

MICHELLE MORGAN KING

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EDUCATION

- Ph.D. in EDUCATIONAL MATHEMATICS 2019
University of Northern Colorado; Greeley, Colorado
Doctoral minor in Applied Statistics and Research Methods
Dissertation Title: Standards-Based Grading Practices in Middle School
Mathematics Classrooms: A Multicase Study
Advisor: Dr. Robert A. Powers
Graduate Dean's Citation for Excellence Recipient
- M.A. in MATHEMATICS 2012
University of Northern Colorado; Greeley, Colorado
Emphasis in Teaching
- B.S. in MATHEMATICS EDUCATION 2008
Bemidji State University; Bemidji, Minnesota
Additional majors in Mathematics with an emphasis in General/Applied Mathematics
and Technology Education with a minor in Industrial Technology
Magna Cum Laude

WORK EXPERIENCE

- ASSISTANT PROFESSOR OF MATHEMATICS EDUCATION 2019 – Present
Department of Education; Department of Computer Science and Mathematics
Western Colorado University; Gunnison, Colorado
Responsibilities include instructing education and mathematics courses, service to the
University, and scholarly activity.
- GRADUATE TEACHING and RESEARCH ASSISTANT 2013 – 2019
UNIVERSITY STUDENT TEACHER SUPERVISOR
School of Mathematical Sciences
University of Northern Colorado; Greeley, Colorado
Responsibilities include instructing and assisting in the instruction of mathematics
content and teaching methods courses, and participating as a member of a data
analysis team for the NSF-funded *InformsMKT* research project. Additional
responsibilities included supervising and mentoring secondary mathematics student teachers.
- SECONDARY MATHEMATICS TEACHER 2008 – 2013
Clearbrook-Gonvick Junior Senior High School
Clearbrook-Gonvick School District; Clearbrook, Minnesota
Responsibilities included supervising and instructing junior and senior high school
mathematics and engineering courses. Additional responsibilities included serving as an
after-school tutor for all subjects with an emphasis in K-12 mathematics.

TEACHING EXPERIENCE

WESTERN COLORADO UNIVERSITY

Mathematics Courses

- Methods of Teaching Secondary Mathematics (Spring 2021)
- Mathematics for Elementary School Teachers II (Spring 2020, 2021)
- Secondary Mathematics from an Advanced Perspective (Fall 2020)
- Mathematics for Elementary School Teachers I (Fall 2019, 2020)
- College Algebra (Fall 2019 and Spring 2020)

Education Courses

- Methods and Strategies for Effective Mathematics Instruction (Spring 2020, 2021)
- Mathematical Investigations (Spring 2021)
- Content Area Learning (Fall 2019, 2020)
- Shaping School Systems (Fall 2019)

UNIVERSITY OF NORTHERN COLORADO

Mathematics and Statistics Courses

◇ Instructor of Record

- Calculus I for the Life Sciences (Spring 2019)
- Fundamentals of Mathematics II – Algebra, Probability, and Data Analysis (Fall 2018)
- Discrete Mathematics (Spring 2018)
- Topics in Calculus (Spring 2016)
- Calculus I (Fall 2015)
- Fundamentals of Mathematics I – Number and Operations (Fall 2014)
- Mathematics and Liberal Arts (Spring 2014)
- Introduction to Statistical Analysis (Fall 2013)

◇ Co-Teaching Mentorships

- Elements of Discrete Mathematics (Fall 2017)
- Mathematical Modeling (Fall 2016)
- Mathematical Foundations for Teachers (Fall 2015)

Methods of Teaching Courses

◇ Instructor of Record

- Principles of Teaching Secondary Mathematics (Spring 2017)
- Methods of Teaching Mathematics (Spring 2015)
- Clinical Experience – Secondary (Spring 2014)

◇ Co-Teaching Mentorships

- Methods of Teaching Mathematics (Fall 2016)
- Principles of Teaching Secondary Mathematics (Spring 2016)
- Methods of Teaching Mathematics (Spring 2014; Fall 2014)

TEACHING EXPERIENCE (Continued)

CLEARBROOK-GONVICK JUNIOR SENIOR HIGH SCHOOL

Mathematics Courses:

- Math/Algebra 8 (Grade 8; 2008 – 2013)
- Algebra I (Grade 9; 2008 – 2011)
- Geometry (Grades 9 and 10; 2008 – 2012)
- Algebra II (Grades 10, 11, and 12; 2012 – 2013)
- College Algebra (Grades 11 and 12; 2012 – 2013)

Project Lead the Way Engineering Courses:

- Introduction to Engineering Design (2009 – 2011; 2012 – 2013)
- Computer Integrated Manufacturing (2011 – 2012)

RESEARCH EXPERIENCE

<i>Initiating a Foundational Research Model for Secondary Mathematical Knowledge for Teaching (INFORMS MKT)</i> Research Assistant and Collaborator; NSF-Funded Research Project	Ongoing
<i>Weathering the Storm: Stories from a Semester in Graduate School</i> Researcher; Qualitative Research Project	Ongoing
<i>Alternative Scoring Methods in Collegiate Mathematics Courses</i> Researcher; Qualitative Research Project	2018
<i>Standards-Based Grading Practices in Middle School Mathematics Classrooms: A Multicase Study</i> Researcher; Qualitative Research Project (Doctoral Dissertation)	2017
<i>Exploration of Secondary Mathematics Teachers' Teaching Practices</i> Researcher; Survey Research Project	2017
<i>Exploration of a Secondary Mathematics Teacher's Planning Process</i> Researcher; Qualitative Research Project	2016
<i>Facilitating Classroom Discourse: Lessons Learned from a Project Designed to Help Pre-Service Teachers Implement High-Cognitive Demand Tasks</i> Researcher; Qualitative Research Project	2016
<i>An Investigation of Pre-Service Teachers' Conceptual Understanding as a Result of Participation in a Mathematics Content Course</i> Researcher; Qualitative Research Project	2015
<i>Assessment of Pre-Service Secondary Mathematics Teachers' Abilities to Complete and Teach PARCC Assessment Items</i> Researcher; Quantitative Research Project	2015

RESEARCH EXPERIENCE (Continued)

Learning from Failure: A Case Study of Learning from Repeating an Introductory Mathematics Course for Pre-Service Elementary Teachers 2014
Researcher; Qualitative Research Project

SERVICE EXPERIENCE

DEPARTMENT OF EDUCATION FACULTY REPRESENTATIVE 2019 – Present
Curriculum Committee; Western Colorado University

PROJECT MENTOR 2020, 2021
Senior Mathematics Project; Western Colorado University

SUBMISSION REVIEWER 2019
Quadrennial Conference; International Congress on Mathematics Education

SUBMISSION REVIEWER 2019
Annual Conference; Psychology of Mathematics Education (NA)

GRADUATE STUDENT ASSOCIATION REPRESENTATIVE 2017 – 2019
Academic Appeals Board; University of Northern Colorado

INTRODUCTORY MATHEMATICS TUTOR 2013 – 2019
Tutoring Lab; University of Northern Colorado School of
Mathematical Sciences

GRADUATE STUDENT ASSOCIATION REPRESENTATIVE 2017 – 2018
University-Wide Graduate Council; University of Northern Colorado

GRADUATE STUDENT REPRESENTATIVE 2017 – 2018
Graduate Program Committee; University of Northern Colorado School of
Mathematical Sciences

GRADUATE STUDENT REPRESENTATIVE 2017 – 2018
Director Search Committee; University of Northern Colorado School of
Mathematical Sciences

PUBLICATION REVIEWER 2017 – 2018
Mathematics Teaching in the Middle School; National Council of
Teachers of Mathematics

SUBMISSION REVIEWER 2017, 2018
Annual Conference; Association of Mathematics Teacher Educators

SERVICE EXPERIENCE (Continued)

SUBMISSION REVIEWER Research Conference; National Council for Teachers of Mathematics	2017
RESEARCH PROJECT PROPOSAL REVIEWER McNair Scholars Program; University of Northern Colorado	2017
SUBMISSION REVIEWER Journal of Mathematics Education Leadership; National Council of Supervisors of Mathematics	2016

CONFERENCE PRESENTATIONS

<i>Bullseyes and circles: Alternative scoring practices in collegiate mathematics courses</i> 14 th International Congress on Mathematics Education; Shanghai, China (Hybrid)	2021 <i>Accepted</i>
<i>Identifying mathematical learning opportunities in a task as a missing, essential skill of teaching</i> 14 th International Congress on Mathematics Education; Shanghai, China (Hybrid)	2021 <i>Accepted</i>
<i>The unstandardized nature of standards-based grading in middle school mathematics classrooms</i> 14 th International Congress on Mathematics Education; Shanghai, China (Hybrid)	2021 <i>Accepted</i>
<i>Teachers' review of tasks as a tool for examining secondary teachers' mathematical knowledge for teaching</i> Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education; St. Mazatlán, Mexico (Hybrid)	2021 <i>Accepted</i>
<i>Rough drafts and discussion boards as tools for developing conceptual understanding</i> Annual Conference of the Association of Mathematics Teacher Educators; Virtual Conference	2021
<i>Task analysis as a means of investigating mathematics knowledge for teaching</i> Annual Conference of the Association of Mathematics Teacher Educators; Virtual Conference	2021
<i>A guide for categorizing tasks in mathematics education courses</i> Annual Conference of the Association of Mathematics Teacher Educators; Virtual Conference	2021
<i>The unstandardized nature of standards-based grading in mathematics classrooms</i> National Council of Teachers of Mathematics Research Symposium; Chicago, IL	2020 <i>Canceled</i>

CONFERENCE PRESENTATIONS (Continued)

- Alternative scoring practices in collegiate mathematics courses* 2020
Joint Mathematics Meetings; Denver, CO
- Collaborative research: Initiating a foundational research model for secondary knowledge for teaching (Informs MKT)* 2020
Joint Mathematics Meetings; Denver, CO
- Standards-based grading practices in middle-school mathematics classrooms: A multicasestudy* 2019
College of Natural and Health Sciences 14th Annual Student Research Celebration; University of Northern Colorado; Greeley, CO
- Alternative scoring methods in collegiate mathematics courses* 2019
Annual Conference on Research on Undergraduate Mathematics Education; Oklahoma City, OK
- Standards-based grading and its implications for mathematics teacher preparation and professional development* 2019
Annual Conference of the Association of Mathematics Teacher Educators; Orlando, FL
- High school teachers' mathematical knowledge for teaching exponential functions: MKT as decision-making* 2018
Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education; Greenville, SC
- Traditional versus standards-based grading: A comparison of the teaching of secondary mathematics teachers* 2018
Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education; Greenville, SC
- Facilitating classroom discourse: lessons learned from a project designed to help pre-service teachers implement high-cognitive demand tasks (research focused)* 2016
College of Natural and Health Sciences 11th Annual Student Research Celebration; University of Northern Colorado; Greeley, CO
- Facilitating classroom discourse: lessons learned from a project designed to help pre-service teachers implement high-cognitive demand tasks (research focused)* 2016
Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education; Tucson, AZ
- Facilitating classroom discourse: lessons learned from a project designed to help pre-service teachers implement high-cognitive demand tasks (practitioner focused)* 2016
Annual Conference of the Association of Mathematics Teacher Educators; Irvine, CA

CONFERENCE PRESENTATIONS (Continued)

Using High Cognitive Demand Tasks to Foster Successful Classroom Discussions 2015
Annual Conference of the Colorado Council of Teachers of Mathematics; Denver, CO

Learning from Failure: A Case Study of Learning from Repeating an Introductory Mathematics Course for Pre-Service Elementary Teachers 2014
Applied Statistics and Research Methods Research Night; University of Northern Colorado; Greeley, CO

JURIED PUBLICATIONS

Morgan, M., & Powers, R. (2018). Traditional versus standards-based grading: A comparison of the teaching practices of secondary mathematics teachers. In T. E. Hodges, G. J. Roy, & A. M. Tyminski (Eds.), *Proceedings of the 40th annual meeting of the North American chapter of the international group for the psychology of mathematics education* (pp. 1146). Greenville, SC: University of South Carolina & Clemson University.

Troutd, M. L., Parker, C. F, Lee, A., Morgan, M., Reiten, L., Novak, J. (2018). High school teachers' mathematical knowledge for teaching exponential functions: MKT as decision-making. In T. E. Hodges, G. J. Roy, & A. M. Tyminski (Eds.), *Proceedings of the 40th annual meeting of the North American chapter of the international group for the psychology of mathematics education* (pp. 512-515). Greenville, SC: University of South Carolina & Clemson University.

Morgan, M. (2017). Mastery-based grading: An exploration of one teacher's implementation of reform grading practices. In E. Galindo, & J. Newton (Eds.), *Proceedings of the 39th annual meeting of the North American chapter of the international group for the psychology of mathematics education* (pp. 1230-1233). Indianapolis, IN: Hoosier Association of Mathematics Teacher Educators.

Morgan, M., & Powers, R. (2016). Facilitating classroom discourse: A project designed to help preservice teachers implement high-cognitive demand tasks. In M. B. Wood, E. E. Turner, M. Civil, & J. A. Eli (Eds.), *Proceedings of the 38th annual meeting of the North American chapter of the international group for the psychology of mathematics education* (pp. 955). Tucson, AZ: The University of Arizona.

Morgan, M. (2015). Learning from failure: A case study of repeating a mathematics course for preservice elementary teachers. In T. G. Bartell, K. N. Bieda, R. T. Putnam, K. Bradfield, & H. Dominguez (Eds.), *Proceedings of the 37th annual meeting of the North American chapter of the international group for the psychology of mathematics education* (pp. 558-561). East Lansing, MI: Michigan State University.

AWARDS and HONORS

STaR FELLOWSHIP Association of Mathematics Teacher Educators	2020
GRADUATE DEAN'S SCHOLARSHIP Graduate School; University of Northern Colorado	2013 – 2018
OUTSTANDING TEACHING BY A GRADUATE STUDENT AWARD School of Mathematical Sciences; University of Northern Colorado	2015
OUTSTANDING FACULTY AND STAFF RECOGNITION First Year Scholars Program; University of Northern Colorado	2014

CERTIFICATIONS and LICENSURES

MATHEMATICS (GRADES 5-12) Full Professional Teaching License Minnesota Department of Education **Renewal in process.	2008 – 2019
TECHNOLOGY (GRADES 5-12) Full Professional Teaching License Minnesota Department of Education **Renewal in process.	2008 – 2019
COMPUTER INTEGRATED MANUFACTURING INSTRUCTOR Project Lead the Way Certification Rochester Institute of Technology; Rochester, New York	2010
INTRODUCTION TO ENGINEERING DESIGN INSTRUCTOR Project Lead the Way Certification University of Minnesota – Twin Cities; Minneapolis, Minnesota	2009

PROFESSIONAL MEMBERSHIPS

North American Chapter of the International Group for the Psychology of Mathematics Education	2016 – Present
Association of Mathematics Teacher Educators	2015 – Present
National Council of Teachers of Mathematics	2009 – Present
Mathematics Association of America	2009 – Present