Geena Taite, Ph.D.

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Education

Montclair State University	| Ph.D. in Mathematics Education (August 2024)
	<u>Dissertation Title</u>: Evolving Teacher Pedagogy Through Implementation of Mathematical Modeling and Participation in Responsively Designed Professional Development
	<u>Dissertation Chair & Advisor</u>: Dr. Joseph DiNapoli
	<u>Committee</u>: Dr. Kathryn Herr, Dr. Steven Greenstein
University of Nebraska-Lincoln	| M.A.T. in Mathematics (2019)
Ramapo College	| B.S. in Mathematics (2013)
	| With *Highest Honors in Mathematics*
	| K-12 Mathematics Teaching Certificate

Teaching Experience

Passaic County Technical Institute STEM Academy	| STEM Mathematics Educator (2018-present)
PRISM at Montclair State University	| PD Designer & Facilitator; Math Coach (2023-present)
Ramapo College of New Jersey	| Adjunct Professor (2024-present)
Northern Valley Regional High School	| Mathematics Educator (2013-2018)
Ramapo College Upward Bound Program	| Mathematics Educator (2013-2017)
Expert Tutoring & College Counseling	| Mathematics Tutor (2010-present)
Ice House	| Figure Skating Coach (2007-2020)

High School Courses Developed

2022	Mathematical Modeling
2022	AP Research
2013 - 2018	Curriculum Writing at NVRHS

- *Algebra 1, Geometry, Algebra 2*

High School Courses Taught

AP Calculus AB	2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 | 2024-2025
AP Research	2021-2022 | 2022-2023 | 2023-2024 | 2024-2025
Mathematical Modeling	2023-2024 | 2024-2025
Algebra 2	2020-2021 | 2022-2023
Algebra 1 Applications	2021-2022
Algebra 2 Applications	2021-2022
Algebra 2 Honors	2016-2017 | 2017-2018 | 2020-2021
Algebra 1	2013-2014 | 2018-2019 | 2020-2021
Algebra 1 Honors	2019-2020
Geometry	2013-2014 | 2014-2015 | 2016-2017 | 2017-2018 | 2018-2019
Probability and Statistics	2016-2017

College Courses Taught

Elementary Probability and Statistics | Fall 2024

Experience Teaching Teachers

PRISM	September 2025	Real-World Applications at West New York High School	1 Half-Day PD Session
PRISM	2024-2025	Math Coach at Westwood Regional High School	10 Full Days
PRISM	July 2024	Mathematical Modeling in Geometry	2 Full Day PD Sessions
PRISM	October 2023	Intro to Using & Creating Desmos Activities	3 Evening PD Sessions
PRISM	August 2023	Mathematical Modeling in Algebra	2 Full Day PD Sessions
PCTI STEM Academy	2022-2023	Mathematical Modeling	5 Half-Day PD Sessions
PCTI STEM Academy	2021-2022	Mathematical Modeling	5 Half-Day PD Sessions

Research Experience

The DYME Project

      Fall 2023 - Summer 2024

      Research Assistant

      Montclair State University, Montclair, NJ

This project investigated dynamic measurement in Desmos.

      I was responsible for transferring dynamic measurement tasks from Geogebra to a Desmos activity and designing new tasks in Desmos related to area and multiplication.

Designing & Implementing Professional Development on Mathematical Modeling to Address Evolving Teacher Challenges

      September 2021 - June 2022

      Principal Investigator

      Montclair State University, Montclair, NJ

This project investigated the challenges in-service mathematics teachers faced as they implemented mathematical modeling in Algebra 1 and Algebra 2.

      I was responsible for leading a team of four additional doctoral students in all aspects of the project. My role included gaining access to the school and participants, responsively designing professional development (PD) sessions for teachers, checking in with teachers on a weekly basis to inform the PD sessions, facilitating the PD sessions, interviewing participants, and analyzing qualitative data.

Wipro Science Education Fellowship, Phase II

      Funded by Wipro Limited, $300,000

      Fall 2020 - Spring 2021

      Research Assistant

      Montclair State University, Montclair, NJ

This project investigated teacher noticing in the science classroom.

      I was responsible for transcribing video recordings of teacher discussion and also analyzing data alongside another graduate research assistant.

Publications

Taite, G. (In press). Mathematical modeling sub-competances in today's high school curricular materials. *The New Jersey Mathematics Teacher.*

Taite, G., & DiNapoli, J. (2025). Perspectives on mathematical modeling education: Conceptions and research. *Encyclopedia, 5*(3), 138. https://doi.org/10.3390/encyclopedia5030138

Taite, G. (2024). *Evolving teacher pedagogy through implementation of mathematical modeling and participation in responsively designed professional development* (Publication No. 1449) [Doctoral Dissertation, Montclair State University]. Theses, Dissertations and Culminating Projects. https://digitalcommons.montclair.edu/etd/1449

Taite, G., Leonard, H., Provost, A., & Panorkou, N. (2024). Modeling the Impact of the Chernobyl Disaster. M*athematics Teacher: Learning and Teaching PK-12, 117*(5), 346-352. https://doi.org/10.5951/MTLT.2023.0271

Taite, G., Provost, A., Kim, Y., Forte, F., & Perkoski, A. (2023). Increasing student engagement in mathematical modeling through teacher professional development. In *Proceedings of the forty-fifth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. University of Nevada, Reno.

Presentations

Taite, G. (September 2024). *Mathematical Modeling Education: My Journey Connecting Theory with Practice*. Presented at Ramapo College Mathematics Department Event.

Taite, G., Provost, A., Kim, Y., Forte, F., & Perkoski, A. (2023, December). *MSU Math Modeling Research Projects*. Presented at the Montclair State University Math Modeling Evening Event.

Taite, G., Provost, A., Kim, Y., Forte, F., & Perkoski, A. (2023, October). *Increasing student engagement in mathematical modeling through teacher professional development* [Conference presentation]. North American Chapter of the International Group for the Psychology of Mathematics Education, Reno, NV, United States.

Taite, G., Provost, A., Forte, F., Kim, Y., & Perkoski, A., (2023, April). *Designing & implementing professional development on mathematical modeling to address evolving teacher challenges* [Poster session]. Presented at the Montclair State University Student Research Symposium.

Lahiere, E., **Taite, G.**, Kim, Y., Provost, A., & Perkoski, A., (2023, April). *Tracing the mathematical modeling phases of pre-service teachers: A MAD analysis* [Poster session]. Presented at the Montclair State University Student Research Symposium.

Provost, A., Kim, Y., Lahiere, E., **Taite, G.**, & Perkoski, A., (2023, April). *Supporting pre-service teachers as they begin their mathematical modeling journey* [Poster session]. Presented at the Montclair State University Student Research Symposium.

Perkoski, A., Provost, A., **Taite, G.**, Kim, Y., & Lahiere, E. (March 2023). *Exposing pre-service teachers to mathematical modeling to enhance student learning opportunities* [Conference presentation]. Presented at the National Council of Teachers of Mathematics (NCTM) Virtual Conference.

Taite, G., Provost, A., Kim, Y., Forte, F., & Perkoski, A. (2023, February). *Designing and implementing professional development on mathematical modeling* [Conference presentation]. Association of Mathematics Teacher Educators Conference, New Orleans, LA, United States. https://amte.net/sites/amte.net/files/2023%20AMTE%20Conference%20Program%20PRINT%2 0VERSION%201-19-23.pdf

Publications in Progress

Taite, G., Provost, A., Kim, Y., Forte, F., & Perkoski, A.. *Designing & implementing professional development on mathematical modeling to address evolving teacher challenges* [Manuscript in preparation].

Lahiere, E., Taite, G., Kim, Y., Provost, A., & Perkoski, A.. *Tracing the mathematical modeling phases of pre-service teachers: A MAD analysis* [Manuscript in preparation].

Awards

| Governor's Educator of the Year - Diana C. Lobosco STEM Academy (2024)

| NJ State Finalist for the Presidential Award for Excellence in Mathematics and Science Teaching (2023)

| PME-NA Registration Scholarship Awardee (2023)

| Recipient of the Academic Achievement Award at Ramapo College (2013)

| Recipient of the Ramapo College Provost Scholarship (2013)

| Recipient of the NJ Bloustein Distinguished Scholar Award (2013)

Professional Activities

| Army Educational Outreach Program RESET (Research Experiences for STEM Educators and Teachers) Participant (2025)

| AP Research Reader (2022; 2023; 2025)

| Chair of Diana C. Lobosco STEM Academy Institutional Review Board (IRB) (2021-2024)

Service

| Speaker for MSU Advanced Qualitative Methods course (October 2025)

| Alumna Guest Speaker at Ramapo College Mathematical Modeling Education: My Journey Connecting Theory with Practice (September 2024)

| Alumna Guest Speaker at Ramapo College Pi Mu Epsilon Mathematics Honor Society Induction Ceremony (March 2024)

| Speaker for MSU Math Seminar (October 2021)

| Speaker for MSU Advanced Qualitative Methods course (December 2021)

| Teaching Mentor at the DCL STEM Academy (2021-2022)

| Volunteer for MSU Ph.D. Program Open House (2019-2023)

Professional Memberships

| National Council of Teachers of Mathematics (NCTM)

| New Jersey Education Association (NJEA)