

TRACY E. DOBIE

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EDUCATION

Ph.D., Learning Sciences (focus in Mathematics Education)
 School of Education and Social Policy, Northwestern University, 2016

Dissertation Title: Middle School Students' Conceptions of the Usefulness of Mathematics: A Sociocultural Approach to the Study of Utility Value

Committee Members: Carol Lee (chair), Edd Taylor, Miriam Sherin, Mesmin Destin

B.A., Psychology
 Princeton University, 2007

ACADEMIC EMPLOYMENT

2018-present	Assistant Professor, Educational Psychology & Urban Institute for Teacher Education, University of Utah
2016-2018	Postdoctoral Fellow, School of Education & Social Policy, Northwestern University
2011-2016	Graduate Research and Teaching Assistant, Northwestern University

GRANTS

Funded Grants

- 2023 PIs: Connor Warner, Martha Macomber; Co-PIs: **Tracy Dobie**, Kerry Herman.
University of Utah Office of the Vice President for Research Community Based Research Partnership Formation Grant. Mapping Community Assets to Support Native Student Achievement in Mathematics and Literacy: Developing a Partnership between the Ute Tribe, the Uintah School District, and the University of Utah. **\$10,000**
- 2022 **PI: Tracy Dobie**, *Spencer Foundation Small Research Grant.* Useful for Whom? Centering Humanity and Relationality in the Study of the Usefulness of Mathematics **\$49,994**
- 2022 **PI: Tracy Dobie**, Co-PIs: Lauren Barth-Cohen, Connor Warner, Lynne Zummo.
National Science Foundation, Improving Undergraduate STEM Education (IUSE). Developing and Implementing Case-Based Scenarios to Support Elementary Pre-service Teachers' Enactment of Equitable Mathematics and Science Instruction. **\$599,994**

- 2022 **PI: Tracy Dobie.** *College of Education Faculty Initiative for Graduate Student Research Fellowship.* **\$40,000**
- 2021 **PI: Tracy Dobie.** *University of Utah, College of Education Dean's Funding Initiative Award.* Bringing the Voices of Teachers, Families, and Community Members Into Elementary Math Methods. **\$10,000**
- 2021 **PI: Tracy Dobie.** *University of Utah, Faculty Scholarly Grant.* "This is useless!": Taking a Sociocultural Approach to Investigate Students' Judgments of the Usefulness of School Mathematics. **\$5,979**
- 2020 **PI: Tracy Dobie,** Co-PI: Lauren Barth-Cohen. *University of Utah, College of Education & Vice President for Research Funding Incentive Seed Grant.* Developing and Enacting Case-Based Teaching Scenarios in Elementary STEM Education to Bridge the In-service and Pre-service Teacher Divide. **\$12,000**
- 2019 **PI: Tracy Dobie.** *University of Utah, College of Education Faculty Research Grant.* "When are we ever going to use this?" Exploring Underrepresented Students' Perspectives on the Usefulness of School Mathematics. **\$4,999**
- 2019 **PI: Tracy Dobie.** *University of Utah, Faculty Scholarly Grant.* "This is useless!": Investigating Students' Judgments of the Usefulness of School Mathematics. **\$5,998**

Under Review

- 2023 **PI: Eunice Han; Co-PIs: Tracy Dobie, Akil Narayan, Yongmei Ni, Laura Rogers.** *National Science Foundation Noyce Grant.* What do STEM Teachers Desire? Exploring the Impact of Stress on Retention. \$897,286

Unfunded Grants

- 2023 **PI: Tracy Dobie.** *National Association of Education Equity in Math Education Research Grant (EMERG).* A Participatory Action Approach to Rehumanizing the Usefulness of Mathematics for Latine and Indigenous Youth. \$112,998 (**Finalist**)
- 2021 **PI: Tracy Dobie,** *NAEd/Spencer Postdoctoral Fellowship.* Useful for Whom? Centering Humanity and Relationality in the Study of the Usefulness of Mathematics. \$70,000
- 2020 **PI: Tracy Dobie,** Co-PIs: Lauren Barth-Cohen, Connor Warner, Lynne Zummo. *National Science Foundation, Improving Undergraduate STEM Education (IUSE).* Developing and Implementing Hypothetical Teaching Scenarios to Support Elementary Pre-service Teachers' Enactment of Equitable Mathematics and Science Instruction. \$599,939
- 2020 **PI: Tracy Dobie,** *University of Utah, University Teaching Grant.* Incorporating Mediated Field Experiences into a Math Methods course for Elementary Pre-Service Teachers. \$3,500

2019 PI: Shar Kiuahara, Co-PIs: Doug J. Hacker, Tracy Dobie. *Special Education Research Grant: Cognition and Student Learning, Development & Innovation (84.324A)*. Understanding Fractions through Writing Project FACT+R²C²: A Metacognitive Approach for Upper Elementary Students With or At-Risk for Mathematics Learning Disability. \$1,398,523

PEER-REVIEWED PUBLICATIONS

1. Barth-Cohen, L., **Dobie, T.E.**, Gutiérrez, J.F., Carlsruh, R.*, & Greenberg, K.* (2023). Preservice elementary teachers' knowledge resources for blending arguments and representations in science. *Journal of Science Teacher Education*, 1-23. <https://doi.org/10.1080/1046560X.2023.2283662>
2. MacArthur, K.* & **Dobie, T.E.** (2023). Benefits and Challenges of Peer Interaction in Calculus Group Exams: Perspectives of Latina/Hispanic & Mixed Race Women. *PRIMUS*, 33(10), 1121-1134. <https://doi.org/10.1080/10511970.2023.2248973>
3. Baker, K., Ward, J., Nitta, K., Gonzalez, M. L., Smith, E., Jessup, N. A., & **Dobie, T.** (2023). From Colleagues to Critical Friends: Exploring Avenues of Professional Learning to Support Equity-Based Pedagogies in Mathematics Education. *Studying Teacher Education*, 1-19. [2022 IF = .77]
4. Anderson, E.R. & **Dobie, T.E.**¹ (2022). Sentence stems to foster dialogue: Uses of “I notice” and “I wonder” in online teacher professional development. *Journal of Teacher Education*, 73(3), 424-437. <https://doi.org/10.1177/00224871221087198> [2022 IF = 3.9]
5. **Dobie, T.E.**, MacArthur, K.* (2022). Exploring shifts in student attitudes toward group exams in college calculus: The case of Dane. *International Journal of Research in Undergraduate Mathematics Education*, 8(1), 149–175. <https://doi.org/10.1007/s40753-021-00148-7> [2022 IF = 1.5]
6. **Dobie, T. E.**, & Sherin, B. (2021). The language of mathematics teaching: A text mining approach to explore the zeitgeist of US mathematics education. *Educational Studies in Mathematics*, 107(1), 159-188. <https://doi.org/10.1007/s10649-020-10019-8> [2021 IF = 2.853]
7. **Dobie, T. E.**, Leatherwood, C.*, & Sherin, M. G. (2021). A Look Inside Teacher-Captured Video. *Journal of Technology and Teacher Education*, 29(1), 45-66.
8. **Dobie, T.E.** & Anderson, E.R. (2021). Noticing and wondering to guide professional conversations. *Mathematics Teacher: Learning and Teaching PK-12*, 114(2), 94-102. <https://doi.org/10.5951/MTLT.2020.0210>
9. Smith, E., **Dobie, T. E.**, Jessup, N., & Ward, J. (2021). Tensions of trust in preservice teachers' consideration of challenging mathematics tasks. *Journal of Education for*

¹ Anderson and I are equal collaborators in our work and take turns leading papers in the first author position.

* Student researcher

Teaching, 47(2), 287-289. <https://doi.org/10.1080/02607476.2021.1877087> [2021 IF = 2.11]

10. **Dobie, T. E.**, & Sherin, M. G. (2020). What's in a Name? Language Use as a Mirror into Your Teaching Practice. *Mathematics Teacher: Learning and Teaching PK-12*, 113(5), 354-360. <https://doi.org/10.5951/MTLT.2019.0296>
11. **Dobie, T.E.** (2019a). Expanding conceptions of utility: middle school students' perspectives on the usefulness of mathematics. *Mathematical Thinking and Learning*. <https://doi.org/10.1080/10986065.2019.1564969> [2019 IF = 1.074]
12. **Dobie, T. E.**, & Anderson, E. R.¹ (2015). Interaction in teacher communities: Three forms teachers use to express contrasting ideas in video clubs. *Teaching and Teacher Education*, 47, 230-240. <https://doi.org/10.1016/j.tate.2015.01.003> [2015 IF = 1.823]

BOOK CHAPTERS

1. **Dobie, T.E.**, Sherin, M.G., & White, S.* (2021) A lexical snapshot: An investigation into the evolving terminology of middle school mathematics teachers in the United States. In Mesiti, C., Artigue, M., Hollingsworth, H., Cao, Y, & Clarke, D. (Eds.) *Teachers talking about their classrooms: Learning from the professional lexicons of mathematics teachers around the world* (pp. 323-333). New York, NY: Routledge.
2. **Dobie, T.E.**, Sherin, M.G., White, S.*, & Mayle, K. (2021) United States Lexicon. In Mesiti, C., Artigue, M., Hollingsworth, H., Cao, Y, & Clarke, D. (Eds.) *Teachers talking about their classrooms: Learning from the professional lexicons of mathematics teachers around the world* (pp. 334-347). New York, NY: Routledge.
3. **Dobie, T.E.** (2019b). A sociocultural examination of utility value in mathematics: The role of interdependence in middle school students' perceptions of usefulness. In M. Hannula, G. Leder, F. Morselli, M. Vollstedt, Q. Zhang, *Affect and mathematics education: Fresh perspectives on motivation, engagement, and identity* (pp. 67-88). Springer.

MANUSCRIPTS ACCEPTED OR UNDER REVIEW

1. **Dobie, T.E.**, Zummo, L., Biddle, A.P., Barth-Cohen, L., Warner, C., Galvez Sghiatti, D., & Daniels, M. Elementary teachers designing culturally grounded cases for preservice teachers: A process for reciprocal learning. (in press, *Mathematics Teacher Educator*)
2. Dias, L.*, Hundley, M.*, & **Dobie., T.E.** Representing student thinking through number talks. (Book chapter in press, *Information Age Publishing*)
3. Taylor, E.V. & **Dobie, T.E.** Parental support for mathematical problem-solving: Proximal and distal influences within the religious practice of tithing (in press, *Journal of Mathematical Behavior*)
4. **Dobie, T.E.**, Dyer, E., Sherin, M.G., & Munson, M. The intersection of teacher noticing and the language of practice. (accepted, invited manuscript to *ZDM – Mathematics Education*)

5. **Dobie, T.E.**, Smith, E., & Jessup, N., Ward, J., Baker, K., Nitta, K., Gonzalez, M. Utilizing Trust to Examine Pre-service Teachers' Tensions When Learning to Implement Challenging Mathematics Tasks. (under review, *Journal of Teacher Education*)
6. **Dobie, T.E.** & Anderson, E.R. ¹ Discourse in Digital Learning Communities: An Exploration of Elementary Teachers' Enactment of Interpretations. (under review, *Teaching and Teacher Education*)

PEER-REVIEWED CONFERENCE PROCEEDINGS

1. **Dobie, T.E.**, Zummo, L, Dias, L.*, Barth-Cohen, L., & Warner, C. (2022). Case-based scenarios for supporting equitable mathematics and science Instruction: Articulating design conjectures and emerging tensions. In Chinn, C., Tan, E., Chan, C.,& Kali, Y.(Eds.), *Proceedings of the 16th International Conference of the Learning Sciences-ICLS 2022* (pp. 1457-1460) . Hiroshima, Japan.
2. **Dobie, T.E.** & MacArthur, K.* (2021). Student perspectives on group exams as a rehumanizing mechanism in college calculus. In D. Kolloche (Ed.), *Exploring new ways to connect Proceedings of the Eleventh International Mathematics Education and Society Conference (MES; Vol. 2, pp. 423-432)*. Tredition. <https://doi.org/10.5281/zenodo.5413729>
3. **Dobie, T.E.** & Carlsruh, R.*, & Aina, Jr., D.K.* (2021). Utility in context: A sociohistorical lens for examining students' conceptions of the usefulness of mathematics. In D. Kolloche (Ed.), *Exploring new ways to connect Proceedings of the Eleventh International Mathematics Education and Society Conference (MES; Vol. 2, pp. 414-422)*. Tredition.
4. MacArthur, K.* & **Dobie, T.E.** (2021). Perspectives on rehumanizing undergraduate mathematics: Elevating the voices of Latina and mixed-race women. In. D. Olanoff, K. Johnson, & S.M. Spitzer (Eds.), *Proceedings of the forty-third annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 207-211). Philadelphia, PA.
5. Gutiérrez, J. F., Shiver, S.* , **Dobie, T.E.**, Francom, R.* , & Barth-Cohen, L. (2021). Anything But Race: Race-Evasion and Color-blindness in Preservice Teachers' Responses to a Hypothetical Scenario. In de Vries, E., Hod, Y., & Ahn, J. (Eds.), *Proceedings of the 15th International Conference of the Learning Sciences - ICLS 2021*. (pp. 1161-1162). Bochum, Germany: International Society of the Learning Sciences.
6. Baker, K., Gonzalez, M., Nitta, K., Ward, J., Jessup, N., **Dobie, T.E.** & Smith, E. (2020). A collaborative self-study to forefront issues of identity and equity in mathematics methods courses. In A.I. Sacristán, J.C. Cortés-Zavala & P.M. Ruiz-Arias, (Eds.). *Mathematics Education Across Cultures: Proceedings of the 42nd Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, Mexico (pp. 756-757) Cinvestav / AMIUTEM / PME-NA. <https://doi.org/10.51272/pmena.42.2020>
7. Gonzalez, Baker, K., M., Nitta, K., Smith, E. **Dobie, T.E.**, Jessup, N., & Ward, J. (2020). Prospective teachers' affordances and challenges of seeing students' mathematical strengths. In A.I. Sacristán, J.C. Cortés-Zavala & P.M. Ruiz-Arias, (Eds.). *Mathematics*

- Education Across Cultures: Proceedings of the 42nd Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, Mexico (pp. 756-757) Cinvestav / AMIUTEM / PME-NA. <https://doi.org/10.51272/pmena.42.2020>
8. **Dobie, T.E.** & Francom, R.* (2020). A preliminary model of influences on adolescents' perceptions of usefulness in school mathematics. In A.I. Sacristán, J.C. Cortés-Zavala & P.M. Ruiz-Arias, (Eds.). *Mathematics Education Across Cultures: Proceedings of the 42nd Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, Mexico (pp. 1442-1443) Cinvestav / AMIUTEM / PME-NA. <https://doi.org/10.51272/pmena.42.2020>
 9. **Dobie, T.E.**, Barth-Cohen, L., Francom, R.*, Greenberg, K.*, & Gutiérrez, J. (2020). Pre-service elementary teachers navigating tensions related to classroom social dynamics through hypothetical teaching scenarios. In A.I. Sacristán, J.C. Cortés-Zavala & P.M. Ruiz-Arias, (Eds.). *Mathematics Education Across Cultures: Proceedings of the 42nd Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, Mexico (pp. 1595-1600) Cinvestav / AMIUTEM / PME-NA. <https://doi.org/10.51272/pmena.42.2020>
 10. Barth-Cohen, L., **Dobie, T.E.**, Greenberg, K.*, Francom, R.*, & Gutiérrez, J. (2020). Examining links between arguments and representations in pre-service teachers' pedagogical content knowledge. *The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS)*. Volume 4, 2253-2256. Nashville, TN. (online)
 11. Gutiérrez, J., **Dobie, T.E.**, Greenberg, K.*, Francom, R.*, & Barth-Cohen, L. (2020). Examining preservice teachers' written responses to hypothetical classroom scenarios. *The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS)*. Volume 4, 2325-2328. Nashville, TN. (online)
 12. Gutiérrez, J.F., Barth-Cohen, L.A., Francom, R.*, Greenberg, K.*, MacArthur, K.*, & **Dobie, T.E.** (2019). An emerging methodology for the study of preservice teachers' learning about equity in STEM education. In S. Otten, Z. de Araujo, A. Candela, & C. Munter (Eds.), "...against a new horizon." *Proceedings of the 41st annual meeting of the North-American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA)*. St. Louis, MO: University of Missouri.
 13. **Dobie, T.E.**, White, S.*, & Sherin, M. (2017) Towards a shared language of instruction: Exploring teachers' lexicon for mathematics teaching and learning. *Proceedings of the 39th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1254-1257). Indianapolis, IN.
 14. **Dobie, T.E.** (2017) Subject level zoom: A new lens for studying students' perceptions of the usefulness of mathematics. *Proceedings of the 39th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1111-1114). Indianapolis, IN.
 15. **Dobie, T.E.** (2017) Features of adolescents' engagement with mathematics in the classroom and in everyday life. In Kaur, B., Ho, W.K., Toh, T.L., & Choy, B.H. (Eds.),

Proceedings of the 41st Conference of the International Group for the Psychology of Mathematics Education (Vol. 1, p. 187). Singapore: PME.

16. **Dobie, T.E.** (2017) A comparison of students' and teachers' conceptions of the usefulness of mathematics. In Kaur, B., Ho, W.K., Toh, T.L., & Choy, B.H. (Eds.), *Proceedings of the 41st Conference of the International Group for the Psychology of Mathematics Education* (Vol. 2, p. 22). Singapore: PME.
17. Mesiti, C., Clarke, D., **Dobie, T.E.**, White, S.*, & Sherin, M. (2017) "What do you see that you can name?" Documenting the language teachers use to describe phenomena in middle school mathematics classrooms in Australia and the USA. In Kaur, B., Ho, W.K., Toh, T.L., & Choy, B.H. (Eds.), *Proceedings of the 41st Conference of the International Group for the Psychology of Mathematics Education* (Vol. 3, pp. 241-248). Singapore: PME.
18. Mesiti, C., Clarke, D., Roan, K., Hollingsworth, H., Cao, Y., Yu G., Novotná, J., Žlábková, I., & **Dobie, T.E.** (2016). Discourse about the mathematics classroom. In C. Csíkos, A. Rausch, & J. Sztányi (Eds.), *Proceedings of the 40th Conference of the IGMPE*, Vol. 1 (pp. 357-363). Szeged, Hungary.
19. Clarke, D., Diez-Palomar, J., Hannula, M., Chan, M.C.E., Mesiti, C., Novotná, J., Žlábková, I., Cao, Y., Yu G., Hollingsworth, H., Roan, K., Jazby, D., Tuohilampi, L., & **Dobie, T.E.** (2016). Language mediating learning: The function of language in mediating and shaping the classroom experiences of students, teachers and researchers. In C. Csíkos, A. Rausch, & J. Sztányi (Eds.), *Proceedings of the 40th Conference of the IGMPE*, Vol. 1 (pp. 349-352). Szeged, Hungary.
20. **Dobie, T.E.** (2015) An equitable approach to the study of utility in mathematics education. In Bartell, T. G., Bieda, K. N., Putnam, R. T., Bradfield, K., & Dominguez, H. (Eds.), *Proceedings of the 37th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 585). East Lansing, MI: Michigan State University.
21. **Dobie, T.E.** (2013) Religious participation and mathematical problem solving: The relation between risk-taking and problem context. In Martinez, M. & Castro Superfine, A (Eds.), *Proceedings of the 35th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 557). Chicago, IL: University of Illinois at Chicago.
22. **Dobie, T.E.** (2012) Who's at bat and does it matter? Using agent-based baseball models to promote mathematical reasoning. In Van Zoest, L. R., Lo, J.-J., & Kratky, J. L. (Eds.), *Proceedings of the 34th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 1144). Kalamazoo, MI: Western Michigan University.

OTHER PUBLICATIONS

1. Ward, J., Baker, K., Smith, E.M., Dobie, T.E., Jessup, N., & Gonzalez, M. (Summer 2020). 2019 STaR teacher interest group: Reflections on equity-based practices in elementary methods coursework. *Connections, Volume 29(4)*.

2. **Dobie, T.E.** (2017). [Teacher access to high quality STEM instructional resources and collaboration with STEM industry experts](https://grandchallenges.100kin10.org) [White paper].
<https://grandchallenges.100kin10.org>

MANUSCRIPTS IN PREPARATION

1. **Dobie, T.E.**, Carlsruh, R.*, Ondricek, B.*, & Aina, Jr., D.K.* Early adolescents' discussions of usefulness as windows into potential barriers and limitations of the study of usefulness in mathematics.
2. Gutierrez, J., Shiver, S.*, **Dobie, T.E.**, & Barth-Cohen, L. A Million Reasons: Race Evasion and Colorblindness in Preservice Teachers' Responses to a Hypothetical Teaching Scenario.

INVITED TALKS

1. Van Opstall, M. & **Dobie, T.E.** (2019, March) *Content ideas for Math 2000 (Algebraic Reasoning) with a focus on student agency*. Presentation at the Utah Association of Mathematics Teacher Educators Annual Meeting, Salt Lake City, UT.
2. **Dobie, T.E.** (2017, February) *Conceptions of usefulness in mathematics: What does it mean to students for mathematics to be useful?* Keynote lecture at the symposium "Meaningful Learning of Mathematics: A Perspective from Different Angles," Bremen, Germany.

CONFERENCE PRESENTATIONS AND POSTERS

1. **Dobie, T.E.** (2023). *Barriers to Perceived Usefulness of Mathematics Among Middle School Students*. Psychology of Mathematics Education-North America Annual Meeting, Reno, NV.
2. Dias, L.*, Barth-Cohen, L., Zummo, L., **Dobie, T.**, and Warner, C. (2023). *Preservice Teacher Thinking About Equity-Oriented Teaching Practices in Math and Science Using Case Prompts*. AERA Annual Meeting, Chicago, IL.
3. **Dobie, T.E.** (2022, February). *Rethinking the Usefulness of Mathematics*. Utah Council of Teachers of Mathematics (UCTM) Annual Conference, Kaysville, Utah.
4. **Dobie, T.E.** (2022, February). *Names Matter: Reflecting on Our Language*. Utah Council of Teachers of Mathematics (UCTM) Annual Conference, Kaysville, Utah.
5. Barth-Cohen, L., **Dobie, T.E.**, Greenberg, K.*, Francom, R.*, Gutiérrez, J. F., Shiver, S.* (2021). *Examining Intuitive Knowledge Resources at the Intersection of Scientific Arguments and Representations*. Paper at the 2021 Annual Meeting of the American Education Research Association (AERA). [Virtual Conference].

6. Gutiérrez, J. F., Barth-Cohen, L., Francom, R.*, Greenberg, K.*, MacArthur, K.* & **Dobie, T.E.** (2020, April) *Examining Racial Awareness and Color-Blind Discourse in Preservice Teachers' Responses to a Hypothetical Classroom Scenario* [Paper Session]. AERA Annual Meeting San Francisco, CA. (Conference Canceled)
7. Greenberg, K.*, Francom, R.*, MacArthur, K.*, Barth-Cohen, L., Gutiérrez, J. F. & Dobie, T.E. (2020, April) *Insights From a Mixed-Methods Approach for Measuring Elementary Preservice Teachers' Pedagogical Content Knowledge for Mathematics* [Roundtable Session]. AERA Annual Meeting San Francisco, CA. (Conference Canceled)
8. Francom, R.*, Greenberg, K.*, Gutiérrez, J. F., Barth-Cohen, L., MacArthur, K.* & Dobie, T.E. (2020, April) *Preservice Elementary Teachers' Responses to a Classroom Scenario Involving Indigenous Ways of Knowing in Science* [Paper Session]. AERA Annual Meeting, San Francisco, CA. (Conference Canceled)
9. **Dobie, T.E.** (2020, February) *Supporting Productive Teacher Discourse in Online Professional Development*. Annual Conference of the Association of Mathematics Teacher Educators (AMTE), Phoenix, AZ.
10. **Dobie, T.E.** (2020, February) *New directions for video-based pedagogies to enhance teacher noticing: A look inside teacher-captured video*. Annual Conference of the Association of Mathematics Teacher Educators (AMTE), Phoenix, AZ.
11. **Dobie, T.E.** (2019, October) *"When Am I Ever Going to Use This?!" Rethinking Why Students View Mathematics as Useful (or Not)*. National Council of Teachers of Mathematics (NCTM) Regional Conference & Exposition, Salt Lake City, Utah.
12. **Dobie, T.E.** (2019, October) *Hua Long Dian Jing, Matome, and Mise en Commun: How Language Can Help Us Reflect on Our Practice*. National Council of Teachers of Mathematics (NCTM) Regional Conference & Exposition, Salt Lake City, Utah.
13. Barth-Cohen, L., **Dobie, T.E.**, & van Opstall, K. (2019, October) *Connecting Mathematical Arguments and Representations to Support Student Learning*. National Council of Teachers of Mathematics (NCTM) Regional Conference & Exposition, Salt Lake City, Utah.
14. Anderson, E. & **Dobie, T.E.** (2019, April) Sentence stems to foster dialogue: Using “I notice” and “I wonder” in online professional development. In **T.E. Dobie** (Chair), *Discourse in the digital world: Design and facilitation of online teacher professional development*. Symposium the Annual Meeting of the American Educational Research Association, Toronto, Canada.
15. **Dobie, T.E.**, Leatherwood, C.*, Sherin, M.G., & Sherin, B. (2019, April) *What happens when teachers discuss video online?* Annual Meeting of the American Educational Research Association, Toronto, Canada.

16. Sherin, M.G., **Dobie, T.E.**, Leatherwood, C.*, & Altshuler, M.* (2019, April) *Using teacher self-captured video in professional development*. Annual Meeting of the American Educational Research Association, Toronto, Canada.
17. Thompson, J.J., Fox, A., Richards, K., **Dobie, T.E.**, Lomax, K., Kazemi, E. Shim, S.Y.*, & Sherin, B. (2019, April) *Modeling Across Mathematics and Science in K-2*. Annual Meeting of the American Educational Research Association, Toronto, Canada.
18. **Dobie, T.E.**, Sherin, M.G., & White, S.L.* (2018, April) *A U.S. Lexicon: Teachers' Language for Describing Mathematics Classes*. Annual Meeting of the American Educational Research Association, New York, NY.
19. Richards, J., Thompson, J.J., Kazemi, E., Lomax, K., Fox, A., Shim, S.Y.*, **Dobie, T.E.**, Anderson, E., Sherin, M.G., Sherin, B., & Teske, P.R. (2018, April) *Designing practice-based learning labs for K-2 teachers: Initial lessons learned*. Annual Meeting of the American Educational Research Association, New York, NY.
20. **Dobie, T.E.** (2017, April) *Enhancing student engagement and perceived usefulness through task design*. National Council of Teachers of Mathematics Research Conference, San Antonio, TX.
21. Richards, J., Fox, A., Shim, S.*, Anderson, E., **Dobie, T.E.**, Sherin, B., Lee, J., Thompson, J., Kazemi, E., Lomax, K., & Sherin, M. (2017, April) *Designing for K-2 teacher learning about modeling in practice-based online courses*. Annual Meeting of the American Educational Research Association, San Antonio, TX.
22. **Dobie, T.E.** (2016, July) *Interdependence in middle school students' conceptions of usefulness in mathematics*. 13th International Congress on Mathematics Education, Hamburg, Germany.
23. **Dobie, T.E.** (2016, April) *"But how is this helping life?" Middle School Students' Conceptions of the Usefulness of Mathematics*. Annual Meeting of the American Educational Research Association, Washington, D.C.
24. **Dobie, T.E.** (2015, June) *Students' conceptions of the usefulness of mathematics: Examining the alignment between adolescents' values and perceptions of utility*. Annual Meeting of the Jean Piaget Society, Toronto, ON, Canada.
25. **Dobie, T.E.** (2014, April) *The usefulness of mathematics: Individual vs. group conceptions of utility in mathematics education*. Annual Meeting of the American Educational Research Association, Philadelphia, PA.
26. **Dobie, T.E.** & Taylor, E.V. (2014, April) *Religious practices and mathematical problem solving: The role of problem context in rational number understanding*. Annual Meeting of the American Educational Research Association, Philadelphia, PA.

27. **Dobie, T.E.** (2014, February) *Managing the open discussion of contrasting ideas in video clubs*. Annual Conference of the Association of Mathematics Teacher Educators (AMTE), Irvine, CA.
28. **Dobie, T.E.** (2013, April) *The role of social context in mathematical risk-taking*. Annual Meeting of the American Educational Research Association, San Francisco, CA.
29. Taylor, E.V. & **Dobie, T.E.** (2013, April) *Religious engagement and context in mathematical problem-solving*. National Council of Teachers of Mathematics Research Pre-session, Denver, CO.
30. **Dobie, T.E.** & Anderson, E. (2012, April) *Managing conflict in video clubs*. Annual Meeting of the American Educational Research Association, Vancouver, BC, Canada.

AWARDS AND HONORS

- SIG RME Outstanding Reviewer. *Special Interest Group for Research in Mathematics Education, American Educational Research Association (2020)*
- SIG RME Outstanding Reviewer. *Special Interest Group for Research in Mathematics Education, American Educational Research Association (2019)*
- Service, Teaching, and Research (STaR) Fellow. *Association of Mathematics Teacher Educators (2019)*
- Global Initiative Travel Award for Graduate Student Involvement in Global Research. *School of Education and Social Policy, Northwestern University (2016)*
- Dissertation Year Fellowship. *School of Education and Social Policy, Northwestern University (2015-2016)* Graduate Teaching Fellow. *Searle Center for Advancing Teaching & Learning, Northwestern University (2014-2015, 2015-2016)*
- Laurine E. Fitzgerald Graduate Student Fellowship. *School of Education and Social Policy, Northwestern University (2012-2013, 2013-2014, 2014-2015, 2015-2016)*
- Robert J. Menges Memorial Award for Graduate Student Professional Development. *School of Education and Social Policy, Northwestern University (2014)*
- Conference Travel Grant. *The Graduate School, Northwestern University (2012, 2013)*
- University Fellow. *The Graduate School, Northwestern University (2010-2011)*

TEACHING

Undergraduate & Graduate Courses

- Foundations of Learning (ED PS 6451/7451), University of Utah
- Learning Sciences: Research and Methodological Perspectives (ED PS 7860), University of Utah
- Elementary Math Methods in Diverse Classrooms (EDU 5360/6360), University of Utah
- Learning and Development (ED PS 2110), University of Utah
- Learning Sciences Seminar (ED PS 7440), University of Utah
- Learning Philanthropy: Engaging in the Study and Practice of Giving, Northwestern University

K-12 Teaching

- Educational Endeavors, Mathematics Tutor, Chicago, IL
- Ideal Student Workshop for Daniel Murphy Scholarship Fund, Teacher, Chicago, IL
- Susan Petrick, M.Ed., Educational Therapy Office, Mathematics and Literacy Teaching Associate, Princeton, NJ
- Harlem Success Academy Charter School, Associate Kindergarten Teacher, New York, NY
- PJJ Educational Services, Mathematics Tutor, New York, NY
- The Aspire Program, Mathematics Teacher, Cleveland, OH

Guest Lectures

- **Dobie, T.E.** (2021, September) *Motivation and Engagement in Mathematics Learning*. Presentation for Introduction to Educational Psychology class. Salt Lake City, UT.
- **Dobie, T.E.** (2019, January) *Enhancing Equitable Participation in the College Classroom*. Presentation for the Mathematics Education & Teaching Seminar. Salt Lake City, UT.
- **Dobie, T.E.**, *Greenberg, K., *Francom, R., Gutierrez, J. Barth-Cohen, L. *MacArthur, K. (2019, August) *Using hypothetical classroom scenarios to explore pre-service teachers' knowledge and beliefs related to arguments, representations, and equity in STEM*. Presentation at the Urban Institute for Teacher Education faculty retreat. Salt Lake City, UT.

STUDENT MENTORINGPh.D. Students*Advisor & Committee Chair*

- Bailey Ondricek, University of Utah, Educational Psychology department, Learning Sciences program 2023-
- Laurel Dias, University of Utah, Educational Psychology department, Learning Sciences program 2020-2023

Committee Member

- Vanessa Bustamante, University of Utah, Chemistry department 2023-
- Janae Chandler, University of Utah, Family and Consumer Studies department 2022-
- Tamara Young, University of Utah, Physics & Astronomy department 2020-
- Rachel Carlsruh, University of Utah, Educational Psychology department, Learning Sciences program 2021-2022

M.S., M.Stat, & M.Ed. Students*Committee Chair*

- Daniel Aina, M.Ed., University of Utah 2021-

Committee Member

- Rachel Carlsruh, M.Ed., University of Utah 2019-2021
- Kelly MacArthur, M.Stat, University of Utah 2019-2020

- Laurel Dias, M.Ed., University of Utah 2019-2020

Undergraduate Students

- Honors Thesis Advisor, Alyssa Lee, University of Utah 2021-2023

Other Formal Mentoring

- Co-facilitator of STEM Education Research Group (undergraduate/graduate), University of Utah (2018-2022)
- Faculty Facilitator of Antiracist Educators Reading Group for Elementary Education Students (undergraduate), University of Utah (2020-2022)

PROFESSIONAL DEVELOPMENT

- Designed mathematics formative assessments as part of the Middle School Mathematics Formative Assessment Writing Project. Salt Lake City, UT (4/23-6/23)
- Designed Elementary Mathematics for Special Education Teachers course for the Utah State Board of Education. Salt Lake City, UT. (1/22-5/22)
- Led session “A Reflection on Equity in Mathematics Education: Current Strengths and Next Steps Forward” for the Utah K-12 Mathematics Leadership and Coaching Institute. Salt Lake City, UT. (11/19)
- Designed and facilitated summer professional learning course “Elementary Math for All Students.” Various locations, UT. (2/19-6/19)
- Led session “A glimpse into math coaching” for the “Foundations of Teaching and Learning for Instructional Coaches” course as part of instructional coaching endorsement. South Salt Lake, UT. (4/19)

SERVICE

Professional Service

Grant Reviewing

- Spencer Foundation – Small Grant Reviewer (February, June, October 2024)
- National Science Foundation – STEM Ed Postdoctoral Research Fellowship Panel (February 2024)
- National Science Foundation – ECR Panel (January 2022)

Conference Leadership

- Psychology of Mathematics Education-North America (PME-NA) Strand Leader for Teaching Practice & Classroom Activity (2024)
- AERA Division 1c (Mathematics) Program Co-Chair (2023-2025)
- International Society of the Learning Sciences, Senior Reviewer (2021, 2022)

Conference Reviewing

- AERA Annual Meeting (2014-present)
- Psychology of Mathematics Education—North American Chapter Annual Conference (2013-present)
- International Society of the Learning Sciences Annual Meeting (2020, 2024)

- Mathematics Education & Society Conference (2021)
- National Council of Teachers of Mathematics Research Conference (2015)

Journal Reviewing

- Journal of Mathematical Behavior (2023)
- Mathematics Teacher: Teaching and Learning PK-12 (2019, 2022)
- Mathematical Thinking and Learning (2018, 2020, 2023)
- Journal for Research in Mathematics Education (2020)
- For the Learning of Mathematics (2019)
- Teaching and Teacher Education (2017)
- Mathematics Teacher Educator (2016)
- Journal of Educational Psychology (2016)

University Service

- Reviewer for the Undergraduate Research Opportunity Program (UROP), University of Utah (2023)
- CSME Faculty Associate, University of Utah (2019-present)
- Hugo Rossi Lecture Series organizer, University of Utah (2019-present)

College Service

- Departmental representative for Native Ed @ the CoE, University of Utah (2024-)
- UITE Admissions Committee, University of Utah (2022-present)
- Organizer of Urban Institute for Teacher Education (UITE) Faculty Book Club, University of Utah (2019-2020)

Department Service

- Faculty Appointments Committee, University of Utah (2024-)
- Learning and Cognition Program Committee, University of Utah (2018-present)
- STEM Education/Learning Sciences Faculty Search Committee, University of Utah (2021-2022)
- Reading and Literacy Faculty Search Committee, University of Utah (2019-2020)

Public Service

- Mathematics Advisory Team member, Utah State Board of Education (USBE) (2020-2021; 2022-present)
- Elementary Math Competencies Design Team member, Utah State Board of Education (USBE) (2021-2022)
- Equity Planning Team member, Utah State Board of Education (USBE) (2020-2021)

ADDITIONAL TRAINING

- Research Mentoring Certificate, University of Utah (Spring 2022)
- Division K Early Career Mentoring Pre-Conference, Selected participant (Spring 2019)
- Social Policy and Research in Cognition and Mathematics Education (SPaRCME) conference, Invited participant (Spring 2015)

- AERA Division G Pre-Conference Mentoring Seminar, Selected participant (Spring 2015)
- Questionnaire Design for Social Surveys course, University of Michigan (Fall 2014)

PROFESSIONAL AFFILIATIONS

American Educational Research Association
Association of Mathematics Teacher Educators
International Society of the Learning Sciences
Mathematics Education and Society
National Council of Teachers of Mathematics
Psychology of Mathematics Education