

AUDREY MOHAN, PH.D.
Senior Research Scientist, BSCS
512.296.3111 amohan@bscs.org

EDUCATION

Texas State University, San Marcos, TX Department of Geography; Major field: Geographic Education	Ph.D.	May 2009
<ul style="list-style-type: none">• Grosvenor Scholar, 2007-2008• Dissertation: <i>Teacher Efficacy in Geography: A Mixed Methods Study of Formal and Informal Teacher Education</i>		
Texas State University, San Marcos, TX College of Education, Post-baccalaureate Teacher Certification Special Education EC-12, History 8-12		February 2004
University of Texas, Austin, TX College of Education, Special Education	M.Ed.	December 2003
University of Notre Dame, South Bend, IN College of Arts and Letters, History, cum laude	B.A.	May 2002

PROFESSIONAL APPOINTMENTS

BSCS Science Learning <i>Senior Research Scientist</i>	2012- Present
Geography Education National Implementation Project (GENIP) Chair	2017-2022
University of Denver <i>Associate Director, Office of Teaching and Learning</i>	2012 - 2013
National Council for Geographic Education <i>Research Director, Geography Roadmap Project</i>	2011 - 2012
University of Texas – San Antonio <i>Assistant Professor, Department of Interdisciplinary Learning and Teaching</i>	2009 - 2011
National Geographic Society – Washington, D.C. <i>Grosvenor Scholar, Education and Children’s Programs</i>	2007 – 2008
Texas State University – San Marcos, TX <i>Graduate Research Assistant, Grosvenor Center for Geographic Education</i>	2005 - 2009
Burnet School District – Burnet, TX <i>Teacher, Special Education and Social Studies</i>	2002-2005

FUNDED WORK

Key personnel. (2025-2027). Revision to [confidential program]. Award Amount: \$3M. Funding Source: [confidential].

- Primary role is to lead the differentiation and accessibility aspects of the materials, serve as a reviewer, and serve as an expert consultant on units that include spatial thinking, maps, geography, and Earth science content.

Co-Principal Investigator. (2022-2026). *OpenSciEd Elementary*. Award Amount: \$7.5M to Northwestern University; Subaward to BSCS: \$2.5M. Funding Source: Carnegie Corporation of New York, Bill & Melinda Gates Foundation, Hewlett Foundation, & Schusterman Foundation.

- Collaborative curriculum development and field test grant between Northwestern University, BSCS Science Learning, Michigan State University, and Horizon Research, Inc.
- As a co-PI on the project and lead from BSCS, I managed workflows across all K-5 curriculum development and professional learning program and coordinated our work with a 9-state steering committee. This included managing more than ten BSCS staff members, 3-5 contractors, and a \$2.5M budget.
- As grade-level lead, I collaboratively led the development, field testing, data analysis, and revision to multiple units, including achieving perfect scores on the units on an external review process by the EQUiP Peer Review Panel for Science.
- Project website: www.openscienced.org

Co-Principal Investigator. (2022-2026). *Build it Green!: Energy Education through Energy Efficient Building Design*. Total award: 2,999,998; Subaward Amount to BSCS: \$436,610; Funding Source: National Science Foundation (#2201204).

- Collaborative curriculum development and research grant between University of Missouri, BSCS Science Learning, Colorado State University, and Oregon Public Broadcasting.
- Role includes leading the curriculum development aspect of the project and advising on the digital tools.
- Student edition is available at: <https://www.builditgreenscience.org/>
- Teacher edition is available at: <https://www.builditgreenscience.org/teacher-edition>

Key personnel. (2021-2025). *Climate Education Pathways*: A high school unit teaching about climate change and climate solutions. Total Funding 2,849,726. Funding Source: National Science Foundation (#2100808).

- Collaboratively developed all curriculum materials and professional learning resources with BSCS staff and teacher team members.
- Project website: <https://bscs.org/climate/>
- Student Edition: <https://climate.bsccs.org/>
- Teacher Edition: <https://climate-teacher.bsccs.org/>

Associate Director, Developer's Consortium. (2018-2022). *OpenSciEd Middle School*. Award Amount: \$9M; Funding Source: Carnegie Corporation of New York, Bill & Melinda Gates Foundation, Hewlett Foundation, & Schusterman Foundation.

- Collaborative curriculum development and field testing grant between BSCS Science Learning, Northwestern University, University of Texas-Austin, Boston College, and Digital Promise. This work was also in collaboration with ten state partners: California, Iowa,

Louisiana, Oklahoma, New Jersey, New Mexico, Massachusetts, Michigan, Rhode Island, and Washington.

- My primary role on the project was the lead on all curriculum development work. This included managing more than 10 staff members and dozens of contractors. I tracked budgets for \$9M, timelines, and workflows.
- I also served as the unit Lead and/or writer for 5 units. The middle school program was the first to receive the highest scores on each Gateway from EdREports and high scores on the EQulP for Science external Peer Review Panel.
- Project website: www.openscienced.org

Principal Investigator. (2018-2022). *Invitations to Inquiry with FieldScope*. Award Amount: \$360,000; Funding source: Pisces Foundation.

- Led the development, piloting, and revisions of all twelve data-rich mapping and graphing lessons. Co-led the teacher professional learning.
- These lessons use FieldScope for students to collect, organize, and/or analyze spatial data from various citizen science projects across the US.
- Project website: www.bsccs.org/invitations
- FieldScope: www.fieldscope.com

Advisor. *OpenSciEd Covid-19 & Health Equity*, Middle and high school units.

- Units funded to help educate youth about the spread of COVID-19 in communities across the US.
- Project website: www.openscienced.org

Key personnel. (2017) *The Developing Math/Science Teacher Leadership: A Consensus Approach to Evaluating Program Quality and Supporting Teacher Leader Workforce Development Project*. Award Amount: \$ 299,963. Funding Source: National Science Foundation (#1534698).

- Collaborative project between BSCS Science Learning, the Educational Development Center (EDC) and the Knowles Teacher Initiative.
- Conference and synthesis grant to develop a report on key findings for teacher leadership development programs and recommendation.
- Primary role was to advise on conference structure and contribute to synthesis of conference proceedings to advise the final reports.
- Project website: <https://bsccs.org/reports/math-science-teacher-leadership-synthesis-project/>

Co-Principal Investigator. (2014-2016). *Developing Consensus Guidelines for Tools and Processes that Assess Science Instructional Materials*. Award Amount: \$298,696; Funding Source: National Science Foundation (#1445675).

- Collaborative project between BSCS Science Learning, Achieve, and the K-12 Alliance at WestEd to develop program level adoption processes and professional learning experiences with science instructional materials.
- Primary role was the synthesis across multiple tools and processes to develop a new tool and process for schools to use for adoption.
- Project website: <https://bsccs.org/nextgentime/>

Research Director, Committee on Instructional Materials and Professional Development. (2011 – 2013). Establishing a Roadmap for Large-Scale Improvement of K-12 Education in the Geographical Sciences (DRL# 1049437).

- This project brought together experts in geography and science education to develop recommendations for the design of instructional materials and professional development in geography education.
- Reports available: <https://www.genip.us/roadmap>

Principal Investigator. (2010). *Sustainable Ecosystems, Enduring Cultures (SEEC) Ecuador*.

A Fulbright-Hays Group Project Abroad to study geography, history, culture, sustainability, environmental stewardship, biodiversity, and human impact on ecosystems. Award amount: \$84,268; Funding Source: U.S. Department of Education.

PUBLICATIONS AND PRESENTATIONS

Peer reviewed research-focused journal articles

- Mohan, L., Harris, E., Snowden, J., Guy-Gaytán, C., **Mohan, A.**, & Lee, D. (under review). Localizable climate change education in schools: Examining impacts on students' environmental science agency. *Science Education*.
- Edelson, D. C., Reiser, B. J., McNeill, K. L., **Mohan, A.**, Novak, M., Mohan, L., ... & Suárez, E. (2021). Developing research-based instructional materials to support large-scale transformation of science teaching and learning: The approach of the OpenSciEd middle school program. *Journal of Science Teacher Education*, 32(7), 780-804.
- Battersby, S., **Mohan, A.**, Cooper, C., Curtis, M., Lane, J., Tabor, L., & Wessell, J. (2013). What supports or promotes the development of geographic knowledge, skills, and practices? *Research in Geographic Education*, 15(2), 29-43.
- Boehm, R. G., Brysch, C.P., **Mohan, A.** & Backler, A. (2012). A new pathway: Video-based professional development in geography. *Journal of Geography*, 111(2), 41-53.
- **Mohan, A.**, & Boehm, R.G. (2009). Geography Education in the United States. A chapter in a special edition of *Research in Geographic Education*, ed. O. Muniz. San Marcos, TX: Grosvenor Center for Geographic Education.
- Boehm, R.G., & **Mohan, A.** (2009). Geospatial technology: Curricular keystone of applied geography. *International Journal of Applied Geospatial Research*, 1(1), 26-34.
- Bednarz, S., Chalkley, B., Fletcher, S., Hay, I., Le Heron, E., **Mohan, A.**, & Trafford, J. (2008). Community engagement for student learning in geography. *Journal of Geography in Higher Education*, 32(1), 87-100.

Peer reviewed practitioner-focused journal articles

- Zangori, L., **Mohan, A.**, Cole, L., H. Young, J. Aman, & J.B. Kim. (accepted). "We spent a lot of time not in my classroom": Using Rural School Buildings to Teach Place-Based Energy Efficiency. *The Science Teacher*.
- **Mohan, A.**, Mohan, L., Granados, E., Harris, E., Guy-Gaytán, C. (2025). Sparking Curiosity, Inspiring Action: An Innovative Approach to Climate Education. *The Science Teacher*.
- **Mohan, A.**, Mohan, L., & Jamshidi, A. (2025). "How Does It Not Fall Over?": Forces and motion in art. *Science and Children*, 62(6), 50–59.
<https://doi.org/10.1080/00368148.2025.2553374>
- Strode, P. K., Mead, L. S., Stuhlsatz, M., Kjellvik, M. K., Schultheis, E. H., Warwick, A. R.,

Mohan, A., Morris, J.A., & Mayes, R. (2025). Quantitative reasoning in the context of science phenomena. *The American Biology Teacher*, 87(6), 308-312.

- **Mohan, A.,** Mills, W., & Mohan, L. (2023). A multidisciplinary approach to teaching climate change. *The Geography Teacher*, 20(3), 127-131.
- **Mohan, A.** & Mohan, L. (2014). Spatial thinking through the elementary years. *Social Studies Review*, 52-29.

Book chapters

- **Mohan, A.** & Mohan, L. (in review). Invited chapter on the intersection between geography and science education to be published in *The Oxford Handbook of Geography for Educator*, Eds. Rebecca Theobald and Todd Kenreich.
- **Mohan, A.** & Mohan, L. (2025). Approaches to Curriculum Development. A chapter in Bednarz, S. & Mitchell, J. (Eds), *Handbook on Geography Education*. Berlin, Germany: Springer.
- **Mohan, A.,** Mohan, L., & D.C. Edelson. (2025). Designing richer science learning experiences using geography. Berlin, Germany: Springer.

Reports and Synthesis Works

- BSCS Science Learning. (2017). *Guidelines for the evaluation of instructional materials in science*. Colorado Springs: Author. [Lead Author]
- **Mohan, A.,** & Mohan, L. (2016). Spatial thinking with maps: Grades 6-12. National Geographic Education Foundation. Report prepared for National Geographic Education Programs.
- **Mohan, A.,** & Mohan, L. (2014). Spatial thinking through the elementary years. *Social Studies Review*, 52-59.
- Mohan, L., **Mohan, A.,** & Uttal, D. (2014). Research on thinking and learning with maps and geospatial technologies. In Solem, M., Huynh, N., Boehm, R (Eds.), *GeoProgressions. Learning progressions for maps, geospatial technology, and spatial thinking: A research handbook*, (9-21). Association of American Geographers, Washington, DC.
- Schell, E. M., Roth, K. J., & **Mohan, A.** (Eds.). (2013). *A road map for 21st century geography education: Instructional materials and professional development* (A report from the Instructional Materials and Professional Development Committee of the Road Map for 21st Century Geography Education Project). Washington, DC: National Council for Geographic Education.

Recent Authored Curriculum Materials and Resources

- Mohan, L. and **Mohan, A.** (Eds.) (2026). Why do living things live where they do and what should we do when it changes? [Grade 3] San Francisco, CA: OpenSciEd.
- Housman, G., Joplin, A., Mohan, L., and **Mohan, A.,** (Eds.) (2025). Why do animals look and act the way that they do? [Grade 3] San Francisco, CA: OpenSciEd.
- Mohan, L. and **Mohan, A.,** (Eds.) (2025). Why do plants only grow well in certain places, and how can we protect them? [Grade 3] San Francisco, CA: OpenSciEd.
- Mohan, L., **Mohan, A.,** & C. Guy-Gaytán, (2025). Climate Education Pathways Base Unit. <https://climate-teacher.bscs.org/base-unit>
- Granados, E., **Mohan, A.,** & CLIM8 Team (2024). How are Georgia peaches and our relationships with them changing due to climate change? What can we do? <https://climate->

teacher.bsccs.org/pathways/georgia-peaches

- Mohan, L. and **Mohan, A.** (Eds.) (2024). How can we design objects to balance and move in different ways? [Grade 3] San Francisco, CA: OpenSciEd.
- **Mohan, A.**, Smith, W., & Mohan, L., (Eds.). (2022). How do changes in Earth's system impact our communities and what can we do about it? [Middle School] San Francisco, CA: OpenSciEd.
- **Mohan, A.**, & Smith, W., (Eds.). (2021). Where do natural hazards happen and how do we prepare for them? [Middle School] San Francisco, CA: OpenSciEd.
- Novak, D., Smith, W., & **Mohan, A.**, (Eds.). (2021). What causes Earth's surface to change? [Middle School] San Francisco, CA: OpenSciEd.
- SeaPerch/RoboNation. (2018). *Exploring big data: A unit on big data analysis for high school students*. Funded by the Office of Naval Research. Lead Author.

Conference presentations, papers, and posters (previous 5 years only)

- Mohan, L., Guy-Gaytán, C., Snowden, J., Harris, E., & **Mohan, A.** (2025, March). *Impacts of professional learning on teachers' design capacity* [Poster presentation]. National Association for Research in Science Teaching Annual Conference, Washington, DC, United States.
- Snowden, J., Mohan, L., Harris, E., Guy-Gaytan, C., **Mohan, A.**, & Lee, D. (2025, June). Localized Climate Education: Examining Impacts on Students' Environmental Science Agency. [Conference poster]. DRK-12 PI Meeting, Arlington, VA.
- **Mohan, A.**, Flanagan, J., Klein, E., Guy-Gaytán, C., Bracey, Z. B., Noll, J. D., Mohan, L., Mahfoud, J., & Gay, C. (2024, March 20–23). *Successful implementation of open-source instructional materials for the NGSS* [Professional learning institute]. National Science Teaching Association National Conference, Denver, CO, United States.
- **Mohan, A.**, & Stennett, B. (2024, March 20–23). *Using freely available digital tools and storyline unit to explore climate change data and solutions* [Conference session]. National Science Teaching Association National Conference, Denver, CO, United States.
- Mohan, L., Guy-Gaytán, C., & **Mohan, A.** (2024, March). *Customize a climate change storyline unit* [Conference session]. National Science Teaching Association National Conference, New Orleans, LA, United States.
- Mohan, L., Harris, E., Guy-Gaytán, C., **Mohan, A.**, & Stennett, B. (2024, March). *Partnering with teachers to localize climate learning* [Paper presentation]. National Association for Research in Science Teaching Annual Conference, Denver, CO, United States.
- Granados, E., **Mohan, A.**, & Mohan, L. (2023). *Anchoring student learning in locally relevant problems and solutions* [Conference session]. National Science Teaching Association National Conference, Atlanta, GA, United States.
- Snowden, J., Mohan, L., Harris, E., Donovan, B., Dixon, C., Carey, L., Stennett, B., Guy-Gaytán, C., **Mohan, A.**, Stimac, C., & Young, H. (2023, June). *Climate education pathways ESA* [Poster presentation]. DRK12 PI Meeting, Arlington, VA, United States.
- **Mohan, A.** & O'Connor, S. (October, 2022). *Invitations to Inquiry with FieldScope: Engaging Students with Community & Citizen Science Data*. Workshop presented at the annual meeting of the North American Association for Environmental Education.
- Mohan, L., Wright, W., & **Mohan, A.** (March, 2022). COVID-19 & Health Equity: How can we slow the spread of the COVID-19 virus to protect our communities, Online professional development initiative by the National Council for Geographic Education.

- Chaudary, S., Paul Metcalf, H., **Mohan, A.**, & Novak, M. (March, 2022). Designing Middle School Science Curricula 'By States, for States'. Paper presented at the annual meeting of the International Association for Research in Science Teaching.
- O'Connor, S., & **Mohan, A.** (February, 2022). Invitations to Inquiry with FieldScope: Engaging Students with Community & Citizen Science Data. Online professional development initiative by the National Council for Geographic Education.
- Mohan, L., Cook Whitt, K., Harris, E., & **Mohan, A.** (October, 2020). Leveraging environmental learning in the design of NGSS units. Paper presented at the annual meeting of the North American Association for Environmental Education.

K-16 TEACHING EXPERIENCE

University Level Teaching (Texas State University-San Marcos; University of Texas at San Antonio): 2005-2011

Graduate Level Courses: Education Policy and Critical Issues in Teaching, Advanced Methods in Social Studies, Theory in Curriculum and Instruction
Undergraduate Level Courses: Science and Humanity; Models for Teaching Secondary Social Studies; Quantitative Methods; World Regional Geography

K-12 Teaching

Burnet High School, Burnet CISD, Burnet, TX 2002-2005
 Grades: 9-12 Social Studies and Special Education
 Subjects: World Geography, World Geography Pre-Advance Placement, Government, Advance Placement Government, Economics, Advance Placement Economics, and all subjects in Special Education setting

PROFESSIONAL MEMBERSHIPS

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- National Council for Geographic Education (NCGE), serving as President in 2018
 - Association of American Geographers (AAG)
 - National Science Teachers Association (NSTA)
 - National Association for Research on Science Teaching (NARST)
 - North American Association for Environmental Education (NAAEE)
 - Citizen Science Association (CSA)
 - Society of Women Geographers (SWG)
 - National Council for Social Studies (NCSS)

SELECTED HONORS & AWARDS

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- 2022 Ten-year service award, BSCS Science Learning
 - 2017-2022 Chair, Geography Education National Implementation Project (GENIP)
 - 2018 President, National Council for Geographic Education
 - 2011, Salvatore J. Natoli Dissertation Award National Council for Geographic Education
 - 2010 Fulbright-Hays Group Project Abroad Grant Recipient (Ecuador)
 - 2010, 2008, 2006, AAG-NSF, IGU Junior Scholar Travel Grant
 - 2008 & 2007, Sally Ann Karnau Geography Dissertation Research Scholarship

- 2007, Prentice Hall Graduate Student Teaching Award
- 2006 Alice Rechlins-Perkins Scholarship for Geographic Education Texas State University, San Marcos, TX

A COMPLETE LIST OF PUBLICATIONS, PROJECTS, AND PRESENTATIONS IS AVAILABLE ON REQUEST