative educational programming, and presentations to meet stakeholder needs and evaluate their impact on learning goals
- Conducted translational research and program evaluation projects with community partners
- Produced peer-reviewed papers, technical reports, and other scholarly dissemination products
- Consulted with education and community leaders on research and its relevance to their practice and needs

Outreach and Evaluation Specialist, Science of Learning Institute, Johns Hopkins University (Baltimore, MD)
2015–2017

Advance the Institute's dissemination and translation portfolio to academic and community audiences

- Secured over 1.7 million dollars in federal grant and other external funding to support translational science research

- Disseminated research into targeted messaging to help stakeholders understand relevance of research to improving learning
- Translated research into evidence-informed practices designed to meet the needs of educators in formal and non-formal learning settings
- Conducted evaluation research to assess the impact of applications on learning and behavior
- Executed events for scientific and non-scientific audiences to facilitate interdisciplinary collaborations among researchers and connections between research and practice

Postdoctoral Research Fellow, Spatial Intelligence and Learning Center, Temple University (Philadelphia, PA)

2011-2015

Postdoctoral Research Fellow

- Planned, designed, and executed science of learning research
- Authored professional papers, reports, and presentations to communicate findings to scientific audiences
- Partnered with community organizations to developed professional development workshops and training seminars for educators and parents
- Provided support such as grant writing, conference and symposia planning, and mentorship

Education

- University of Delaware (Newark, DE)
  Ph.D., Cognitive Psychology
- University of Arizona (Tucson, AZ)
  B.S., Psychology and Biology

Funding

Co-Principal Investigator, *Experiencing STEM FirstHand: The Impact of a Novel Approach to Bolstering Scientific Identity, Interest, and Knowledge in Low-Income Middle School Students of Color*. Funder: Office of Elementary and Secondary Education, Education, Innovation, and Research (EIR), 2022-2026. Total Award: $3,999,782.

Principal Investigator, *Making Space in Science Instruction: Developing the SPACE-IT Program to Foster Students' Spatial Thinking Skills and Science Achievement*. Funder: Institute of Education Sciences, 2021-2025. Total Award: $ 1,998,794.

Project Director, *A Formative Evaluation of an Online Professional Development Platform to Promote Teachers' use of Research-informed Practices*. Funder: Chan-Zuckerberg Foundation. Total Award: $45,694.50.

Co-Principal Investigator, *Improving Early Child Development Through the Integration of Safe Play and Song-based Learning in Villa El Salvador, Peru: A Program Development Project*. Funder: Johns Hopkins University Discovery Award, 2018 – 2019. Total award: $97,295.

Co-Investigator, *Child Development Through Safe Play and Song-based Learning: Exploring Early Learning Contexts in Villa El Salvador, Peru*. Funder: 2018-2019. The Alliance for a Healthier World, 2018-2019. Total Award: $23,825.

Principal Investigator, *Developing a Spatially-enhanced Elementary Curriculum and Teacher Training Series to Improve Science Achievement*. Funder: Institute of Education Sciences, 2017-2021. Total Award: $1,398,481.

Co-Project Director, *Formative Program Evaluation of the Science of Teaching & School Leadership Academy*. Funder: E.E. Ford Foundation, (PI: The Center for Transformative Teaching and Learning), 2017-2020. Total Award: $114,234.

Project Director, *The Science of Learning: Exploring Goals, Methods, and Educational Practice (Teacher Professional Development Workshop)*. Funder: E.E. Ford Foundation, (PI: The Center for Transformative Teaching and Learning), 2017-2019. Total Award: $38,316.

Co-Principal Investigator. *Playing with Space: An Early Childhood Teacher Training Workshop to Enhance Spatial Thinking for Future STEM Success*. (Co-PI: Port Discovery). Funder: Annie E. Casey Foundation, 2018- 2019. Total Award: $10,000.

Project Director, *Developing Science-informed Content for the "All the Way to K" Early Language and Literacy program*. Funder: W.K. Kellogg Foundation, (PI: Children's Museum of Manhattan), 2017-2018. Total Award: $25,000.

Consultant, *Bilingualism*. Funder: Nanyang Technological University (PI: Barbara Landau). 2016 – 2018. Total Award: $333,843.

Principal Investigator, *Inter-Science of Learning Centers Conference*. Funder: National Science Foundation Grant, (Co-PI: Nora Newcombe), 2013-2015. Total Award: $114,962.

Core Researcher, Developing and Testing Materials to *Improve Spatial Skills in Upper Division Geoscience Courses*. Funder: National Science Foundation Grant, Transforming Undergraduate Education Program. (PI: Carol Ormand), 2011-2014. Total award: $174,800.

University of Delaware Dissertation Fellowship, 2009-2010.

University of Delaware, Department of Psychology Research Fellowship, 2005-2006.

Publications

Michod, R.E., Davison, D. R., Sanders, H., Hoskinson, J. S. and Gagnier, K.M. (In Press). Translating research on evolutionary transitions into the teaching of biological complexity. *Evolution*.

Gagnier, K. M., Okawa, A., and Jones-Manson, S. (2022). Designing and Implementing Social Emotional Learning Programs to Promote Equity. White paper produced by AnLar and the Office of Elementary and Secondary Education; Education, Innovation, and Research Program (EIR).

Gagnier, K. M., Holochwost, S. J., & Fisher, K. R. (2021). Spatial Thinking in Science, Technology, Engineering, and Mathematics: Elementary Teachers' Beliefs, Perceptions, and Self-Efficacy. *Journal of Research in Science Teaching*. 1–32. https://doi.org/10.1002/tea.21722

Rothstein, J. D., Buckland, A. J., Gagnier, K., Ochoa, M., Allen-Valley, A., Jivapong, B., ... & Fisher, K. R. (In Press). Assessing the play and learning environments of children under two years in peri-urban Lima, Peru: A formative research study. *BMC public health*.

Gagnier, K. M., & Fisher, K. R. (2020). Unpacking the Black Box of Translation: A framework for infusing spatial thinking into curricula. *Cognitive Research: Principles and Implications*, 5(1), 1-19.

Intraub, H., & Gagnier, K. M. (2018). Expanding Space: Does Imagination affect Boundary Extension for Visual Scenes? In T. L. Hubbard (Ed.). *Spatial Biases in Perception and Cognition*. Cambridge, UK: Cambridge University Press.

Davatzes. A., Gagnier. K.M., Resnick, I., & Shipley, T. F. A Cycle of Prediction, Comparison, and Feedback Supports Spatial Learning in Geoscience. (2018). *EoS, Earth, Space, and Science News*.

Holochwost, S. J., Wolf, D. P., Fisher, K. R., O'Grady, K., & Gagnier, K. M. (2018). The Arts and Socioemotional Development: Evaluating a New Mandate for Arts Education. In *Arts Evaluation and Assessment* (pp. 147-180). Palgrave Macmillan, Cham.

Gagnier, K. M., Atit, K., Ormand, C. J., & Shipley, T. F. (2017). Comprehending diagrams: Sketching to support spatial reasoning. *Topics in Cognitive Science*, 1-19. DOI: 10.1111/tops.12233 5

Ormand, C. J., Shipley, T. F., Tikoff, B., Dutrow, B., Goodwin, L., Hickson, T. A., Atit, K., Gagnier, K. M., & Resnick, I. (2017). The spatial thinking workbook: A research-validated spatial skills curriculum for geology majors. Journal of Geoscience Education: Synthesizing Results and Defining Future Directions of Geoscience Education Research, 65(4), 423-434.

Gagnier, K.M., & Shipley, T. F. (2016). Visual completion from 2D cross-sections: Implications for visual theory and STEM education and practice. *Cognitive Research: Principles and Implications*, 1(1), 1-18. DOI: 10.1186/s41235-016-0010-y

Gagnier, K.M., Atit, K. & Shipley, T.F. (2016). Understanding and Improving Reasoning of Spatial Representations: Implications for Education. In David J. Cowen (Ed.), *STEM and GIS in Higher Education*. ESRI Press.

Gagnier, K.M., Shipley, T., F., Tikoff, B., Ormand, C.J., Atit, K., Resnick, I., & Garnier, B. (2016). Training spatial skills in geosciences: A review of tools and tests. AAPG Memoir: 3-D Structural Interpretation: Earth, Mind, and Machine, 111, 7-23. DOI: 10.1306/13561983M1113668

Intraub, H., Morelli, F., & Gagnier, K. M. (2015). Visual, haptic and bimodal scene perception: Evidence for a unitary representation. *Cognition*, 138, 132-147.

Atit, K. Gagnier, K.M., & Shipley, T.F. (2015). Student gestures aid penetrative thinking. *Journal of Geoscience Education*, 63(1), 66-72. DOI: http://dx.doi.org/10.5408/14-008.1

Gagnier, K., M., Dickinson, C. A., & Intraub, H. (2013). Fixating picture boundaries does not eliminate boundary extension: Implications for scene representation. *Quarterly Journal of Experimental Psychology*. DOI: 10.1080/17470218.2013.775595

Gagnier, K., & Shipley, T. F. (2013). Completion in the wild: Perception of 3D forms from cross-sections. *Proceedings of the 35th Annual Meeting of the Cognitive Science Society*. Berlin, Germany: Cognitive Science Society.

Gagnier, K., M & Intraub, H. (2012). When less is more: Line-drawings lead to greater boundary extension than color photographs. *Visual Cognition*, 20, 815-824. DOI: 10.1080/13506285.2012.703705

Gagnier, K., M., Intraub, H., Oliva, A. & Wolfe, J.M (2011). Why does vantage point affect boundary extension? *Visual Cognition*, 19, 234-257. DOI: 10.1080/13506285.2010.520680

Wolfe, J. M., Horowitz, T. S., Palmer, E. M., Michod, K. O., & VanWert, M. J. (2010). Getting in to guided search. In V. Coltheart (Ed.), *Tutorials in Visual Cognition*. (pp. 93-120). Hove, Sussex: Psychology Press.

Michod, K.O., & Intraub H. (2009). Boundary Extension. *Scholarpedia*, 4(2):3324.

Wolfe, J.M., Horowitz, T.S., & Michod, K.O. (2007). Is visual attention required for robust picture memory? *Vision Research*, 47, 955-964. DOI: 10.1016/j.visres.2006.11.025

Michod, K.O., & Intraub H. (2007). Conceptual masking: Is concept the key or does layout play a role? In Castelhano, M., Franconeri, S., Curby, K., & Shomstein, S. Object Perception, Attention, and Memory.

Technical Reports

Gagnier, K.,M. Vodicka, D., and Quidwai, S. (2021). Prioritize Building Relationships with Your Students: What Science Says. Technical Report Produced for the Global Science of Learning Education Network

Gagnier, K.,M. Vodicka, D., and Quidwai, S. (2021). Prioritize Building Relationships with Your Students: What Science Says. Technical Report Produced for the Global Science of Learning Education Network https://tdlc.ucsd.edu/GSLN/Library/Building_Student_Relationships.pdf

Gagnier, K. M (2020). The Science of Building Relationships and Implications for Education. Technical Report produced by the Science of Learning Institute for the Global Science of Learning Network.

Gagnier, K. M (2020). Neuroteach Global Content Analysis: Content Review to Inform Future Refinement. Technical Report produced by the Science of Learning Institute for the Center for Transformative Teaching and Learning.

Gagnier, K. M. (2020). Strategies to Support Learning and Retention. Technical Report produced by the Science of Learning Institute for the Temasek Foundation.

Gagnier, K. M., Holochwost, S. J., Unlutabak., Burcu., & Fisher, K. R. (2019). Summative Evaluation of the Science of Teaching and School Leadership Academy Year 3. Technical Report produced by the Science of Learning Institute for the Center for Transformative Teaching and Learning.

Gagnier, K. M., Holochwost, S. J., & Fisher, K. R. (2018). Formative Evaluation of the Science of Teaching and School Leadership Academy Year 2. Technical Report produced by the Science of Learning Institute for the Center for Transformative Teaching and Learning.

Gagnier, K., Fisher, K., & Holochwost, S. (2018). Informing the development of "All the Way to K" Program: Understanding caregivers' knowledge, perceptions, and practices in language and literacy development in young children. Technical report for Children's Museum of Manhattan. New York, New York.

Landau, B., Fisher, K. R., Gagnier, K. M. & Magsamen, S. (2018). Unpacking the "Black Box." The Science of Learning Institute 5 Year Anniversary. Technical Report produced by the Science of Learning Institute.

Gagnier, K. M., Holochwost, S. J., & Fisher, K. R. (2017). Language and Literacy in Baltimore City. Technical Report produced by the Science of Learning Institute for the Baltimore Health Department and Family League of Baltimore.

Gagnier, K., & Fisher, K. (2017). Spatial thinking: A missing building block in STEM education. Technical Report produced by the Science of Learning Institute for the Johns Hopkins University Institute for Education Policy.

Gagnier, K. M., Fisher, K. R., & Holochwost, S. J. (2017). The Road to Reading. Technical Report produced by the Science of Learning Institute for the Children's Museum of Manhattan and Port Discovery Children's Museum.

Gagnier, K. M., Holochwost, S. J., & Fisher, K. R. (2017). Formative Evaluation of the Science of Teaching and School Leadership Academy Year 1. Technical Report produced by the Science of Learning Institute for the Center for Transformative Teaching and Learning.

Gagnier, K. M., Landau, B., & Fisher, K. R. (2017). Language Learning in Early Childhood: A Brief Summary. Technical report produced by the Science of Learning Institute for the Children's Museum of Manhattan.

Gagnier, K., M., and Fisher, K., R. (2016). Spatial Thinking: A Missing Building Block in STEM Education. Johns Hopkins University Institute for Education Policy Commentary.

Educational Outreach, Workshops, and Invited Presentations Reports

Gagnier, K.,M. Vodicka, D., and Quidwai, S. (2021). Prioritize Building Relationships with Your Students: What Science Says. Getting Smart
https://www.gettingsmart.com/2021/05/prioritize-building-relationships-with-your-students-what-science-says/

Gagnier, K. (2021, February). The Science of Learning: Evidence-informed Teaching Strategies to Support Learning. The Teaching Academy, Johns Hopkins University, Baltimore, MD. 7

Gagnier, K. (2021, January). The Building Blocks of Scientific and Mathematical Thinking: Infusing Spatial Thinking into Educational Practice. University of Limerick. Limerick, Ireland.

Gagnier, K. (2020, October). Connecting Research and Practice to Advance Science and Society: The Case of Spatial Thinking. Temple University. Philadelphia, PA.

Gagnier, K. (2019, October). The Science of Learning and Educational Practice. Baltimore Friends School. Baltimore, MD.

Gagnier, K. &, Fisher, K. (2019, June). Mind, Brain, and Education and Action Research in Your School: Spatialization, STEM, and Beyond. Breck School. Minneapolis, MN

Fisher, K. & Gagnier, K. (2019, April). Action Research: Exploring research-informed innovations in your classroom. Breck School. Minneapolis, MN

Gagnier, K. & Fisher, K. (2019, April). Science of learning & action research. Breck School. Minneapolis, MN.

Fisher, K. & Gagnier, K. (2019, April). Translating the science of learning to classroom practices. Center for Educational Resources. Johns Hopkins University. Baltimore, MD.

Gagnier, K., Fisher, K., & Grimm, D. (2019, March). Say what? Crafting a dissemination plan to communicate science to public audiences. Workshop to be presented biennial Society for Research in Child Development Conference. Baltimore, MD.

Fisher, K. & Gagnier, K. (2019, March). Playing with space in early learning classrooms: Laying the foundation for future STEM success. Head Start Teacher Workshop. Baltimore, MD.

Gagnier, K. & Fisher, K. (2019, March). Playing with space in early learning classrooms: Laying the foundation for future STEM success. Head Start Trainer Professional Development Workshop. Baltimore, MD.

Fisher, K. & Gagnier, K. (2018, August). Playing with space in early learning classrooms: Laying the foundation for future STEM success. Head Start Teacher Workshop. Baltimore, MD.

Gagnier, K. & Fisher, K. (2018, August). Playing with space in early learning classrooms: Laying the foundation for future STEM success. Head Start Trainer Professional Development Workshop. Baltimore, MD.

Fisher, K. & Gagnier, K. (2018, July). Through the pipeline: Examining the connection between research and practice. Science of Teaching and School Leadership Academy. Center for Transformative Teaching and Learning. St. Andrew's Episcopal School.

Gagnier, K. & Levine, R. (2018, April). Science of Learning in Your Research. Professional Development Workshop for Johns Hopkins Medical School Faculty. Institute for Excellence in Education, Johns Hopkins University. Baltimore, MD.
Gagnier, K. & Fisher, K. (2018, February). Exploring applications of the science of learning to the university classroom. Center for Educational Resources. Johns Hopkins University.

Gagnier, K., Fisher, K., & Rosswog, S. (2018, November). Playing with space: Laying the building blocks for STEM success. Port Discovery Educational Staff Workshop. Baltimore, MD.

Gagnier, K. & Kelleher, I. (2018, January). The Science of Learning and Educational Practice. Prince George's Community College Faculty Fellows Workshop, Largo, MD.

Gagnier, K. & Kelleher, I. (2017, April). The Science of Learning and Application for Educational Practice. Prince George's Community College Faculty Fellows Workshop, Largo, MD.

Gagnier, K., & Fisher, K. (2017, February). Developing a dissemination plan. In K. Fisher (Organizer), Communicating science to non-scientific audiences. Workshop presented at the annual meeting of the American Association for the Advancement of Science, Boston MA.

Gagnier, K. & Fisher, K. (2017, January). The Building Blocks of Mathematical and Scientific Thinking. Professional Development Workshop for PreK and Kindergarten Teachers. Baltimore City Public Schools. Baltimore, MD.

Gagnier, K. & Fisher, K. (2016, November). Spatializing the Science Curriculum in Elementary School. Lesson plan development workshop. Holy Child School. Bethesda, MD.

Gagnier, K. & Fisher, K. (2016, October). Science of Learning: What do we know? Council of Chief State School Officers. 8

Gagnier, K. & Fisher, K. (2016, May). Science of Learning: What do we know? Alliance for Excellent Education, Baltimore, MD.

Gagnier, K. (2016, September). Smart Baby Panel Discussion. Nanyang Technological University, Singapore.

Gagnier, K. & Fisher, K. (2016, June). Exploring the early language and literacy learning needs in our community. Family Literacy Coalition. Baltimore City Health Department. Baltimore, MD.

Gagnier, K. & Fisher, K. (2016, May). Cognition and development. National Collaborative on Education and Health.

Gagnier, K. & Fisher, K. (2016, May). Language and literacy development in early childhood. Family Literacy Coalition.

Gagnier, K. (2016, April). Ideas Festival Panel Discussion. Nanyang Technological University, Singapore.

Gagnier, K. & Fisher, K. (2016, March). Exploring language development in infancy and early childhood. B'More for healthy babies Initiative.

Gagnier, K. (2016, October). Promoting an "I Can Do It!" Growth Mindset in Your Children. Severna Park Elementary School.

Gagnier, K. & Fisher, K. (2015, December). Exploring the early language and literacy development. Family Literacy Coalition. Baltimore City Health Department. Baltimore, MD.

Gagnier, K. & Fisher, K. (2015, December). Exploring the early language and literacy development. Family Literacy Coalition. Baltimore City Health Department. Baltimore, MD.

Gagnier, K. (2015, March). Spatial Thinking in STEM Education. Workshop for K-5 Science and Math Teachers, Franklin Institute, Philadelphia PA.

Gagnier, K. (2015, March). Playing for STEM. Workshop for PK-2 Teachers, Please Touch Museum, Philadelphia PA.

Gagnier, K. (2014, August). Brainiacs. Workshop for the General Public, Franklin Institute, Philadelphia PA.

Gagnier, K. (2013, May). Why did vision evolve? Workshop for the General Public, Franklin Institute, Philadelphia PA.

Conference Presentations

Gagnier, K. Henrick, E., Arce-Trigatti, P., Jackson, M. Supplee. L. and Holian, L. (2021). Evaluating the Health of Small Research-Practice Partnerships: What is Possible and Meaningful. Session organized for the annual meeting of the Society for Research in Educational Effectiveness, Arlington VA.

Gagnier, K. Holochwost, S., & Fisher K. R. (2021). Spatial Thinking in Science, Technology, Engineering, and Mathematics: Elementary Teachers' Beliefs, Perceptions, and Self-Efficacy. Paper presented at the annual meeting of the Society for Research in Educational Effectiveness, Arlington VA.

Gagnier, K. Holochwost, S., Nelson, A. S., & Fisher K. R. (2020). Science Self-Concept and Self-Efficacy: Their Structure and Relation to 3rd Grade Academic Achievement. Presentation accepted to the Society for Research on Educational Effectiveness. Arlington, VA.

Gagnier, K. Whitman, G., & Fisher K. R. (2019). MBE and Teacher Professional Learning: Measuring the Impact. Presentation at the annual Learning and the Brain Conference. Boston, MA.

Buckland, A., Rosthstein, J., Fisher, K., Gagnier, K., Ochoa, M., Cabrera, L., & Leontsini, E. (2019). Formative research for a play- and music-based early child development intervention in peri-urban Lima, Peru: A strengths and needs assessment. Presentation at the annual American Public Health Association Conference. Philadelphia, PA.

Gagnier, K., Fisher, K. R., Unlutabak, B., & Holochwost, S. (2019, March). Bridging the translation gap: An interdisciplinary approach to infusing spatial thinking into 3rd grade science. In K. Gagnier & K. Fisher (Chairs), Exploring new translational science approaches to incorporate spatial thinking into elementary science. Exchange symposium accepted at the biennial Society for Research in Child Development Conference. Baltimore, MD.

Gagnier, K., Fisher, K.R., & Grimm, D. (2019, March). Say what? Crafting a dissemination plan to communicate science to public audiences. Workshop presented at the biennial Society for Research in Child Development Conference. Baltimore, MD.

Gagnier, K.M., Holochwost, S. J., Lewis, S., & Fisher, K. R. (2017, April). Developing a measure of caregiver knowledge, attitudes, and behaviors around language and literacy development for use with diverse populations. Paper presented at the biennial meeting of the Society for Research in Child Development, Austin TX.

Gagnier, K., Newcombe, N., Zaslow M., & Schwartz, M. (2017, April). In K. Fisher (Organizer), Catalyzing a paradigm shift: Research translation for advancing science and society. Conversational roundtable to be presented at the biennial Society for Research in Child Development conference. Austin, TX.

Gagnier, K.M. (2017). Developing a Dissemination Plan. Paper presented at the annual meeting of the American Association for the Advancement of Science, Boston MA.

Holochwost, S. J., Wolf, D. P., Fisher, K. R., Gagnier, K. M. (2016, November). Alternatives to randomized control designs in program evaluation. Paper presented at the annual meeting of the American Evaluation Association, Atlanta, GA.

Ormand, C.J., Shipley, T. F., Dutrow, B., Goodwin, L., Hickson, T.A., Tikoff, B., Atit, K., Gagnier, K.M., and Resnick, I. Resnick (2016). The Spatial Thinking Workbook: Developing students' spatial thinking skills in upper-level undergraduate geology courses through curricular materials based on cognitive science research. Poster to be presented at the Geological Society of America annual meeting, Denver, CO.

Gagnier, K. M., Fisher, K. R. & Holochwost, S. J. (2016). Translating science of learning research into practice: A model for scientist-practitioner partnerships to develop evidence-based practices for the community. Poster presented at Bringing Cognitive Science Research to the Classroom, Washington DC.

Gagnier, K. M. (2015). Spatial thinking in the Geoscience. Lessons from an Interdisciplinary collaboration between cognitive scientists and geoscientists. Talk presented at the annual meeting of the Geological Society of America, Baltimore MD.

Shipley, T. F. Atit, K., Weisberg, S. M., and Gagnier, K., M. (2015). Challenges to reasoning and learning about 3D spatial relations: Bridging the gap between lab-research and field-based education. Talk presented at the annual meeting of the Geological Society of America, Baltimore MD.

Ormand, C.J., Shipley, T. F., Dutrow, B., Goodwin, L., Hickson, T.A., Tikoff, B., Atit, K., Gagnier, K.M., and Resnick, I. Resnick (2015). Teaching Spatial Thinking in Mineralogy, Structural Geology, and Sedimentology & Stratigraphy: Tools and Strategies from Cognitive Science Research: Earth Educators' Rendezvous (Boulder, CO).

Gagnier, K.M., Atit, K., Ormand, C., & *Shipley, T., F. (2015). Using sketching to support students in developing rich 3D representations from STEM diagrams. Talk presented at the conference on Diagrams as Vehicles of Scientific Reasoning, Pittsburg, PA.

Gagnier, K.M. (2015). Spatial Thinking in Science: Lessons from an Interdisciplinary Collaboration between Cognitive Scientists and Geoscientists. Talk presented at the Eastern Psychology Society Conference, Philadelphia, PA.

Ormand, C.J., Shipley, T.F., Dutrow, B., Goodwin, L., Hickson, T., Tikoff, B., Atit, K., Gagnier, K.M., & Resnick, I. (2015). Teaching Spatial Thinking in Undergraduate Geology Courses Using Tools and Strategies from Cognitive Science Research. Talk presented at the annual meeting of the American Geophysical Union, San Francisco, CA.

Ormand, C.J., Shipley, T.F., Tikoff, B., Dutrow, B., Goodwin, L., Hickson, T., Atit, K., Gagnier, K.M., & Resnick, I. (2014). Transforming Spatial Reasoning Skills in the Upper-Level Undergraduate Geoscience Classroom Through Curricular Materials Informed by Cognitive Science Research. Talk presented at the annual meeting of the American Geophysical Union, San Francisco, CA.

Gagnier, K.M., Atit, K., Ormand, C., & Shipley, T., F. (2014). Comprehending diagrams: Sketching to support spatial reasoning from diagrams. Poster to be presented at the International Mind Brain and Education Society, Fort Worth, TX.

Gagnier, K.M., Atit, K., Ormand, C., & Shipley, T., F. (2014). Understanding 3D: Generating diagrams from 3D models improves diagrammatic reasoning. Talk presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.

Gagnier, K. M., & Shipley, T.F. (2013). Biases in the perception of 3D forms from 2D cross-Sectional views. Poster presented at the annual meeting of the Psychonomic Society, Toronto, CA.

Ormand, C.J., Shipley, T.F., Tikoff, B., Manduca, C., Dutrow, B., Goodwin, L., Hickson, T., Atit, K., Gagnier, K.M., & Resnick, I. (2013). Improving spatial visualization skills in the undergraduate geoscience classroom through 10 interventions based on cognitive science research. Poster presented at Geological Society of America annual conference, Denver, CO.

Gagnier, K.M., & Shipley, T.F. (2013). Completion in the wild: perception of 3D forms from 2D cross-sections. Poster presented at the Cognitive Science Society, Berlin, Germany.

Ormand, C.J., Shipley, T.F., Tikoff, B., Manduca, C., Dutrow, B., Goodwin, L., Hickson, T., Atit, K., Gagnier, K.M., & Resnick, I. (2013). Improving spatial reasoning skills in the undergraduate geoscience classroom through interventions based on cognitive science research. Talk presented at AAPG Hedberg Research Conference, Reno, NV.

Gagnier, K.M., Atit, K., Ormand, C., & Shipley, T., F. (2013). The inside story: Using alignment & sketching to help students make inferences about diagrams. Poster presented at Improving Middle School Science Instruction Using Cognition Science, Washington DC.

Gagnier, K.M., Atit, K., Ormand, C., & Shipley, T., F. (2012). Improving penetrative thinking via progressive alignment and directed sketching. Talk presented at the annual meeting of the Geological Society of America, Charlotte, NC.

Gagnier, K.M., Boone, A., & Shipley, T., F. (2012). Looking behavior and penetrative thinking: Examining the relationship between eye movements and performance. Poster presented at the annual meeting of the Geological Society of America, Charlotte, NC.

Gagnier, K. M. (2012). Gesture and sketching: Indicators of knowledge. Talk presented at the Association of Science and Technology Centers, Columbus, OH.

Gagnier, K. M., Atit, K., Shipley, T.F., Ormand, C., Manduca, C., & Tikoff, B. (2012). Improving penetrative thinking skills for geoscience education. Presented at the Inter-Science of Learning Centers conference, San Diego, CA.

Michod K.O. (2010). Remembering unseen space: Evidence that scene representation goes beyond the visual input. Talked presented at The International Conference on Spatial Cognition, Portland, OR. August 19, 2010.

Michod K.O., & Intraub, H. (2009). Don't look! Fixating occluded objects distorts scene memory. Poster presented at the annual meeting of the Vision Sciences Society, Naples, FL.

Michod K.O., Dickinson, C.A., & Intraub, H. (2008). Multiple fixations do not lead to better spatial memory. Poster presented at the annual meeting of the Vision Sciences Society, Naples, FL.

Michod K.O., & Intraub, H. (2007). Conceptual Masking: Is concept the key or does layout play a role? Talk presented at the annual Object Perception, Attention and Memory meeting, Long Beach, CA.

Michod K.O., & Intraub, H. (2007). Conceptual masking: Is it really all about the concept or does layout matter? Poster presented at the annual meeting of the Vision Sciences Society, Sarasota, FL.

Michod K.O., Horowitz, T.S., & Wolfe, J.M. (2005). Picture memory demands attention. Poster presented at the annual meeting of the Vision Sciences Society, Sarasota, FL.

Kunar, M.A., Michod, K.O., & Wolfe, J.M., (2005). When we use the context in contextual cueing: Evidence from multiple target locations. Poster presented at the annual meeting of the Vision Sciences Society, Sarasota, FL.

Michod, K.O., Wolfe, J.M, Horowitz, T.S., & Palmer E.M. (2004). Does guidance take time to develop during a visual search trial? Poster presented at the annual meeting of the Vision Sciences Society, Sarasota, FL.

Professional Societies

- Society for Research in Child Development (SRCD)
- American Association for the Advancement of Science (AAAS)
- Society for Research in Educational Effectiveness (SREE)
- American Psychological Association (APA)
- Association for Psychological Science
- NSF Spatial Intelligence Learning Center
- Cognitive Science Society
- American Education Research Association (AERA)
- National Association of Research in Science Teaching (NARST)
- International Mind Brain and Education Society (IMBES)
- Association of Science and Technology Centers (ASTC)
- Vision Science Society (VSS)
- Geological Society of America (GSA)

Service

- Global Science of Learning Network, Teacher Support Network Working Group, 2020
- Scientific Advisory, Baltimore Friends School, Baltimore, MD. 2020
- Head's Advisory Council, Baltimore Friends School, Baltimore, MD. 2019
- Design Team Advisor, Teaching and Learning Academy, St. Andrew's Episcopal School, Potomac, MD, 2016–2019
- Advisory Board, All the Way to K and Beyond, Children's Museum of Manhattan, New York, NY, 2017-2019
- Catalyzing a Paradigm Shift: Research Translation for Advancing Science and Society Roundtable Organizer, Society for Research in Child Development (SRCD), 2017
- Communicating Science to Non-scientific Audiences Workshop Chair, the American Association for the Advancement of Science (AAAS), 2017
- Consultant for Baltimore Grade Level Reading Campaign, 2016
- Science of Learning Workshop Chair, International Mind, Brain, and Education Society (IMBES) 2014
- Inter-Science of Learning Center (iSLC) Conference Chair, 2013
- Advisory Board, Creating Communities of Learners for Informal Cognitive Science Education, NSF Grant, Museum of Science, Boston, MA. Term: November 2011-2016
- SILC Coordinator for the Philadelphia Science Festival 2012, 2013, 2014
- Philadelphia Science Festival Educator Workshop developer, 2014, 2015