

## Curriculum Vitae

Notarization. I have read the following and certify that this *curriculum vitae* is a current and accurate statement of my professional record.



Date: Aug 25, 2023

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*In general, do not list a work or activity more than once.*

### **I. Personal Information**

#### **I.A. Contact Information**

UID: 102440285,

Daniel M. Levin

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College of Education, University of Maryland, College Park,

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#### **I.B. Academic Appointments at UMD**

2018- *Associate Clinical Professor*, Department of Teaching and Learning, Policy and Leadership

2013-2018 *Assistant Clinical Professor*, Department of Teaching and Learning, Policy and Leadership

2008-09;  
2011-12 *Visiting Assistant Professor*, Department of Teaching and Learning, Policy and Leadership

2006-2008 *Lecturer*, Department of Curriculum and Instruction

2004-2005 *Professional Development Schools Coordinator*, Secondary Science Education, Department of Curriculum and Instruction

#### **I.D. Other Employment**

2009-2011 *Assistant Professor*, School of Education, Teaching, and Health, American University

2005-2006 *Coordinator and Lead Teacher*, Science, Mathematics, and Technology Academy, Montgomery Blair High School, Montgomery County Public Schools

- 2001-2004 *Science Teacher*, Montgomery Blair High School, Montgomery County Public Schools. Biology, chemistry, environmental science, research methods
- 2000-2001 *Science Teacher*, Walter Johnson High School, Montgomery County Public Schools. Chemistry, Earth science
- 1998-2000 *Interdisciplinary Resource Teacher; Science Department Chair*, Takoma Park Middle School, Montgomery County Public Schools
- 1997-1998 *Science Teacher*, Takoma Park Middle School, Montgomery County Public Schools
- 1992-1997 *Biologist*, Laboratory of Cellular and Developmental Biology, National Institute of Diabetes, Digestive, and Kidney Diseases, National Institutes of Health
- 1989-1991 *Research Assistant*, Department of Organismal and Evolutionary Biology, Harvard University

### **I.E. Educational Background**

University of Maryland	Curriculum and Instruction	Ph.D. 2008
Towson University	Secondary Science Teaching	M.A.T. 1997
Brandeis University	Biology & Anthropology	B.A. 1989

### **I.G. Professional Certifications, Licenses, and Memberships**

Advanced Professional Certificate, State of Maryland. Biology 7-12; Chemistry 7-12

American Educational Research Association  
 National Association for Research in Science Teaching  
 Association of Middle Level Education  
 National Science Teachers Association  
 Association for Science Teacher Education

## **II. Research, Scholarly, Creative, and Professional Activities**

- \* graduate student co-author
- # undergraduate student co-author
- ^ practicing teacher co-author

### **II.A. Books**

### *II.A.1. Books Authored*

Levin, D.M., Hammer, D., Elby, A., and Coffey, J. (2012). *Becoming a responsive science teacher: Focusing on student thinking in secondary science*. Arlington VA: NSTA Press. ISBN: 978-1-936959-05-1

## **II.B. Chapters**

### II.B.1 Books

Jardine, H\*, Levin, D.M., and Cooke, T. (2020). Group active engagement in introductory biology: The role of undergraduate teaching and learning assistants. In J.J. Mintzes & E.M. Walter (Eds.). *Active learning in college science: The case for evidence-based practice*. Springer Nature.

Levin, D.M., Chumbley, A.K\*, Jardine\*, H.E., Grosser-Clarkson, D., and Elby, A. (2018). Professed vs. enacted beliefs about responsive science teaching: Three cases from a practice-based middle level teacher certification program. In P. B. Howell, S. A. Faulkner, J. P. Jones, & J. Carpenter (Eds.), *Preparing middle level educators for 21st Century Schools: Enduring beliefs, changing times, evolving practices*. Charlotte, NC: Information Age Publishing.

Robertson, A. D., Atkins, L. J., Levin, D. M., and Richards, J. (2016). What is responsive teaching? In A. D. Robertson, R. E. Scherr, & D. Hammer (Eds), *Responsive teaching in science*. London: Routledge

Zeyer, A., Levin, D.M., and Keselman, A. (2015). For the mutual benefit: Health information provision in a science classroom. In Smith, C.A. and Keselman, A. (Eds.) *Crucial conversations: Meeting health information needs outside of healthcare*. Cambridge, UK: Chandos Publishing.

## **II.C. Refereed Journals**

### II.C.1. Refereed Journal Articles

#### Education Publications

Tang, X., Levin, D.M., Elby, A., and Chumbley, A.K.\* (under review) Complex pictures behind the scene: How identity and affect shape epistemic stance in science teaching.

Tu, K.#, Sun, A.#, and Levin, D.M. (in press). A primer on research techniques: Design and outcomes of a student-Initiated course on research methodologies in molecular biology. *Journal of College Science Teaching*.

- De La Paz, S., Levin, D.M., and Butler, C\*. (2023). Addressing an unfulfilled expectation: Teaching students with disabilities to write scientific arguments. *Written Communication*, 40 (2), 448-481.
- Tu, K.#, Sun, A.#, and Levin, D.M. (2023). A sweet method of modeling restriction endonuclease-based molecular cloning. *The American Biology Teacher* 85 (1), 52-54
- Tu, K.#, Sun, A.#, and Levin, D.M. (2022). Using memes to promote student engagement and classroom community during remote learning. Using memes to promote student engagement and classroom community during remote learning. *Biochemistry and Molecular Biology Education*, 51(2), 202-205.
- Tang, X., Levin, D. M., Chumbley, A.K.\* , and Elby, A. (2022). Arguing about argument and evidence: Disagreements and ambiguities in science education research and practice. *Science Education*, 106(2), 285-311.
- De La Paz, S., Butler, C.,\* Levin, D.M., and Felton, M. (2022). Effects of a cognitive apprenticeship on transfer of argumentative writing in middle school science. *Learning Disability Quarterly*. (Published early online August 24, 2022)
- Tu, K.#, and Levin, D.M. (2022). Learning to troubleshoot experiments: Flipped classroom activities for PCR & Western Blot. *The American Biology Teacher*, 84(5), 315-316.
- Felton, M., Levin, D.M., De La Paz, S., and Butler, C.\* (2022). Scientific argumentation and responsive teaching: Using dialogue to teach science in three middle-school classrooms. *Science Education*, 106(6), 1354-1374.
- Levin, D. M., De La Paz, S., Lee, Y.\* and Nadal, E. E.\* (2021). Use of cognitive apprenticeship models of instruction to support middle school students' construction and critique of written scientific explanations and arguments. *Learning Disabilities: A Multidisciplinary Journal*, 26(1).
- Lee, Y.\* , Levin, D. M., De La Paz, S. (2021). "Now I've seen what they can do": How implementing a cognitive apprenticeship can impact middle school science teachers' beliefs and practices. *Science Educator*, 28(1), 10-18.
- Richards, J., Elby, A., Luna, M. J., Robertson, A. D., Levin, D. M., and Nyeggen, C. G. (2020). Reframing the responsiveness challenge: A framing-anchored explanatory framework to account for irregularity in novice teachers' attention and responsiveness to student thinking. *Cognition and Instruction*, 38(2), 116-152
- Tang, X., Yang, L.\* , and Levin, D. M. (2020). When linguistic elements contribute to conceptual dynamics: The case of Chinese students' pre-instructional ideas about the earth. *Cognition and Instruction*, 38(2), 224-263

- Walkoe, J., and Levin, D.M. (2018). Using technology in representing practice to support preservice teachers' quality questioning: The roles of noticing in improving practice. *Journal of Technology and Teacher Education*, 26(1), 127-147.
- De La Paz, S., and Levin, D. M. (2018). Beyond "They cited the text": Middle school students and teachers' written critiques of scientific conclusions. *Research in Science Education*, 48, 1433-1459.
- Jardine, H.\* , Levin, D. M., Quimby, B.B., and Cooke, T. (2017). Collaborative learning in an undergraduate life sciences living-learning program: Case studies at multiple planes of analysis. *Learning Communities Journal*, 9, 75-106.
- Jardine, H. E.\* , Levin, D. M., Quimby, B. B., and Cooke, T. J. (2017). Group active engagement exercises: Pursuing the recommendations of Vision and Change in an introductory undergraduate science course. *Journal of College Science Teaching*, 46(5), 20.
- Cooke, T.J., Quimby, B.B, Horvath, N.F., Jardine, H.E.\* , and Levin, D.M. (2016). Integrated Life Sciences (ILS): A new honors living-learning program at the University of Maryland. *Honors in Higher Education. 1*: 1-30.
- Tang, X., Coffey, J., and Levin, D.M. (2015). Instructional use of scoring rubrics in high school biology classrooms: A help or hindrance to student learning? *American Biology Teacher* 77(9): 23-29
- Wenger, J.J.#, Levin, D.M., Sparks, W.O.^, Eastman, B.A.^, Tanu, E.D.#, and Keselman, A. (2015). "Nor any drop to drink": Students construct solutions for desalinating ocean water. *Science Scope* 38(8): 42-51
- Hundal, S., Levin, D.M., and Keselman, A. (2014). Lessons of researcher-teacher co-design of an environmental health afterschool club curriculum. *International Journal of Science Education*. 36(9): 1-21
- Keselman, A., Levin, D.M., Hundal, S., Kramer, J.F., Matzkin, K., and Dutcher, G. (2012). Teaching environmental health science for informed citizenship in the science classroom and afterschool clubs. *The International Journal of Science in Society*, 3(3), 31-44.
- Levin, D.M., Kramer, J.F., Keselman, A., and Barnes-Whitlock, B.^ (2012) Making the argument. *The Science Teacher* 79(5), 46-50.
- Levin, D.M., Grant, T., and Hammer, D. (2012). Attending and responding to student thinking in science. *American Biology Teacher*, 74(3), 158-162
- Levin, D.M and Richards, J.\* (2011). Learning to attend to the substance of student thinking in science. *Science Educator* 20(2), 1-11

Coffey, J., Hammer, D., Levin, D.M., and Grant, T. (2011). The missing substance of formative assessment. *Journal of Research in Science Teaching*, 48(10), 1109–1136

Keselman, A., Levin, D.M., Kramer, J.F., Matzkin, K., Dutcher, G. (2011). Educating young people about environmental health for informed social action. *Umwelt und Gesundheit Online*, 4, 1-8. <http://www.electronic-health-journal.com>

Levin, D.M. (2010). The invented cell: Supporting students' reasoning about structure, function, and mechanism. *The Science Teacher*, 77(9), 64-65

Levin, D.M. (2010). Explaining biological phenomena. *The Science Teacher*, 77(6), 66-67

Levin, D.M., Hammer, D., and Coffey, J.E. (2009). Novice teachers' attention to student thinking. *Journal of Teacher Education* 60(2): 142-154

Tang, X., Coffey, J., Elby, A., and Levin, D.M. (2009). Scientific inquiry and scientific method: Tensions in teaching and learning. *Science Education* 94(1): 29-47

#### Science Publications

Brasaemle, D.L., Levin D.M., Adler-Wailes, D.C., and Londos, C., (2000). The lipolytic stimulation of 3T3-L1 adipocytes promotes the translocation of cytosolic hormone-sensitive lipase to the lipid storage droplet. *Biochim. Biophys. Acta.*, 1483. 251-262

Londos, C., Brasaemle, D.L., Schultz, C.J., Adler-Wailes, D.C., Levin, D.M., Kimmel, A.R., Rondinone, C.M., (1999). On the control of lipolysis in adipocytes. *Annals of the New York Academy of Sciences*, 892 (*The Metabolic Syndrome X*). 155-168

Londos, C., Brasaemle, D.L., Gruia-Gray, J., Servetnick, D.A., Schultz, C.J., Levin, D.M., and Kimmel, A.R., (1995). Perilipins: Unique proteins associated with intracellular neutral lipid droplets in adipocytes and steroidogenic cells. *Biochemical Society Transactions*, 23. 609-613.

Birchler, J., and Levin, D.M., (1991). Directed synthesis of a segmental chromosomal transposition: An approach to the study of chromosomes lethal to the gametophyte generation in maize. *Genetics*, 127. 609-618.

Birchler, J., Chalfoun, D.J., and Levin, D.M., (1990). Recombination in the B chromosome of maize to produce A-B-A chromosomes. *Genetics* 126. 723-733.

Kaufman, E., Nelson, T., Fales, H., and Levin, D.M., (1988). Isolation and characterization of a hydroxyacid-oxoacid transhydrogenase from rat kidney mitochondria. *Journal of Biological Chemistry*, 263. 116872-116879

## **II.D. Published Conference Proceedings**

### II.D.1. Refereed Conference Proceedings

Elby, A., Luna, M., Robertson, A., Levin, D. M., and Richards, J. (2020). Framing analysis lite: A tool for teacher educators. *Proceedings of the International Conference of the Learning Sciences*. 2: 2085-2092

Levin, D.M., Grosser-Clarkson, D., Chumbley, A.K.\*, Fleming, E.\*, Galvez-Molina, N.#, & Haque, A.# (2019). Pre-service middle school science teachers practice leading discussion in a simulated classroom environment. *Short Papers from the Understanding the Role of Simulations in K-12 Science and Mathematics Teacher Education Conference*.

Levin, D.M., and Richards, J.\* (2010). Exploring how novice teachers learn to attend to student thinking in analyzing case studies of classroom teaching and learning. *Proceedings of the International Conference of the Learning Sciences*. 1: 41-48

Tang, X., Coffey, J., Levin, D.M., and Hammer, D. (2008). The scientific method and scientific inquiry: Tension as in teaching and learning. *Proceedings of the International Conference of the Learning Sciences*. 2: 374-381

## **II.E. Conferences, Workshops, and Talks**

### II.E.1. Keynotes

Levin, D.M. (2022). Challenges and pursuit of science proficiency in the United States. *Keynote: Armenia Project: Competency-based STEM Education*. International Visitor Leadership Program. Bureau of Educational and Cultural Affairs. U.S. Department of State. Washington, DC, April 4, 2022

Levin, D.M. (2016). Responsive teaching in science: Implications for teaching and teacher education. *Keynote: Science and Mathematics Education Conference (SMEC 18)*. American University of Beirut. Beirut, Lebanon, March 12, 2016

Levin, D.M. (2010). Educating the responsive teacher. *Keynote. Regional Project on Science Education in Primary and Secondary Schools in the U.S.* The Graduate School, U.S. Department of State. Washington, DC, March 15, 2010

### II.E.2. Invited Talks

Levin, D.M. (2023) Complex pictures behind the scene: How identity and affect shape epistemic stance in science teaching. Presented at *Princeton University Ecology and Evolutionary Biology Lab (Simon Levin Lab) "Conversation Hour,"* March 19, 2023

- Levin, D.M., Grosser-Clarkson, D., Chumbley, A.K.\*, Fleming, E.\*, Galvez-Molina, N.#, & Haque, A.# (2019). Pre-service middle school science teachers practice leading discussion in a simulated classroom environment. Presented at *Understanding the Role of Simulations in K-12 Science and Mathematics Teacher Education*, Louisville, KY. February 19–21, 2019
- Levin, D.M. (2018). Professional track faculty success story. Presented at *University of Maryland Professional Track Faculty Symposium*, October 26, 2018
- Grosser-Clarkson, D., Fleming, E.E.\*, and Levin, D.M. (2017). Developing profiles of middle-level mathematics teacher candidates' responsiveness with avatars. *Center for Mathematics Education Colloquium Series*, University of Maryland, College Park. September 29, 2017
- Levin, D.M. (2017). Disciplinary literacy in middle school biology. *Maryland Mathematics and Science Institute*. Terrapin Teachers, University of Maryland, College Park. June 23, 2017.
- Levin, D.M. (2016). Encouraging critical literacy in teaching and learning: Disciplinary literacy in science. *Office of International and Executive Programs*. University of Maryland, College Park. October 27, 2016.
- Levin, D.M. (2016). Improving interactions between instructors and learners: Responsive teaching in science. *Office of International and Executive Programs*. University of Maryland, College Park. October 20, 2016.
- Levin, D.M. (2016). Responsive teaching in science: Big ideas and small moments. *Maryland Mathematics and Science Institute*. Terrapin Teachers, University of Maryland, College Park. June 24, 2016.
- Levin, D.M. (2015). Science education reform and responsive science teaching in the United States. *Faculty of Education, Southwest University, Chongqing, China*. June 29, 2015
- Levin, D.M. (2015). Evolution and the nature of science. *Evolution Revolution*, Priddy Library. The Universities at Shady Grove. March 25, 2015.
- Levin, D.M. (2012). Novice teachers' attention to students' thinking. *NIH Science Education Conversations*. National Institutes of Health, Office of Science Education. December 20, 2012
- Levin, D.M. and Irvine-Belson, S. (2010). Learning from our students: How research on our teaching informs practice and policy. *Scholarship on Teaching and Learning Panel Session*. *Center for Teaching, Research, and Learning*, American University. November 18, 2010.
- Levin, D.M. (2010). Toward responsive teaching practice. *"ExPERT" teacher workshop, ExPERT program learning community*, University of Maryland, College Park. July 24, 2010.



Levin, D.M. (2009). Integrating biology content and inquiry. *Howard Hughes Medical Institute Biology Teachers Symposium*, University of Maryland, College Park, November 14, 2009

Levin, D.M. (2007). Taking Science to School: Report from the National Research Council's Committee on Science Learning K-8. *Mathematics and Science Education Conference*. East Tennessee State University. Johnson City, TN, May 30, 2007

### II.E.3. Refereed Presentations

Lee, Y., Levin, D.M., De La Paz, S., Butler, C., (2021). Teaching secondary students with LD to write scientific explanations and arguments, *Council of Exceptional Children Annual Conference*.

Lee, Y., Butler, C. De La Paz, S., Levin, D.M. (2020). Constructing and critiquing in inclusive science. *Council of Learning Disability*, Richmond, VA

Lee, Y., De La Paz, S., Levin, D.M. (2020) Teaching students with LD and English learners to write mechanistic explanations, *National Association for Research in Science Teaching Annual Meeting*,

Lee, Y.\*, De La Paz, S., and Levin, D. M. (2020). Improving causal and mechanistic science explanation writing of students with LD and English learners. *American Educational Research Association Annual Meeting*, San Francisco, CA

Levin, D.M., Napp-Avelli, C., Vieira, C., Herring, C., Fernandez-Napp, S., McGlone, J., and McGlone, C. (2020). El problema de la basura: Collaborative action to address an environmental problem in a rural Afro-Ecuadorian community. Paper to be presented at the *National Association for Research in Science Teaching Annual Meeting*, Portland, Oregon

Mesiner, J. E.\*, and Levin, D.M. (2020). Problems and Possibilities: Tensions and Identity in Student Teaching. Paper to be presented at the *American Educational Research Association Annual Meeting*, San Francisco, CA

Mesiner, J. E.\*, and Levin, D.M. (2020). Tensions in student teaching: Can they be productive? Paper to be presented at the *National Association for Research in Science Teaching Annual Meeting*, Portland, Oregon

Cohen, H. K. and Levin, D.M. (2019). MPAVE: Maryland Project on Avatars and Virtual Environments. MAVRIC DC Conference

Levin, D.M., Elby, A., Chumbley, A.K.\*, and De La Paz, S (2019). Arguing about argument: Epistemological disagreement in the classroom between a student teacher and her mentor. Paper presented at the *American Educational Research Association Annual Meeting*, Toronto, CA

- Levin, D.M., Grosser-Clarkson, D., Chumbley, A.K.\*, Fleming, E.\*, Galvez-Molina, N.#, and Haque, A.# (2019). Pre-service middle school science teachers' practices of leading discussion in a simulated classroom environment. Paper presented at the *American Educational Research Association Annual Meeting*, Toronto, CA
- Levin, D.M., Chumbley, A.K.\*, De La Paz, S., McNair, C.D.#, and Thomas, E.#, (2019). Increased expectations for all: Science teacher interns leading discussions in middle school inclusion classrooms. Paper presented at the *National Association for Research in Science Teaching Annual Meeting*, Baltimore, MD
- Chumbley, A.K.\* & Levin, D.M., (2019). Negotiating the transition: From “practicing responsive teaching” into “responsive teaching practice”. Paper presented at the *National Association for Research in Science Teaching Annual Meeting*, Baltimore, MD
- Levin, D.M., Mesiner J.E.\*, Chumbley, A.K.\*, and Galvez-Molina, N.# (2019). Problems and possibilities: Tensions between teaching interns and their mentors. Paper presented at the *Ethnography in Education (Center for Urban Ethnography) Annual Meeting*, Philadelphia, PA
- De La Paz., S. Lee, Y.\*, and Levin, D.M. (2017). Teaching struggling and novice writers to construct scientific explanations. *Presentation for the Council for Exceptional Children Annual Meeting*, Boston, MA.
- De La Paz., S., and Levin, D.M. (2017). Teaching novice middle school writers to construct and critique scientific explanations. *Paper 17<sup>th</sup> Biennale EARLI Conference for Research on Learning and Instruction*, Tampere, Finland.
- Levin, D.M., De La Paz, S., and Lee, Y\*. (2016). Professional development to support teachers' practices of engaging students in constructing and critiquing explanations in science. *Paper presented at the Annual Meeting of the American Educational Research Association*. Washington, DC.
- Jardine, H., Levin, D.M.\*, Quimby, B.B., and Cooke, T.J. (2016). Students' expectations of collaborative learning: Case studies from an undergraduate life sciences living-learning program. *Paper presented at the Annual Meeting of the National Association for Research in Science Teaching, Baltimore, MD*.
- Jardine, H.\*, Levin, D.M., Quimby, B.B., and Cooke, T.J. (2016). Productive collaborative learning in a life sciences living-learning program. *Paper presented at the Annual Meeting of the American Educational Research Association*. Washington, DC.
- Jardine, H.\*, Levin, D.M., Quimby, B.B., and Cooke, T.J. (2016). Understanding collaborative learning in a life sciences living-learning program through multiple grains of focus. *Paper presented at the Annual Conference of Ethnography in Education*, Philadelphia, PA

- Levin, D.M., and Mills, K.\* (2015). Practice-based teacher education and the edTPA. *Paper presented at the Annual Conference of the Association for Middle Level Education*, Columbus, Ohio
- De La Paz, S. and Levin, D.M. (2015). Writing and evaluating claims in middle school science classrooms. *Paper presented at the Annual Meeting of the American Educational Research Conference*, Chicago, Ill
- Levin, D.M., (2014). Promoting core practices in a middle-level mathematics and science teacher preparation program. *Paper presented at the Annual Conference of the Association for Middle Level Education*, Nashville, TN
- Hundal, S., Levin, D.M., and Keselman, A. (2011). Lessons of a researcher-teacher co-design of an environmental health afterschool club curriculum. *Paper presented at the Annual Meeting of the American Educational Research Conference*, Vancouver, BC, Canada.
- Keselman A., Levin, D.M., Kramer, J., Matzkin, K., and Hundal, S. (2011). Teaching middle school environmental health science for informed citizenship. *Paper presented at the Third International Conference on Science in Society*. Washington, D.C.
- Levin, D.M. (2011). Supporting scientific inquiry among students with exceptionalities. *Paper presented at the Annual Ethnography in Education Research Forum*, University of Pennsylvania. Philadelphia, PA.
- Richards, J.\*, Levin, D. M., and Hammer, D. (2011). Supporting preservice teachers' reform-based practices: The importance of intellectual and emotional support in a teacher certification program. *Paper presented at the Annual Meeting of the American Educational Research Conference*, New Orleans, LA
- Richards, J.\*, and Levin, D. M. (2010). Examining the "stickiness" of a teacher certification program focused on attending to student thinking. *Paper presented at the 2010 American Educational Research Association Annual Meeting*, Denver, CO.
- Levin, D.M., and Richards, J\*. (2009) Developing a professional vision for science education reform teaching. *Paper presented at the Annual Conference of the Association for Science Teacher Education*, Hartford, CT.
- Levin, D.M., Hutchison, P., and Honda, S. (2005). Teacher thinking about student inquiry. *Paper presented at the Annual Conference of the American Educational Research Association*, Montreal, Canada
- Levin, D.M., Azevedo, R., Winters, F.I., and Cromley, J.G. (2004). How does a teacher scaffold students' self-regulated learning during a collaborative science inquiry investigation in GenScope? *Paper presented at the Annual Conference of the American Educational Research Association*, San Diego, CA.
- Azevedo, R., Cromley, J.G., Winters, F.I., Moos, D.C., Levin, D.M., and Fried, D.B. (2004). Adaptive scaffolding and self-regulated learning from hypermedia: A developmental study.

*Paper presented at the Annual Conference of the American Educational Research Association, San Diego, CA.*

### II.E.6. Refereed Posters

- De La Paz, S., Lee, Y\*., Man, K.\*., and Levin, D.M. (2017). Constructing and critiquing explanations in science with academically diverse students. Structured Poster presentation at the *International Conference on Learning Disabilities*, Baltimore, MD.
- Levin, D.M., Lee, Y\*., and De La Paz, S. (2017). Professional development to support a cognitive apprenticeship approach to disciplinary writing in science. *Poster presented at the Annual Meeting of the American Educational Research Association*, San Antonio, TX.
- Levin, D.M., Chumbley, A.K.\*., Jardine, H.E.\*., and Elby, A. (2017). Learning to teach responsively: Assessing progress in practice-based middle level science and mathematics teacher education. *Poster presented at the Annual Meeting of the American Educational Research Association*. San Antonio, TX.
- Tang, X. and Levin, D.M. (2016). Language as resource in science learning. *Poster presented at the Annual Meeting of the American Educational Research Association*. Washington, DC.
- Levin, D.M., and Richards, J.\* (2010). Practices of attending to student thinking can promote collaborative conversations about science. *Poster presented at the Annual Meeting of the Association of Science Teacher Education*, Sacramento, CA.
- Gillespie, C.\*., Levin, D. M., and Richards, J.\* (2010). Alex's honors physics class: A shift from a "science" to an "engineering" epistemological frame. *Poster presented at the 2010 American Educational Research Association Annual Meeting*, Denver, CO.
- Richards, J.\*., and Levin, D. M. (2010). Exploring the relationship between a preservice teacher's view of students and her practices of attending to the substance of student thinking. *Poster presented at the Association for Science Teacher Education 2010 International Conference*, Sacramento, CA.
- Levin, D.M., Gillespie, C.\* and Richards, J.\* (2009) Understanding how and when novice teachers attend to student thinking. *Poster presented at the Annual Conference of American Educational Research Association*, San Diego, CA.
- Levin, D.M., Hammer, D., and Bybee, M.\* (2007). Novice teachers' attention to student thinking: Confronting stage-based models of teacher development. *Poster presented at the Annual Conference of the American Educational Research Association*, Chicago, Ill.
- Levin, D.M., Coffey, J., Hammer, D., Sanyal, A.\*., and Hopkins, N.^ (2007). Teachers' attention to student thinking in social and institutional systems. *Poster presented at the Annual Conference of the American Educational Research Association*, Chicago, Ill.
- Winters, F.I., Azevedo, R., and Levin, D.M. (2004). How do high-school students regulate their learning when using a computer-based environment to collaboratively engage in inquiry?

*Poster presented at the Annual Conference of the American Educational Research Association, San Diego, CA.*

II.E.8. Non-Refereed Presentations

Levin, D.M. and Pritchett, S.R. (2009). PDS partners inquiring into student learning. *Maryland Professional Development School (PDS) Conference: Professional Development Schools: Understanding, Reaching and Teaching a Community of Learners*. Baltimore, Maryland May 2, 2009

II.E.13. Symposia

Levin, D.M. and Chumbley, A.K.\* (2017). Professed vs. enacted beliefs: Cases from a practice-based middle-level teacher certification program. *Symposium on Middle Level Teacher Education at the Annual Meeting of the Association of Middle Level Education*. November, 5, 2017.d

Grosser-Clarkson, D.\* , Levin, D.M., Neel, M.A.\* , and Valli, L. (2016). Attending to student thinking as an organizing practice of teacher education. *Symposium at the Annual Conference of the American Association of Colleges of Teacher Education*, Las Vegas, NV.

Braaten, M., Russ, R., Berland, L., Schwarz, C., Barton, A., Kang, H., Thompson, J., Luna, M., Hutchison, P., and Levin, D.M. (2015). Developing, refining, and sustaining the next generation of responsive science teaching. *Symposium at the Annual Meeting of the National Association for Research in Science Teaching*, Chicago, Ill.

Barnes, S., Demink-Carthew, J\*., Hyler, M., Levin, D.M., and Valli, L. (2014). Re-designing teacher education as a practice-based venture. *Symposium at the Annual Conference of the American Association of Colleges of Teacher Education*, Indianapolis, IN.

II.E.14. Workshops

Levin, D.M. (2019). Learning to Learn Science (short course). *For students from Northwest University, China*, July-August 2019

Levin, D.M. (2017). Planning for Integrated STEM Instruction. *Teachers2Teachers International*, Santo Domingo de Onzole, Ecuador, July 15-21, 2017

Levin, D.M. (2017). Lesson planning and responsive instruction. *Teachers2Teachers International*, Santa Avelina, Guatemala, February 7-8, 2017

Levin, D.M. (2017). What happened to the water tower? *Teachers2Teachers International*, El Paredon, Guatemala, February 2-3, 2017

Levin, D.M. (2015). Responsive science teaching (short course). *Faculty of Education, Southwest University*, Chongqing, China, July 2-9, 2015

- Levin, D.M. (2015). History, philosophy, and impact of school science inquiry in the United States: Guidance for curriculum and instruction. *Huaxing Primary School, Jiangbei, Chongqing, China, July 6, 2015*
- Levin, D.M. (2012). Attending and responding to students' thinking in secondary science, *Association of Independent Maryland Schools, November 5, 2012*
- Levin, D.M. (2012). Learning to listen: Students' inquiry in the science classroom, *Seminars for Teachers, University of Maryland, College Park, October 24 and November 7, 2012*
- Levin, D.M., Hammer, D., and Richards, J.\* (2010). Using case studies of student science learning to develop practices of attending to student thinking. *Annual Meeting of the Association for Science Teacher Education. January 2010*
- Levin, D.M. (2009). Teaching scientific inquiry, *Seminars for Teachers, University of Maryland, College Park, October 14 and October 18, 2009*
- Coffey, J. and Levin, D.M. (2008-9). Formative assessment, *Knowles Science Teaching Foundation, October 17-18, 2008 and April 17-18, 2009*
- Levin, D.M. and Lau, M. (2008). Everyday assessment, *Apple Tree Early Learning Center, August 18, 2008*
- Roth, K., Hammer, D., and Levin, D.M. (2008). Using videocases to support and study preservice teacher learning: Two approaches, *National Association for Research in Science Teaching (NARST), March, 2008*
- Levin, D.M., Hutchison, P., and Honda, S. (2004). EXPERT teacher workshops, *Montgomery County Public Schools/University Maryland Biotechnology Institute "EXPERT" teachers program, Summer 2004*

## **II. F. Professional and Extension Publications**

### II.F.9. Non-Refereed Journal Articles

- Levin, D.M., Lulli, A., Ethe, G., and Mesiner, J.E., (2020, August). A view from the ground: Middle school teachers navigating online teaching in the time of COVID-19. *AMLE Newsletter*
- Levin, D.M., and Mee, M. (2017, April). The boy in the middle: Attending to the social, intellectual, emotional, and physical needs of the middle school child. *Association of Middle Level Education Magazine.*
- Levin, D.M., Fleming, E.E., Napp-Avelli, C., and Storer, A. (2016, November). Planning for integration of mathematics and science in middle level classrooms. *Association of Middle Level Education Magazine.*

Levin, D.M., and Mee, M. (2016, March). Meeting the vision of This We Believe: Toward a developmentally responsive, challenging, empowering, and equitable education for young adolescents. *Association of Middle Level Education Magazine*.

## **II.J. Sponsored Research and Programs – Administered by ORA**

### II.J.1. Grants

*M-PAVE: Maryland Project on Avatars and Virtual Environments*. University of Maryland Division of Research/Maryland Catalyst Fund New Directions Program. **Co-Principal Investigators Daniel Levin**, Helene Cohen, Katherine Dow-Burger. 2019. **\$15,000**

*Negotiating the Certification-to-Workplace Transition: What Helps Pre-service Middle-School Science Teacher Candidates Bring Responsive Teaching Practices to Their Classrooms?* NSF DUE-1712220. **Principal Investigator: Daniel Levin**; Co-Principal Investigators: Andrew Elby, Janet Walkoe 08/01/2017 – 07/31/2020. **\$299,473**.

*University of Maryland Noyce Scholars Program for Science Teachers*. NSF DUE-1239999. **Principal Investigator: Daniel Levin**; Co-Principal Investigators: Andrew Elby, Lawrence Clark, Edward Redish. 01/01/2013 – 12/31/2019. **\$1,199,674**.

*UMCP elementary school STEM add-on endorsement and specialization*. Principal Investigator, Daniel Chazan. **Co-Principal Investigators, Daniel Levin** and Beatriz Quintos. Maryland State Department of Education Race To the Top Grant, 9/1/2011-8/31/2014, **\$77,160**.

*Supplemental Sub-award: What influences teachers' modifications of curriculum?* DRL-0455711. **Principal Investigator: Daniel Levin** 6/1/2009-5/31/2010. **\$8500**

*What Influences Teachers' Modifications of Curriculum?* NSF DRL-0455711. Principal Investigator: David Hammer; Co-Principal Investigators: Andrew Elby, Janet Coffey, Alan Berkowitz. **Senior Staff Member: Daniel Levin**. 06/01/2005 – 05/31/2009. **\$1,453,677**.

## **II.O. Research Advisory Board**

NSF Award Abstract #1441523. DIP: ScienceKit for ScienceEverywhere - A Seamless Scientizing Ecosystem for Raising Scientifically-Minded Children. [http://www.nsf.gov/awardsearch/showAward?AWD\\_ID=1441523](http://www.nsf.gov/awardsearch/showAward?AWD_ID=1441523). Tamara Clegg tclegg@umd.edu (Principal Investigator), June Ahn (Co-Principal Investigator), Jason Yip (Co-Principal Investigator). (2014-2019)

## **II.P. Research Fellowships, Prizes, and Awards**

*UMD College of Education Award for Distinguished Scholarship (Clinical Faculty)* (2015). College of Education, University of Maryland.

*Education Research Fellow* (2013-2018). Integrated Life Sciences Program, Honors College, University of Maryland.

*Fellow*, College Technology Fellows, College of Education, University of Maryland (2013-14)

*Faculty Mellon Research Award* (2010-2011). American University

*Summer Teacher Fellowship* (1998). National Institute of Diabetes, Digestive, and Kidney Diseases, National Institutes of Health.

## I. Teaching, Extension, Mentoring, and Advising

### III.A. Courses Taught

#### III.A.1. Course Sections and Independent Study Sections

Semester	Course Number Name and Section	Enrollment
Spring 2023	TLPL 415, <i>Perspectives in Science</i>	14
	TLPL 498, <i>Special Problems in Education</i>	7
	TLPL 623, <i>Teaching and Learning in the Biological Sciences I</i>	5
	TLPL 698, <i>Conducting Research on Teaching</i>	1
	TLPL 798, <i>Special Problems in Teacher Education</i>	2
	TLPL 898, <i>Pre-Candidacy Research</i>	2
	EDUC 899, <i>Doctoral Dissertation Research</i>	1
Fall 2022	TLPL 420, <i>Knowing, Reasoning and Learning in Science</i>	8
	TLPL 625, <i>Teaching Science in Elementary Schools</i>	7
	TLPL 898, <i>Pre-Candidacy Research</i>	2
	TLPL 899, <i>Doctoral Dissertation Research</i>	1
Spring 2022	TLPL 415, <i>Perspectives in Science</i>	14
	TLPL 498, <i>Special Problems in Education</i>	1
	TLPL 720, <i>Foundations of Science Education</i>	5
	TLPL 899, <i>Doctoral Dissertation Research</i>	1
Fall 2021	TLPL 625, <i>Teaching Science in Elementary Schools</i>	14
	TLPL 788W, <i>Research Methods and Educational Practice</i>	10
	TLPL 898, <i>Pre-Candidacy Research</i>	1
	EDUC 899, <i>Doctoral Dissertation Research</i>	1
Spring 2021	TLPL 415, <i>Perspectives in Science</i>	13
	TLPL 498, <i>Special Problems in Education</i>	1
	TLPL 888, <i>Apprenticeship</i>	1
	TLPL 898, <i>Pre-Candidacy Research</i>	2



	EDUC 899, <i>Doctoral Dissertation Research</i>	1
Fall 2020	TLPL 321, <i>Curriculum and Instruction in Elementary Education: Science</i>	29
	TLPL 788W, <i>Research Methods and Educational Practice</i>	16
	TLPL 798, <i>Special Problems in Teacher Education</i>	2
	TLPL 898, <i>Pre-Candidacy Research</i>	1
	EDUC 899, <i>Doctoral Dissertation Research</i>	1
Spring 2020	TLPL 415, <i>Perspectives in Science</i>	13
	TLPL 498, <i>Special Problems in Education</i>	3
	TLPL 623, <i>Teaching and Learning in the Biological Sciences I</i>	16
	TLPL 798, <i>Special Problems in Teacher Education</i>	3
	TLPL 898, <i>Pre-Candidacy Research</i>	1
	EDUC 899, <i>Doctoral Dissertation Research</i>	1
Fall 2019	TLPL 788W, <i>Research Methods and Educational Practice</i>	12
	TLPL 898, <i>Pre-Candidacy Research</i>	1
	EDUC 899, <i>Doctoral Dissertation Research</i>	1
Summer 2019	TLPL 420, <i>Knowing, Reasoning and Learning in Science;</i>	7
	TLPL 413, <i>Mathematics Teaching Methods</i>	2
	TLPL 798: <i>Special Problems in Teacher Education</i>	1
Spring 2019	TLPL 488W, <i>Perspectives in Science</i>	1
	TLPL 498: <i>Special Problems in Education</i>	1
	TLPL 788W, <i>Research Methods and Educational Practice</i>	15
	EDUC 899, <i>Dissertation Research</i>	1
Winter 2019	TLPL 898, <i>Pre-Candidacy Research</i>	1
Fall 2019	TLPL 420, <i>Knowing, Reasoning and Learning in Science</i>	5
	TLPL 425: <i>Learning and Teaching in Science</i>	2
	TLPL 498: <i>Special Problems in Education</i>	1
	TLPL 626: <i>Learning to Teach and Learn Science</i>	12
	TLPL 798: <i>Special Problems in Teacher Education</i>	2
	EDUC 899, <i>Dissertation Research</i>	1
	TLPL 899, <i>Doctoral Dissertation Research</i>	1
Summer 2018	TLPL 420, <i>Knowing, Reasoning and Learning in Science</i>	7
Fall 2017	EDCI 411, <i>Knowing, Reasoning and Learning in Science</i>	13
	EDCI 411, <i>Knowing, Reasoning and Learning in Science</i>	9

	EDCI 488A, <i>Classroom Interactions</i> EDCI 498, <i>Special Problems in Teacher Education</i> EDCI 689, <i>Teaching Internship</i> EDCI 798, <i>Special Problems in Teacher Education</i>	7 1 1 1
Summer 2017	EDCI 411, <i>Knowing, Reasoning and Learning in Science</i> EDCI 798, <i>Special Problems in Teacher Education</i>	8 2
Spring 2017	EDCI 414, <i>Interdisciplinary Teaching in the Middle Grades II</i> 0101 EDCI 414, <i>Interdisciplinary Teaching in the Middle Grades II</i> IH60 EDCI 488W, <i>Perspectives in Science</i> EDCI 676, <i>Reflection and Practice in Science Teaching</i>	20 4 4 7
Winter 2016	EDCI 798, <i>Special Problems in Teacher Education</i>	2
Fall 2016	EDCI 411, <i>Knowing, Reasoning and Learning in Science</i> EDCI 498, <i>Special Problems in Teacher Education</i> EDCI 675, <i>Learning to Teach and Learn Science</i> EDCI 798, <i>Special Problems in Teacher Education</i>	21 2 11 1
Summer 2016	EDCI 411, <i>Knowing, Reasoning and Learning in Science</i> EDCI 798, <i>Special Problems in Teacher Education</i>	8 1
Spring 2016	EDCI 411, <i>Knowing, Reasoning and Learning in Science</i> EDCI 414, <i>Interdisciplinary Teaching in the Middle Grades II</i> IH60 EDCI 606, <i>Teaching and Learning in the Biological Sciences I</i> EDCI 798, <i>Special Problems in Teacher Education</i>	20 7 18 1
Winter 2015	EDCI 798, <i>Special Problems in Teacher Education</i>	1
Fall 2015	EDCI 413, <i>Interdisciplinary Teaching in the Middle Grades I</i> 0101 EDCI 675, <i>Learning to Teach and Learn Science</i> EDCI 798, <i>Special Problems in Teacher Education</i>	18 11 4
Summer 2015	EDCI 411, <i>Knowing, Reasoning and Learning in Science</i> EDCI 798, <i>Special Problems in Teacher Education</i>	10 1
Spring 2015	EDCI 414, <i>Interdisciplinary Teaching in the Middle Grades II</i> IH60  EDSP 498C <i>Special Problems in Counseling and Personnel Services</i>	7  4

	EDCI 676, <i>Reflection and Practice in Science Teaching</i> EDCI 798, <i>Special Problems in Teacher Education</i>	6 1
Fall 2014	EDCI 413, <i>Interdisciplinary Teaching in the Middle Grades I</i> 0101 EDCI 498, <i>Special Problems in Teacher Education</i> EDCI 675, <i>Learning to Teach and Learn Science</i>	11  1 14
Summer 2014	EDCI 690, <i>Teaching as a Profession</i>	26
Spring 2014	EDCI 606, <i>Teaching and Learning in the Biological Science I</i> EDCI 676, <i>Reflection and Practice in Science Teaching</i> CONS 798 <i>Research Papers in Sustainable Development and Conservation Biology</i> EDCI 798, <i>Special Problems in Teacher Education</i>	20 7 1 4
Fall 2013	EDCI 413, <i>Interdisciplinary Teaching in the Middle Grades I</i> 0101 EDCI 675, <i>Learning to Teach and Learn Science</i>	12  17
Summer 2013	EDCI 411, <i>Knowing, Reasoning and Learning in Science</i> EDCI 689, <i>Teaching Internship</i>	17 7
Spring 2013	EDCI 676, <i>Reflection and Practice in Science Teaching</i> EDCI 798, <i>Special Problems in Teacher Education</i> EDCI 689, <i>Teaching Internship</i>	10 1 7

### III.A.2. Field Supervision

2022-23	2 graduate middle school
2020-21	5 undergrad middle school; 1 graduate chemistry
2017-18	1 graduate computer science
2016-17	1 graduate secondary biology
2015-16	6 undergrad middle school
2014-15	6 undergrad middle school
2013-14	6 undergrad middle school

### **III.B. Teaching Innovations**

#### III.B.1. Major Programs Established

*M.Ed. in Teacher Leadership, Specialization PK-8 STEM* (2011-2014; with Daniel Chazan, Beatriz Quintos, and Amy Green). In collaboration with the State of Maryland, developed a program within TLPL's Masters of Teacher Leadership to prepare elementary and middle

school teachers for an add-on endorsement in “Instructional Leader PK-8 STEM” (COMAR13A.12.02.29)

*Undergraduate Middle School Mathematics and Science Teaching Major* (2008-2010; with Linda Valli and Richard Hollenbeck). Developed the undergraduate middle school mathematics and science teaching major.

*Elementary Science Certificate Program* (2008-2009; with Janet Coffey). Developed a post-baccalaureate certificate program for elementary teachers to pursue credentials in science teaching.

### III.B.6. Course and Curriculum Development

*BSCI 155: Learning to Learn Biology*: Developed course intended to provide appropriate biology instruction for students preparing to be middle school teachers in the College of Education Mathematics and Science Middle School (MSMS) teacher education major. We are currently working to make it a 4-credit course, with a lab, to become the biology requirement in the program.

*TLPL 415 (formerly 488W): Perspectives in Science*: Modified Terrapin Teachers history and philosophy of science course to include mathematics, agriculture, and computer science undergraduate students

*TLPL 420/413: Knowing, Reasoning and Learning in Science; Mathematics Teaching Methods*: Modified summer MCERT methods course to combine math and science.

*TLPL 788W: Research Methods and Educational Practice* (2018). With Claudia Galindo; designed Core course for new TLPL MA Program.

*EDCI 488A (Classroom Interactions)* (2017). Modified UTeach Course for the University of Maryland Terrapin Teachers Program

*EDCI 488W (Perspectives in Science)* (2017). Modified UTeach Course for the University of Maryland Terrapin Teachers Program

*EDCI 606 (Teaching and Learning in the Biological Sciences I) revision* (2013; with Amy Green). Revised this outreach course to serve as the second course in TLPL’s M.Ed. in Teacher Leadership, Specialization PK-8 STEM. Revision emphasized integration of biological inquiry and design thinking.

*EDCI 413 & 414 (Interdisciplinary Middle School Methods I and II)* (2008-2009; with Richard Hollenbeck): Developed the two core middle school methods courses for the undergraduate middle school mathematics and science teaching major.

*EDCI 606 & 607 (Teaching and Learning in the Biological Sciences I and II)* (2008-2009; with Janet Coffey). Developed and taught courses to engage teachers in biological inquiry and issues of biology teaching and learning.

EDCI 470/675 (*Learning to Teach and Learn Science*) and EDCI 676 (*Reflection and Practice in Science Teaching*) (2007-2008) with David Hammer. Revised 470/675 and 676, the second two methods courses in the secondary science sequence, in response to NCATE review.

### III.C. Advising

#### III.C.2. Master's

##### *Completed*

- Ravathi Ramadorai, MA, TLPL (2017-2020). Advisor. Continued career.
- Vivian Zohery, MA, TLPL (2018-2020). Advisor. Entered TLPL PhD program.
- Alexander K. Chumbley, MA, TLPL (2016-2018). Advisor and research project director. Returned to teaching in another state.
- Hannah E. Jardine, MA, TLPL (2014-2016). Advisor and research project director. Entered TLPL PhD program
- Ryan F. Barlow, MA, TLPL (2014-2016). Advisor and research project director. Entered PhD program elsewhere.
- Benjamin Pilgrim, M.Ed., TLPL (2013-2016). Advisor. Continued teaching career.
- Allison Dodson, MS, CONS (2014). Research project director. Currently Assistant Director, Washington Scholars Program and K-12 Partnerships at George Mason University.
- Daniel T. Hutton, M.Ed., TLPL (2013). Advisor. Continued teaching career.

##### *Current*

- Kelley Schreiber, MA, TLPL (2017-2023). Advisor and research project director

#### III.C.3. Doctoral

##### *Completed dissertations:*

Committee member. Ashley Coon. (2022). *From dichotomy to continuum: Linking the recruitment and retention of science teachers*. Assistant Professor, Hood College..

Committee member. Wyatt Hall. (2022). *"Leveling the playing field": Rounds in ESOL pre-service teacher education*. Assistant Professor. Georgia Gwinnett College.

Committee member. Monica Anthony. (2021). *Middle grades pre-service teachers' task selection in a mediated field experience methods course*. Assistant Professor. Georgia Gwinnett College.

Committee member. Diana Bowen, Ph.D. (2019). *Prospective teachers' noticing and naming of students' mathematical strengths and support of students' participation*. Assistant Professor. University of the Virgin Islands.

- Committee member. Yewon Lee, Ph.D. (2019). *Exploring the use of cognitive apprenticeship for teachers and students in science classrooms*. University of Maryland, College Park. Lecturer, University of Maryland, College Park.
- Committee member. Edward Nolan, Ph.D. (2019). *“Understanding how preservice teachers use focusing questioning structures: A multiple case study”*. University of Maryland, College Park. Master Science Teacher, Towson University.
- Co-chair and Advisor. Hannah Elizabeth Jardine (2019). *Instructional partnerships between science faculty and undergraduate teaching and learning assistants: Implications for formative assessment*.
- Committee member. Godfrey Rangasamy, Ph.D. (2018). *An investigation of teachers’ reported use of scientific practices in elementary instruction: Implications for student outcomes and principals’ self-efficacy*. University of Maryland, College Park. Director, Science Curriculum and Instruction, Prince George’s County Public Schools.
- Committee member. Melanie Denise Parker, Ed.D. (2017). *Teaching for a sustainable future: Teacher capacity to implement environmental literacy requirements*. University of Maryland, College Park. Anne Arundel Public Schools, Coordinator of Environmental Science Literacy and Outdoor Education.
- Committee member. Celestine Nakeli Elimbi, Ph.D. (2017). University of Maryland, College Park. *Cultural border crossing: The interaction between fundamental Christian beliefs and scientific explanations*. High school physics teacher, Washington, DC.
- Committee member. Kathryn Levenick Shirey, Ph.D. (2016). University of Maryland, College Park, Committee member, *“How do we make this happen?” Teacher challenges and productive resources for integrating engineering design into high school physics*. Senior Fellow, Knowles Science Education Foundation.
- Committee member. Michael Neel, Ph.D. (2015). University of Maryland, College Park, *Learning to elicit, interpret, and respond to students’ historical thinking: A case study of four teacher candidates*. Post-doctoral fellow at Vanderbilt University.
- Committee member. Laura A. Cathcart, Ph.D. (2015). University of Maryland, College Park, Committee member, *The Salient Map Analysis for Research and Teaching (SMART) method: Powerful potential as a formative assessment in the biomedical sciences*. Training Specialist at the Centers for Disease Control (Atlanta).
- Committee member. Jessica Jane Demink-Carthew, Ph.D. (2014). University of Maryland, College Park, *Reform-oriented collaborative inquiry as a pedagogy for student teaching in middle school*. Assistant Professor in Middle Grades and Elementary Education at the University of Vermont.

Committee member. Colleen Gillespie, Ph.D. (2013). University of Maryland, College Park, *Exploring the variability in how educators attend to science classroom interactions*. Teacher at Lick Wilmerding High School in San Francisco, California.

Committee member. Kristi Lyn Hall, Ph.D. (2013). University of Maryland, College Park, *Examining the effects of students' classroom expectations on undergraduate biology course reform*. Associate Director for Undergraduate Education, College of the Behavioral and Social Sciences, University of Maryland, College Park.

Committee member. Xioawei Tang, Ph.D. (2010). University of Maryland, College Park, *From interaction to interaction: Exploring shared resources constructed through and mediating classroom science learning*. Associate Professor, Southwest University, Basic Education Research Center, Chongqing, China.

*Current*

- Laura Espinosa, EDUC Ed.D. (2017-). Advisor
- Jennifer Mesiner, TLPL Ph.D. (2017-). Advisor.
- Danielle Sodani, TLPL Ph.D., (2019-). Advisor
- Vivian Zohery, TLPL Ph.D., (2020-). Advisor
- Ronela Austin, TLPL Ph.D., (2022-). Advisor
- Margaret Walton, TLPL Ph.D. (2020-). Committee member

**III.E. Advising: Other than Directed Research**

Academic Year	Program	Advisees
2022-2023	Master's Certification Program: Middle School	6
	Undergraduate Bachelor's Certification Program: Middle School	8
2021-2022	Master's Certification Program: Middle School	2
	Undergraduate Bachelor's Certification Program: Middle School	9
2020-2021	Master's of Education in Teacher Leadership: Specialization STEM	15
	Master's Certification Program: Secondary Science	15
	Master's Certification Program: Middle School	2
	Undergraduate Bachelor's Certification Program: Secondary Science	1
	Undergraduate Bachelor's Certification Program: Middle School	13
2019-2020	Master's of Education in Teacher Leadership: Specialization STEM	33
	Master's Certification Program: Secondary Science	8
	Master's Certification Program: Middle School	2
		1

	Undergraduate Bachelor's Certification Program: Secondary Science Undergraduate Bachelor's Certification Program: Middle School	14
2018-2019	Master's of Education in Teacher Leadership: Specialization STEM Master's Certification Program: Secondary Science Master's Certification Program: Middle School Undergraduate Bachelor's Certification Program: Secondary Science Undergraduate Bachelor's Certification Program: Middle School	18 10 2 2 4
2017-2018	Master's of Education in Teacher Leadership: Specialization STEM Master's Certification Program: Secondary Science Master's Certification Program: Secondary Computer Science Master's Certification Program: Middle School Undergraduate Bachelor's Certification Program: Secondary Science Undergraduate Bachelor's Certification Program: Middle School	18 7 1 2 2 13
2016-2017	Master's of Education in Teacher Leadership: Specialization STEM Master's Certification Program: Secondary Science Master's Certification Program: Middle School Undergraduate Bachelor's Certification Program: Secondary Science Undergraduate Bachelor's Certification Program: Middle School	35 8 4 5 20
2015-2016	Master's of Education in Teacher Leadership: Specialization STEM Master's Certification Program: Secondary Science Master's Certification Program: Middle School Undergraduate Bachelor's Certification Program: Middle School	19 6 7 18
2014-2015	Master's of Education in Teacher Leadership: Specialization STEM Master's Certification Program: Secondary Science Master's Certification Program: Middle School Undergraduate Bachelor's Certification Program: Middle School	31 5 6 11
2013-2014	Master's of Education in Teacher Leadership: Specialization STEM Master's Certification Program: Secondary Science Master's Certification Program: Middle School Undergraduate Bachelor's Certification Program: Middle School	12 7 12 12
2012-2013	Master's of Education in Teacher Leadership: Specialization STEM Master's Certification Program: Secondary Science Master's Certification Program: Middle School	12 7 6

#### III.F.4 Guest Lectures



*Writing curriculum for NASA's PACE Education Program's.* In ENGL393Q, Technical Writing. Professor Alexandra Calloway. February 24, 2017.

*Instructional and Curricular Approaches: Responsive Teaching in Science.* In EDUC 747, Instructional Leadership. Professor Thomas Davis. October 3, 2015

*New Instructional and Curricular Approaches: Science.* In EDUC 747, Instructional Leadership. Professors John Norris, Margaret McLaughlin, David Imig. May 1, 2015

#### IV. Service and Outreach

#### IV.A Editorships, Editorial Boards, and Reviewing Activities.

##### IV.A.3. Reviewing Activities for Journals

<b>JOURNAL</b>	<b># of reviews before 2013</b>	<b># of reviews 2013</b>	<b># of reviews 2014</b>	<b># of reviews 2015</b>	<b># of reviews 2016</b>	<b># of reviews 2017</b>	<b># of reviews 2018-19</b>
<i>Journal of Research in Science Teaching</i>	1						
<i>American Biology Teacher</i>	1	1		1		1	
<i>Journal of the Learning Sciences</i>	1						
<i>SAGE Open Access Journal (article editor)</i>			1				
<i>Journal of Mathematics Teacher Education</i>							1
<i>Educational Assessment</i>				1			
<i>Developmental Review</i>					1		
<i>Educational Researcher</i>						2	2
<i>International Journal of STEM Education</i>						1	

##### IV.A.4. Reviewing Activities for Agencies and Foundations

Principal member, *Institute for Education Sciences (IES) National Center for Education Research's Mathematics and Science Education topic (NCER; Education Research Grants RFA, CFDA Number 84.305A)*. (2016-2017)

Panelist, *Review panel for the Institute for Education Sciences (IES) National Center for Education Research's Mathematics and Science Education topic (NCER; Education Research Grants RFA, CFDA Number 84.305A)*. (2015-2016)

Panelist, *National Science Foundation's Division of Research on Learning in Formal and Informal Settings (DRL), Discovery Research K-12 (DRK-12) program*. (2011)

#### IV.A.5. Reviewing Activities for Conferences

*Annual Meeting and Exposition of the National Council of Teachers of Mathematics*. (2017)

#### IV.A.6. Reviewing Activities for Books

*Professional development for Inquiry-Based Science Teaching and Learning*. (2018). AERA Handbook of Research on Teaching. (Fifth Edition). Tsivitanidou, O., Gray, P., Rybska, E., Louca, L., and Constantinou, C. (Eds.). ESERA Science Education Research Series.

*Gitomer, D., & Bell, C. (2016). Handbook of Research on Teaching*. American Educational Research Association.

*Mobile Pedagogy and Perspectives on Teaching and Learning*. (2013). McConatha, D.; Penny, C; Schugar, J., and Bolton, D. (Eds.). IGI Global.

### **IV.B. Committees, Professional, and Campus Service**

#### IV.B.1. Campus Service – Department

Committee member, Professional-track search committee in Science Education.(2022-2023)

Committee member, Search committee for Faculty Specialist/Professional Development Schools Coordinator in Social Studies (2022)

Committee member, Tenure-line search committee in Teacher Education/Professional Development. (2022)

Chair, Search committee for Faculty Specialist/Professional Development Schools Coordinator in Middle School. (2019)

Coordinator, M.Ed Teacher Leadership STEM cohort programs and other outreach efforts (2015-2020)

Committee member, Tenure-line search committee in Technology, Learning, and Leadership specialization. (2018-2019)

Sub-committee chair, TLPL Appointment, Evaluation, and Promotion (AEP) Sub-Committee. (2018-2019; 2021-2022; 2022-2023)

Committee member, Professional track faculty merit committee (2014-2019). Co-chair (2017-2019; 2022)

Committee member, Division 1 summer course offerings committee (2014)

Committee member, Secondary education admissions revision committee (2013-14)

Committee member, Master's program revision committee (2013-14)

Program Coordinator, Middle School Teacher Education Programs, representation on department Leadership Council and Teacher and Leader Research and Education Committee (TLREC) (2011-current)

Coordinator, Secondary Science Teacher Education Program (2011-current)

Committee chair, Admissions committee for secondary science teacher education programs (2011-current)

#### IV.B.2. Campus Service – College

Committee Member: College of Education Advancement, Evaluation, and Promotion Committee: (2019-2020)

Chair, College of Education Senate (2018-2020—1.5 yrs. service)

Committee Member: Search committee for recruiter for College of Education (2019)

Committee Member: Search committee for Alumni Relations Specialist in Office of Advancement (2018)

Committee Member: Advancement, Evaluation, and Promotion Committee: Department of Counseling, Higher Education, and Special Education (CHSE) (2018-2019).

Chair-elect, College Senate (2017-18). Principal responsibility for revision of the College of Education Plan of Organization.

Committee member, Advisory Committee on the Avatar Project (TLE TeachLivE™/Mursion, inc.) (2016-2020)

Steering committee member, College Senate (2016-19)

Senator, College Senate (2015-16)

Committee member, College Innovations and Partnerships Committee (formerly Outreach Committee). (2015-current)

Committee member, Support Program for Advancing Research and Collaboration (SPARC), (2015-current).

Board member, Advisory Board, Terrapin Teachers (UTeach)

Board member, Search Committee, Terrapin Teachers (UTeach) Associate Director, (2014)

Coordinator, NCATE/CAEP Reporting, Middle School Program (2012-current)

Coordinator, NCATE/CAEP Reporting, Secondary Science Programs (2011-current)

#### IV.B.3. Campus Service – University

Interim Co-Director, Terrapin Teachers (2019- 2020)

Chair, Advancement, Evaluation, and Promotion Committee: Terrapin Teachers, College of Mathematical and Natural Sciences (2019-2020).

Committee Member. Professional Track Faculty Senator, University Senate (2016-2018)

Committee Member. Provost's Awards for Professional Track Faculty (2018)

#### **IV.C. External Service and Consulting**

##### IV.C.1. Regional and National Service

Board member, City of College Park Education Advisory Committee (2021-2023)

Board member, Friends of Jug Bay Wetlands Sanctuary Executive Board. (2016-2018)

Board member, District of Columbia Board of Examiners. (Evaluating current and prospective teacher education programs). (2010-2011).

Committee member, National Academy of Sciences, Committee on Science Learning, K-8. (2004-2007).

##### IV.C.2. International Activities

Academic Trip Leader, Teachers2Teachers International. *El problema de la basura*. Coordinated teacher professional development, teaching activities and action research. Santo Domingo de Onzole, Ecuador (2019).

Academic Trip Leader, Teachers2Teachers International. Coordinated teacher professional development and teaching activities. Santo Domingo de Onzole, Ecuador (2018).

Academic Trip Leader, Teachers2Teachers International. Coordinated teacher professional development and teaching activities. Santo Domingo de Onzole, Ecuador (2017).

Team member, Teachers2Teachers International. Participated in teacher professional development and teaching activities. El Paredon and Santa Avelina, Guatemala (2017).

Visiting Professor, Faculty of Education, Southwest University, Chongqing China. Advised students, taught courses, and sat on Master's review committee. (2016, Summer)

#### IV.C.5. Consultancies

Park School, Baltimore, MD. Evaluation of the K-8 Science Program. (2016)

University of Maryland, College Park, MSMaRT Program. Supervising new teachers in Prince George's County Maryland. (2011).

National Library of Medicine, Bethesda, MD. (2011). Consulting with NLM staff members to develop curriculum, in collaboration with teachers, for using the NLM's electronic resources in secondary classrooms. (2010-2012)

Washington Math, Science, and Technology Public Charter School, Washington, DC. Organized and co-taught a summer science institute for incoming 9th graders in the school's "STEP" program. (2007)

National Academy of Sciences. Wrote dissemination materials for Taking Science to School, Report of the Committee on Science Learning, K-8. (2007).

University of Maryland. Wrote NCATE rejoinder (2004)

Alteon, Inc., Laboratory consulting (1998)

#### **IV.G. Service Awards**

*College of Education Award for Service* 2019

*Provost's Excellence Award for Professional Track Faculty in the area of Excellence in Service*, University of Maryland, College Park, 2017.