

Evan D. McClintock, PhD
Assistant Professor (Teaching)
University of Colorado Denver
School of Education & Human Development

EDUCATION

<u>Institution</u>	<u>Degree</u>	<u>Date Received</u>	<u>Major</u>
University of Colorado Denver	Ph.D.	05/2024	Education & Human Development: Research, Evaluation, & Measurement
New York University	Ph.D. (ABD)	08/2010	Teaching & Learning: Mathematics Education
Bucknell University			Educational Research
The Pennsylvania State University	B.S.	05/1995	Elementary Education
<u>Certificates</u>			
Commonwealth of PA	Certificate	05/1995	Instructional I Certificate, Elementary Education
Commonwealth of PA	Certificate	06/2001	Instructional II Certificate, Elementary Education

PROFESSIONAL EXPERIENCE

<u>Dates</u>	<u>Position</u>
08/2024 – Present	Assistant Professor (Teaching Track): Alternative Licensure – Mathematics Lead
10/2013 – 8/2024	Senior Instructor: Alternative Licensure – Mathematics Lead School of Education and Human Development University of Colorado Denver
08/2010 - 10/2013	Instructor and Research Assistant: Mathematics Education School of Education and Human Development University of Colorado Denver
08/2007 – 6/2009	Instructor and Research Assistant: Mathematics Education Steinhardt School of Education and Human Development New York University
08/2004 - 06/2007	Mid-Atlantic Center Mathematics Education Graduate Research Fellow College of Education The Pennsylvania State University
08/2003 - 08/2004	Graduate Assistant: Curriculum & Instruction Mathematics Education College of Education The Pennsylvania State University
09/2001 - 08/2003	University Relations Officer Bucknell University
08/1995 - 08/2001	Elementary Classroom Teacher Ferguson Township Elementary, State College Area School District State College, PA

REFEREED JOURNAL ARTICLES

- 2024 DeBay, D., **McClintock, E.**, Carlson, B., & Johnson, H. L. (under review). "Asynchronish" design for graduate and professional teacher learning: Cultivating community with non-facilitated small group video discussions. *International Journal of Designs for Learning*.
- 2023 Leech, D. J., Leech, N. L., **McClintock, E.**, & Haug, C. A. (2023). Rural teachers' and non-rural teachers' motivations to teach: Differences and similarities. *The Rural Educator*, 44(4), 15-28.
<https://scholarsjunction.msstate.edu/ruraleducator>
- 2022 Johnson, H. L., Tzur, R., Gardner, A., Hodkowski, N. M., Lewis, A., & **McClintock, E.** (2022). A new angle: A teacher's transformation of mathematics teaching practice and engagement in quantitative reasoning. *Research in Mathematics Education*, 24(1), 88-108. <https://doi.org/10.1080/14794802.2021.1988688>
- 2020 Johnson, H. L., **McClintock, E.**, & Gardner, A. (2020). Opportunities for reasoning: Digital task design to promote students' conceptions of graphs as relationships between quantities. *Digital Experiences in Mathematics Education*, 6(3), 340-366. <https://doi.org/10.1007/s40751-020-00061-9>
- 2019 Johnson, H. L., Dunlap, J. C., Verma, G., **McClintock, E.**, DeBay, D. J., & Bourdeaux, B. (2019). Video-based teaching playgrounds: Designing online learning opportunities to foster professional noticing of teaching practices. *Techtrends*, 63, 160-169. <https://link.springer.com/article/10.1007/s11528-018-0286-5>
- 2018 Johnson, H. L. & **McClintock, E.** (2018). A link between students' discernment of variation in unidirectional change and their use of quantitative variational reasoning. *Educational Studies in Mathematics*, 97, 299-316.
<https://doi.org/10.1007/s10649-017-9799-7>
- 2017 Johnson, H. L., **McClintock, E.**, & Hornbein, P. (2017). Ferris wheels and filling bottles: A case of a student's transfer of covariational reasoning across tasks with different backgrounds and features. *ZDM: The International Journal on Mathematics Education*, 49(6), 851-864. <https://doi.org/10.1007/s11858-017-0866-4>
- 2013 Tzur, R., Johnson, H. L., **McClintock, E.**, Xin, Y. P., Si, L., Woodward, J., Hord, C., & Jin, X. (2013). Distinguishing schemes and tasks in children's development of multiplicative reasoning. *PNA*, 7(3), 85-101.
<https://doi.org/10.30827/pna.v7i3.6128>

- 2010 Simon, M. A., Saldanha, L., **McClintock, E.**, Akar, G. K., Watanabe, T., & Zembat, I. O. (2010). A developing approach to studying mathematical conceptual learning: Focusing on students' learning through their mathematical activity. *Cognition and Instruction* 28(1), pp. 70-112.
<https://doi.org/10.1080/07370000903430566>

REFEREED CONFERENCE PROCEEDINGS

- 2022 Johnson, H. L., **McClintock, E.**, & Leech, N. (2022). A multifocal lens on qualitative data analysis: An affordance of networking theoretical approaches. In J. Hodgen, E. Geraniou, G. Bolondi & F. Ferretti. (Eds.), *Twelfth Congress of the European Society for Research in Mathematics Education (CERME 12)*, Feb 2022, Bozen-Bolzano, IT. <https://hal.archives-ouvertes.fr/hal-03749217>
- 2021 Donovan, C., Luce, C., & **McClintock, E.** (November 2021). Designing and scaffolding experiential learning with real clients to teach evaluation. Pre-conference presentation featured at the annual meeting of the American Evaluation Association.
- Johnson, H. L., Olson, G., **McClintock, E.**, Mesa, V., & Rasmussen, C. (2021). Theorizing departmental change in early undergraduate math courses: Leveraging digital resources to influence practice. *Transforming Institutions 2021 Virtual Conference*
- 2019 Johnson, H. L., **McClintock, E.**, & Gardner, A. (2019). Leveraging difference to promote students' conceptions of graphs as representing relationships between quantities. In U. T. Jankvist, M. van den Heuvel-Panhuizen, & M. Veldhuis (Eds.), *Proceedings of the 11th Congress of the European Society for Research in Mathematics Education (CERME 11)* (pp. 4539-4546). Utrecht, The Netherlands: Utrecht University.
- Johnson, H. L., **McClintock, E.**, & Gardner, A. (2019). Locally integrating theories to investigate students' transfer of mathematical reasoning. In U. T. Jankvist, M. van den Heuvel-Panhuizen, & M. Veldhuis (Eds.), *Proceedings of the 11th Congress of the European Society for Research in Mathematics Education (CERME 11)* (pp. 3114-3121). Utrecht, The Netherlands: Utrecht University.
- 2018 Johnson, H. L., **McClintock, E.**, Gardner, A. (2018). Promoting secondary students' shifts to covariational reasoning: Networking theories and task design. *Proceedings of the 42nd Annual Conference of the International Group for the Psychology of Mathematics Education*. Umeå, Sweden: PME.
- Johnson, H. L., **McClintock, E.**, Kalir, R., & Olson, G. (2018). Networking theories to design dynamic covariation techtivities for college algebra students. *Proceedings of the 21st Meeting of the MAA Special Interest Group on Research*

in Undergraduate Mathematics Education. San Diego, CA: RUME.

- 2017 Johnson, H. L., **McClintock, E.**, Hornbein, P., Gardner, A., & Grieser, D. (2017). When a critical aspect is a conception: Using multiple theories to design dynamic computer environments and tasks to foster students' discernment of covariation. *10th Congress of European Research in Mathematics Education, Dublin, Ireland*: DCU Institute of Education and ERME.
- 2015 Verma, G., Johnson, H., Dunlap, J., & **McClintock, E.** (2015). Fully online methods courses? Reconceptualizing STEM teacher preparation through spaces of learning. In Chandrasekharan, S., Murthy, S., Banerjee, G., Muralidhar, A. (Eds.). *Proceedings of epiSTEME 6—Emerging Computational Media and Science Education* (pp. 372-380), Cinnamon Teal Publishing, Mumbai, India.
- 2014 Hodkowski, N., Tzur, R., Johnson, H. L., **McClintock, E.** (2014, July). Relating student outcomes to teacher development of student-adaptive pedagogy. In Oesterle, S., Liljedahl, P., Nicol, C., & Allan, D. (Eds.). (2014). *Proceedings of the 38th Conference of the International Group for the Psychology of Mathematics Education and the 36th Conference of the North American Chapter of the Psychology of Mathematics Education* (Vol. 3, pp. 321-328). Vancouver, Canada: PME.
- 2013 Johnson, H. L., **McClintock, E.**, & Ahmed J. (2013, November). Coordinating representations of covarying quantities: Linking dynamic graphs & filling area animations. In M. Martinez & A. Castro Superfine (Eds.) *Proceedings of the 35th Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 323). Chicago, IL: University of Illinois at Chicago.
- 2012 Tzur, R., Johnson, H. L., **McClintock, E.**, & Riskey, R. (2012, November). Culturally-mathematically relevant pedagogy (CMRP): Fostering urban English language learners' multiplicative reasoning. In L. R. Van Zoest, J. J. Lo, & J. L. Kratky (Eds.), *Proceedings of the 34th Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 829-836). Kalamazoo, MI: Western Michigan University.
- Tzur, R., Johnson, H., **McClintock, E.**, Xin, Y. P., Si, L., Kenney, R., et al. (2012, July). Children's development of multiplicative reasoning: A schemes and tasks framework. In T.-Y. Tso (Ed.), *Proceedings of the 36th Conference of the International Group for the Psychology of Mathematics Education* (Vol. 4, pp. 155-162). Taipei, Taiwan: National Taiwan Normal University.

REFEREED BOOK CHAPTERS

- 2023 Johnson, H. L., Olson, G., **McClintock, E.**, Mesa, V., & Rasmussen, C. (2023). Theorizing a role of digital resources in promoting instructional change in mathematics departments. *Handbook of Digital Resources in Mathematics Education*. Springer.
- 2021 Johnson, H. L., **McClintock, E.**, & Gardner, A. (2021). Opening possibilities: An approach for investigating students' transfer of mathematical reasoning. In: C. Hohensee, & J. Lobato (Eds.) *Transfer of Learning. Research in Mathematics Education* (pp. 59-79). Springer. https://doi.org/10.1007/978-3-030-65632-4_3
- 2015 **McClintock, E.**, Peters, S., Kinol, D., Reed, S., Johnson, H., Tillema, E., Zbiek, R. M., Heid, M. K., Donaldson, S., Murray, E., & Blume, G. (2015). Similarity: Situation 32 from the MACMTL-CPTM situations project. In M. K. Heid, P. S. Wilson, with G. W. Blume (Eds.), *Mathematical understanding for secondary teaching: A framework and classroom-based situations* (pp. 343-350). Charlotte, NC: Information Age Publishing.
- Findell, B., **McClintock, E.**, Blume, G., Fox, R., Zbiek, R. M., Gleason, B. (2015). Division involving zero: Situation 1 from the MACMTL-CPTM situations project. In M. K. Heid, P. S. Wilson, with G. W. Blume (Eds.), *Mathematical understanding for secondary teaching: A framework and classroom-based situations* (pp. 95-101). Charlotte, NC: Information Age Publishing.
- Hembree, D., Tillema, E., **McClintock, E.**, Zbiek, R. M., Johnson, H., Wilson, P., Wilson, J., & Fox, R. (2015). Simultaneous equations: Situation 18 from the MACMTL-CPTM situations project. In M. K. Heid, P. S. Wilson & G. W. Blume (Eds.), *Mathematical understanding for secondary teaching: A framework and classroom-based situations* (pp. 229-237). Charlotte, NC: Information Age Publishing.
- Johnson, H., Karunakaran, S., Fox, R., & **McClintock, E.** (2015). Square root of i : Situation 9 from the MACMTL-CPTM situations project. In M. K. Heid, P. S. Wilson, with G. W. Blume (Eds.), *Mathematical understanding for secondary teaching: A framework and classroom-based situations* (pp. 171-177). Charlotte, NC: Information Age Publishing.
- Johnson, H., Karunakaran, S., **McClintock, E.**, Nazarewicz, P., Jacobson, E., & Edenfield, K. (2015). Absolute value in complex plane: Situation 7 from the MACMTL-CPTM situations project. In M. K. Heid, P. S. Wilson, with G. W. Blume (Eds.), *Mathematical understanding for secondary teaching: A framework and classroom-based situations* (pp. 155-161). Charlotte, NC: Information Age Publishing.
- Johnson, H., **McClintock, E.**, Zbiek, R. M., Gleason, B., Broderick, S., & Wilson J.

(2015). Graphing $\sin(2x)$: Situation 36 from the MACMTL-CPTM situations project. In M. K. Heid, P. S. Wilson, with G. W. Blume (Eds.), *Mathematical understanding for secondary teaching: A framework and classroom-based situations* (pp. 385-389). Charlotte, NC: Information Age Publishing.

Johnson, H., Reed, S., **McClintock, E.**, Jacobson, E., & Edenfield, K. (2015). The product rule for differentiation: Situation 42 from the MACMTL-CPTM situations project. In M. K. Heid, P. S. Wilson, with G. W. Blume (Eds.), *Mathematical understanding for secondary teaching: A framework and classroom-based situations* (pp. 425-431). Charlotte, NC: Information Age Publishing.

Peters, S., **McClintock, E.**, Kinol, D., Grady, M., Johnson, H., Konnova, S., & Heid, M. K. (2015). Least squares regression: Situation 41 from the MACMTL-CPTM situations project. In M. K. Heid, P. S. Wilson, with G. W. Blume (Eds.), *Mathematical understanding for secondary teaching: A framework and classroom-based situations* (pp. 421-424). Charlotte, NC: Information Age Publishing.

Peters, S., **McClintock, E.**, Kinol, D., Karunakaran, S., Zbiek, R. M., Heid, M. K., Singletary, L., & Donaldson, S. (2015). Mean and median: Situation 38 from the MACMTL-CPTM situations project. In M. K. Heid, P. S. Wilson, with G. W. Blume (Eds.), *Mathematical understanding for secondary teaching: A framework and classroom-based situations* (pp. 397-404). Charlotte, NC: Information Age Publishing.

Reed, S., Conner, A. M., Fox, R., Karunakaran, S., Heid, M. K., **McClintock, E.**, Johnson, H., Edenfield, K., Kilpatrick, J., & Gold, E. (2015). Summing the natural numbers: Situation 4 from the MACMTL-CPTM situations project. In M. K. Heid, P. S. Wilson, with G. W. Blume (Eds.), *Mathematical understanding for secondary teaching: A framework and classroom-based situations* (pp. 121-133). Charlotte, NC: Information Age Publishing.

Tillema, E., **McClintock, E.**, Heid, M. K., & Johnson, H. (2015). Properties of i and other complex numbers: Situation 8 from the MACMTL-CPTM situations project. In M. K. Heid, P. S. Wilson, with G. W. Blume (Eds.), *Mathematical understanding for secondary teaching: A framework and classroom-based situations* (pp. 171-177). Charlotte, NC: Information Age Publishing.

Wilson, P., Johnson, H., Shimizu, J., **McClintock, E.**, Zbiek, R. M., Heid, M. K., Grady, M., & Konnova, S. (2015). Calculation of sine: Situation 35 from the MACMTL-CPTM situations project. In M. K. Heid, P. S. Wilson, with G. W. Blume (Eds.), *Mathematical understanding for secondary teaching: A framework and classroom-based situations* (pp. 377-384). Charlotte, NC: Information Age Publishing.

Zbiek, R. M., Heid, M. K., Fox, R., Edenfield, K., Kilpatrick, J., **McClintock, E.**, Johnson, H., & Gleason, B. (2015). Inverse trigonometric functions: Situation 16 from the MACMTL-CPTM situations project. In M. K. Heid, P. S. Wilson, with G.

W. Blume (Eds.), *Mathematical understanding for secondary teaching: A framework and classroom-based situations* (pp. 217-222). Charlotte, NC: Information Age Publishing.

PEER REVIEWED PRESENTATIONS AT MEETINGS/CONFERENCES

- 2024 Arnold, S., Fox, J., Kantor, J., McNitt, S., & **McClintock, E.** (2024, Feb. 16). Learning together: Creating innovation through dialogue between traditional and alternative teacher preparation leaders. *American Association for Colleges of Teacher Education*, Denver, CO.
- 2021 Arnold, S., Fox, J., Kantor, J., **McClintock, E.**, & Stickney, D. (2021, Feb. 26). *Allies not adversaries: Lessons from and conversations with a clinically-centered teacher preparation program* [Conference session]. *American Association for Colleges of Teacher Education*. Virtual.
- 2019 Johnson, H. L., **McClintock, E.**, & Gardner, A. (2019). Leveraging difference to promote students' conceptions of graphs as representing relationships between quantities. *11th Congress of European Research in Mathematics Education*, Utrecht, Netherlands.
- Johnson, H. L., **McClintock, E.**, & Gardner, A. (2019). Locally integrating theories to investigate students' transfer of mathematical reasoning. *11th Congress of European Research in Mathematics Education*, Utrecht, Netherlands.
- 2018 Johnson, H. L., **McClintock, E.**, Kalir, J., & Olson, G. (2018, February). Networking theories to design covariation techtivities for college algebra students. *Conference on Research in Undergraduate Mathematics Education*, San Diego, CA.
- 2017 Johnson, H. L., **McClintock, E.**, Hornbein, P., Gardner, A., & Grieser, D. (2017, February). When a critical aspect is a conception: Using multiple theories to design dynamic computer environments and tasks to foster students' discernment of covariation. *10th Congress of European Research in Mathematics Education*, Dublin, Ireland.
- 2016 Johnson, H. L., **McClintock, E.**, & Hornbein, P. (2016, April). Ferris wheels and filling bottles: Investigating a student's transfer. *National Council of Teachers of Mathematics' Annual Research Meeting*, San Francisco, CA.
- 2015 **McClintock, E.** (2015, September). Common Core Math: Activities that support students' development of key early number knowledge, skill, and understanding. *Association for Supervision and Curriculum Development: Four Corners Regional Conference*, Farmington, NM.
- 2013 Johnson, H. L., **McClintock, E.**, & Ahmed J. (2013, September). Supporting students' quantitative & covariational reasoning: Designing & implementing tasks linking dynamic animations and graphs. *The 4th Realistic Mathematics*

Education Conference. Boulder, CO.

- 1997 Dana, N. F., Dobash L., Myers, J., Pirrone, J., **McClintock, E.**, Fueyo, J. (1997, January). Actualizing the professional development school at the elementary and senior high levels: Promises, possibilities, and pitfalls. Poster presentation at the Holmes Partnership Meeting, St. Louis, MO.

INVITED PRESENTATIONS

- 2024 McClintock, E. (2024, May). Asynchronous support of math specialists working with alternatively licensed math teachers. SyncOn Conference, Boulder, CO.
- 2022 McClintock, E. (2022, June). Professional learning communities: Centering math teachers' experiences in an alternative preparation program. SyncOn Conference, Boulder, CO.

SEMINARS & WORKSHOPS PRESENTED

- 2021 McClintock, E. (2021, April). Using learning trajectories to understand teaching and learning early math ideas. CU Denver, Denver, CO. (2 hours)
- 2019 McClintock, E. (2019, May). Task selection to support students' emerging fraction knowledge. CU Denver, Denver, CO. (Half-day)
- 2013-Present Seminars for alternative licensure teachers (2013-Present). On-going, monthly face-to-face, hybrid, and online sessions that support elementary, secondary, and special education teachers' development in topics such as: Instructional Design for All Learners, High Leverage Practices, Assessment, Unit Planning, Relationship-Driven Classrooms, Culturally Responsive Pedagogy, Mathematics Content Methods, and Literacy Instruction.
- 2012 Tzur, R., Johnson, H. L., **McClintock, E.**, Risley, R., & King, K. (2012, January). Multiplicative reasoning for elementary teachers, part 2. Goldrick Elementary School, Denver, CO. (Half-day)
- 2011 Tzur, R., Johnson, H. L., **McClintock, E.**, Risley, R., & King, K. (2011, November). Multiplicative reasoning for elementary teachers, part 1. Goldrick Elementary School, Denver, CO. (Half-day)
- Tzur, R., Johnson, H. L., **McClintock, E.**, Risley, R., & King, K. (2011, November). Early number concepts for elementary teachers. Goldrick Elementary School, Denver, CO. (Half-day)
- Tzur, R., Johnson, H. L., **McClintock, E.**, Risley, R., & King, K. (2011, September). Place value, base ten concepts for elementary teachers. Goldrick Elementary School, Denver, CO. (Half-day)

Tzur, R., Johnson, H. L., **McClintock, E.**, Risley, R., & King, K. (2011, August). Mathematics for elementary teachers: ECE-K, 1-2, and 3-4-5 grade bands. Goldrick Elementary School, Denver, CO. (Three half-days)

2006 Godine, H., & **McClintock, E.** (2006, July). K-6 grade-band. *Rural Academy for Mathematics Teachers*, Shippensburg, PA. (Two days)

GRANTS RECEIVED

2018 CU Denver, Non-Tenure-Track Faculty Development Grant, \$500

OTHER GRANT APPLICATIONS

2024 NSF IUSE:EDU, 3-year, two-million-dollar grant proposal, How Graphs Work: Cultivating a National Community to Transform Instruction in Introductory Mathematics

2019 CU Denver, Faculty Development Grant

2018 SEHD, Faculty Development Grant

PROFESSIONAL ORGANIZATIONS

2001 - Present: National Council of Teachers of Mathematics

2014 - Present: International Group for the Psychology of Mathematics Education

2016 - Present: European Society for Research in Mathematics Education

2021 - Present: American Educational Research Association

2021 - Present: American Evaluation Association

COURSES TAUGHT

FACE TO FACE

<u>Course</u>	<u>Level</u>	<u>Department</u>	<u>Institution</u>
Curriculum Experiences in Elementary Mathematics I: Numbers and Operations, E12.2115	Graduate	Steinhardt School of Culture, Education, and Human Development	New York University
Teaching Elementary Mathematics I, UEDU 5002/4002	Graduate/ Undergraduate	School of Education and Human Development	University of Colorado Denver
Teaching Elementary Mathematics II, UEDU 5003/4003	Graduate/ Undergraduate	School of Education and Human Development	University of Colorado Denver
Teaching Mathematics in the Elementary Schools, MTHED 420	Undergraduate	College of Education	The Pennsylvania State University

HYBRID

<u>Course</u>	<u>Level</u>	<u>Department</u>	<u>Institution</u>
STEM Capstone: Secondary Education, UEDU 4051/5051	Graduate/ Undergraduate	School of Education and Human Development	University of Colorado Denver
Mathematics for Elementary Teachers, UEDU 5400/MATH 3040	Graduate/ Undergraduate	School of Education and Human Development	University of Colorado Denver
Introduction to Research: Educational Research Methods, RSEM 5120	Graduate	School of Education and Human Development	University of Colorado Denver

ONLINE

<u>Course</u>	<u>Level</u>	<u>Department</u>	<u>Institution</u>
Geometrical Ways of Reasoning Underlying K-12 Common Core Standards, MTED 5623	Graduate	School of Education and Human Development	University of Colorado Denver
Introduction to Research: Educational Research Methods, RSEM 5120	Graduate	School of Education and Human Development	University of Colorado Denver
Research in Schools, RSEM 5080	Graduate	School of Education and Human Development	University of Colorado Denver

PROFESSIONAL SERVICE

PEER REVIEWING

Journal Articles

- 2009-Present *Journal for Research in Mathematics Education*, National Council of Teachers of Mathematics.
- 2018-Present *Mathematical Teaching and Learning, An International Journal*, Taylor Francis.
- 2023-Present *Journal of Mathematics Teacher Education*, Springer.

Conference Proposals

- 2018 Eleventh Congress of the European Society of Research in Mathematics Education (CERME 11), Utrecht, Netherlands
- 2007 & 2008 Psychology of Mathematics Education, North America (PME-NA)

Book Chapters

2022 Handbook of Digital Resources in Mathematics Education, Springer.

Other Proposals

2006 National Science Foundation, Preliminary Proposals for Discovery Research K-12

2005 & 2006 Pennsylvania Council of Teachers of Mathematics Yearbooks

COMMITTEE MEMBERSHIP

2018 Middle School Mathematics Endorsement Committee, Colorado Department of Education

11/2016 Elementary Math Specialist Endorsement Committee, Colorado Department of Education

CONSULTING

7/2014 Mathematics Course Consultant. HOPE Online Learning Academy, Douglas County Public Schools, Englewood, CO.