

MATTHEW MELVILLE

Mdmelvil@pfw.edu

EDUCATION

Ph.D. Education; August 2022
University of Delaware, Newark, DE

Master of Mathematics Education; August 2017
Brigham Young University, Provo, UT

Bachelor of Science in Mathematics Education; May 2009
Brigham Young University, Provo, UT

PROFESSIONAL EXPERIENCE

2022- Present	<i>Assistant Professor</i> , Purdue University Fort Wayne
2021-2022	<i>Graduate Research Assistant</i> , Problem Posing Based Learning, Dr. Jinfa Cai, Dr. Faith Muirhead, University of Delaware
2021-2022	<i>Assistant Editor</i> , Special Issue of ZDM, Dr. Jinfa Cai, University of Delaware
2021-2021	<i>Graduate Research Assistant</i> , Professional Learning Communities, Dr. Lynsey Gibbons, University of Delaware
2019-2021	<i>Graduate Research Assistant</i> , Theory Development of Backwards Transfer, Dr. Charles Hohensee, University of Delaware

2019-2019	<i>University Instructor, Methods for Elementary Pre-Service Teachers, Dr. Charles Hohensee, University of Delaware</i>
2019-2019	<i>Professional Development Lead/Researcher, Research and conduction professional development for curriculum use and inquiry-based mathematics, University of Delaware</i>
2018-2019	<i>University Instructor, Math for Pre-Service Elementary School Teachers, Department of Education, University of Delaware</i>
2018-2018	<i>Professional Development Lead/Researcher, Research and conduction professional development for curriculum use and inquiry-based mathematics, University of Delaware</i>
2017-2018	<i>Graduate Research Assistant, Proof in Secondary Classrooms, Dr. Michelle Cirillo, University of Delaware</i>
2016-2017	<i>Teaching Assistant, Calculus I, Dr. Keith Leatham, Brigham Young University</i>
2016	<i>University Instructor, College Trigonometry, Brigham Young University</i>
2015	<i>Teaching Assistant, Calculus II, Dr. Steven Williams, Brigham Young University</i>
2009-2015	<i>High School Math Teacher, Math Essentials, Algebra I, Algebra II, Geometry, Pre-Calculus, Integrated Mathematics, Swim Coach, Lone Peak High School, Alpine, UT</i>

PUBLICATIONS

Journal Publications

- Dietiker, L., Melville, M., Riling, M., Dailey, A., Schwartz, A., & Roberts, E. (2026). Lesson Plan With AI. *Mathematics Teacher: Learning and Teaching PK-12*, 119(8), 616-627.
- Hwand, S., Han, J., Muirhead, F., Brown, A., Melville, M. D., & Cai, J., (2025). Catalyzing instructional change through mathematical problem posing: The influence of textbooks. *ZDM–Mathematics Education*, 1-15.
- Hohensee, H. C., Melville, M. D., Collier, C., Ma, Y., (2025). Backward transfer influences from quadratic functions instruction on levels of linear function reasoning abilities. *Journal for Research in Mathematics Education*, 56(2), 36-62.
- Hohensee, C., Gartland, S., Melville, M., & Willoughby, L. (2024). Comparing contrasting instructional approaches: a way for research to develop insights about backward transfer. *Research in Mathematics Education*, 1-21.
- Melville, M. D., & Rhodes, S. (2024). Taking risks with rough draft teaching. *Education Leadership*, 81(8), 41-45.
- Melville, M. D. (2022). *Japanese instructional circles*. University of Delaware.
- Melville, M. D., & Corey, D. L. (2021). Kyouzaikenkyuu: an exploration of Japanese mathematics teachers' daily planning practices. *Journal of Mathematics Teacher Education*, 1-13. <https://doi-org.udel.idm.oclc.org/10.1007/s10857-021-09493-5>
- Hohensee, H. C., Gartland, S., Willoughby, L., & Melville, M. D. (2021). Backward transfer influences from quadratic functions instruction on students' prior ways of covariational reasoning about linear functions. *Journal of Mathematical Behavior*, 6. <https://doi-org.udel.idm.oclc.org/10.1016/j.jmathb.2020.100834>.
- Melville, M. D. (2017). *Kyozaikenkyu: An in-depth look into Japanese educators' daily planning practices*. (Publication No. 6515) [Master's thesis, Brigham Young University]. Theses and Dissertations.

Book Chapters

Cai, J., Hwang, S., Melville, M. D., & Robison, V. (2023). Theories for teaching and teaching for theories: Artifacts as tangible entities for storing and improving professional knowledge for teaching. In A. Praetorius & C. Y. Charalambous (Eds.) *Theorizing teaching: Bringing together expert perspectives to move the field forward*. Springer Science & Business Media.

Praetorius, A., Charalambous, C., et al., (2023). Drawing on the Delphi technique to explore areas of convergence and divergence among expert opinions in the field of teaching. In A. Praetorius & C. Y. Charalambous (Eds.) *Theorizing teaching: Bringing together expert perspectives to move the field forward*. Springer Science & Business Media.

Cai, J., Hwang, S., Melville, M., & Robison, V. (2023). Theory for teaching and teaching for theory: Artifacts as tangible entities for storing and improving professional knowledge for teaching. In *Theorizing teaching: Current status and open issues* (pp. 225-251). Cham: Springer International Publishing.

Reins, K. J., & Melville, M. (2023). The plan step. *Lesson Study with Mathematics and Science Preservice Teachers: Finding the Form*, 68.

Journal Articles Under Review

Melville, M. D. (2026). *Professional Learning through Japanese Instructional Circles*. Manuscript submitted for publication.

Melville, M. D. (2026). *Japanese Instructional Circles*. Manuscript submitted for publication.

Melville, M. D., Yoshii, T., Mollema, L., Davison, E. (2026). *A Decade of Feedback from Knowledgeable Others in Japan*. Manuscript submitted for publication.

Conference Proceedings

(Peer-Reviewed)

Davison, E., Mollema, L., Melville, M. D., Yoshii, T. (2025). A Decade of Feedback from Knowledgeable Others in Japan. *Proceedings of the forty-seventh annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. State College, PA

- Melville, M. D. (2024). Deprivitizing Teacher Work Though Instructional Circles. *Proceedings of the forty-sixth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Cleveland, OH.
- Melville, M. D., Jensen, B., Corey, D. L. (2023). Critique as Support. *Proceedings of the forty-fifth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Reno, NV.
- Melville, M. D. (2022). Japanese Instructional Circles. *Proceedings of the forty-fourth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Nashville, TN.
- Hohensee, H. C., Melville, M. D., Collier, C., Ma, Y. (2021). Differential backward transfer effects for students with different levels of linear function reasoning abilities. *Proceedings of the forty-third annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Philadelphia, PA.
- Melville, M. D. (2021). Japanese Teacher Instructional Circles. *Proceedings of the forty-third annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Philadelphia, PA.
- Hohensee, H.C., Gartland, S., Willoughby, L., & Melville, M. D. (2019). Backward transfer effects on action and process views of functions. *Proceedings of the forty-first annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, St Louis, MO. University of Missouri.
- Melville, M. D. (2018). An international comparison of MKT and educative curriculum materials found in teachers' manuals. *Proceedings of the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, Greenville, SC. University of South Carolina & University of Clemson.

PRESENTATIONS

- Yoshii, T., Melville, M. D. (2025, November). *Organizing and Analyzing the Records of the Post-Lesson Discussion: The Lesson Studies of Mathematics in*

the Kyushu Region of Japan. [Conference presentation]. World Association of Lesson Study Conference, Hiroshima, Japan.

Davison, E., Mollema, L., Melville, M. D., Yoshii, T. (2025, October). *A Decade of Feedback from Knowledgeable Others in Japan* [Poster presentation]. The forty-seventh annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, State College, PA, United States.

Melville, M.D., Yoshii, T., (2025, October). *A Decade of Feedback from Knowledgeable Others in Japan*. [Conference presentation] The National Council of Teachers of Mathematics Research Conference, Atlanta, GA, United States.

Riling, M., Dailey, A., Melville, M. D. (2025, October). *AI for lesson planning: Possibilities and limitations*. [Workshop presentation]. The National Council of Teachers of Mathematics Research Conference, Atlanta, GA, United States.

Melville, M. D., Winger, A., Rhodes, S. (2025, October). *Reimagining Schools Towards Safe and Equitable Spaces for Mathematics Teachers and Students*. [Workshop presentation]. The National Council of Teachers of Mathematics Research Conference, Atlanta, GA, United States.

Berry, S., Melville, M. D. (2025, February). *Early Career Teachers' Retention and Implementation of What They Learned in Their Courses and Practicums*. [Poster presentation]. Annual Association of Mathematics Teacher Educators Conference, Reno, NV, United States.

Melville, M. D., et al., (2024, October). *Supporting Teachers and Teacher Educators with Implementing Building Thinking Classrooms*. [Working Group]. The forty-sixth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Cleveland, OH, United States

Melville, M. D., Berry, S. (2024, October). *Deprivitizing Teacher Work Through Instructional Circles* [Conference presentation]. The forty-sixth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Cleveland, OH, United States

Melville, M. D. (2023, October). *Critique as support*. [Conference presentation]. The forty-fifth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Reno, NV, United States

Melville, M. D. (2022, November). *Japanese instructional circles*. [Conference presentation]. The forty-fourth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Nashville, TN, United States.

- Melville, M. D. (2022, February). *Japanese teacher instructional circles*. [Conference presentation]. Annual Association of Mathematics Teacher Educators Conference, Las Vegas, NV, United States.
- Hohensee, H. C., Melville, M. D., Collier, C., Ma, Y., (2021, October). *Differential backward transfer effects for students with different levels of linear function reasoning abilities*. [Conference Presentation]. The forty-third annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Philadelphia, PA, United States.
- Melville, M. D. (2021, October). *Japanese teacher instructional circles*. [Poster presentation]. The forty-third annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Philadelphia, PA, United States.
- Melville, M. D. (2021, April). *Teacher instructional circles*. [Conference presentation]. Steele Symposium, Newark, DE, United States.
- Melville, M. D. (2021, April). *Kyozaikenkyu: Japanese teachers' planning practices*. [Conference presentation]. Lesson Study in Mathematics and Science Teacher Education Conference (LSMSTEC), Chicago, IL, United States.
- Melville, M.D. (2020, February). *Teacher planning practices: Understanding U.S. teachers' conceptions about planning*. [Conference presentation]. Annual Association of Mathematics Teacher Educators Conference, Phoenix, AZ, United States.
- Hohensee, H.C., Gartland, S., Willoughby, L., & Melville, M. D. (2019, November). *Backward transfer effects on action and process views of functions*. [Conference presentation]. The forty-first annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, St Louis, MO, United States.
- Melville, M. D. (2019). *Teacher planning practices: Understanding U.S. teachers' conceptions about planning*. [Conference presentation]. Steele Symposium, Newark, DE, United States.
- Melville, M. D. (2019). *Teacher planning practices: Understanding U.S. teachers' conceptions about planning*. [Conference presentation]. Pennsylvania Chapter of the Association of Mathematics Teacher Educators Conference, Shippensburg, PA, United States.
- Melville, M.D. (2019). *Kyozaikenkyu: Japanese teachers' planning practices*. [Poster presentation]. The National Council of Teachers of Mathematics Research Conference, San Diego, CA, United States.
- Melville, M.D. (2018). *An international comparison of MKT and educative curriculum materials found in teachers' manuals*. [Poster presentation]. The

fortieth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Greenville, SC, United States.

Melville, M.D. (2018). *Kyozaikenkyu: Japanese teachers' planning practices*. [Paper presentation]. Pennsylvania Chapter of the Association of Mathematics Teacher Educators Conference, Shippensburg, PA, United States.

Melville, M.D. (2018). *An international comparison of MKT and educative curriculum materials found in teachers' manuals*. [Poster presentation]. Steele Symposium, Newark, DE, United States.

Cirillo, M., Hummer, J., & Melville, M.D. (2018) *Engaging in lesson study through long term professional development*. [Conference presentation]. The National Council of Teachers of Mathematics Research Conference, Washington D.C., United States.

SPEAKING INVITATIONS

Invited speaker for JRME Talks (Jan 2025). *Backward transfer influences from quadratic functions instruction on levels of linear function reasoning abilities*.

Invited speaker to Purdue University Fort Wayne EDU 443 – Teaching Math Through Problem Solving. (November 2024). *Problem Solving from a Japanese Perspective*.

Purdue University Fort Wayne Petcha Kucha Presentation (June, 2024). *Japanese Instructional Circles*.

Invited speaker to EDU 443 – Teaching Math Through Problem Solving. (November 2023). *Problem Solving from a Japanese Perspective*.

TEACHING EXPERIENCE

Search Committee for Tenure Track Mathematics Education Faculty Member (2022)

Instructional Circle participant for local Fort Wayne Community School District educators (2022 – Present)

University Courses Taught:

- EDU 20001 – Introduction to Scientific Inquiry
- EDU 33300 – Inquiry in Math and Science
- EDU 34001 – History of Education and American Culture
- EDU 40100 – Laboratory/Field Experience (For Early Childhood and Secondary Preservice Teachers)
- EDU 44800 – Methods for Teaching High School Mathematics
- EDU 48000 – Student Teaching in Secondary Mathematics Classrooms
- MA 10300 – Math for Elementary Teacher III (Geometry and Measurement)
- MA 16500 – Analytic Geometry and Calculus I
- MA 16600 - Analytic Geometry and Calculus II
- MA 21300 – Finite Mathematics
- MA 36300 – Differential Equations
- MA 59800 – Quantitative Reasoning (Graduate Level)

PROFESSIONAL SERVICE

Purdue University Fort Wayne College of Science's Educational Policy Committee
(2025 – Present)

Purdue University Fort Wayne Mathematical Science's Academic Affair Committee Chair (2026)

Dickey Scholarship Search Committee (2023 – Present)

Undergraduate and Graduate Advisor (2022 – Present)

Purdue University Fort Wayne Mathematical Science's Academic Affair Committee
(2022 – Present)

Reinvigorating Mathematics for Teachers Leader (2022 – Present)

Search Committee for Tenure Track Mathematics Education Faculty Member (2022)

Instructional Circle participant for local Fort Wayne Community School District educators (2022 – Present)

Write-on-Site Co-Organizer (2018 – 2022)

Write on Site is a program that allows graduate students to hold each other accountable for their writing. We met two times a week, when other commitments do not interfere, to work on proper goal setting and to provide feedback and support for one another.

Peer-Reviewed Articles for:

- Mathematics for Teaching and Learning (MTLT)
- Journal of Research in Mathematics Education
- Educational Studies in Mathematics
- Association of Mathematics Teachers Educators
- North American Chapter of the International Group for the Psychology of Mathematics Education

COMMUNITY SERVICE

Instructional Coach

Various help with teachers who were both former students and unrelated to Purdue University Fort Wayne.

Church of Jesus Christ of Latter-Day Saints

Various leadership responsibilities and service opportunities

Speaker

2020 Teachers of Tomorrow, June 2020

LANGUAGES

English: Native Language

Japanese: Advanced Listener, Advanced Speaker, Intermediate Reading and Writing