

**GABRIEL T. MATNEY**  
<https://www.gabrielmatney.com/>

1801 Timber Ridge Drive  
Bowling Green, OH 43402

419-819-5600  
[gabrielmatney@gmail.com](mailto:gabrielmatney@gmail.com)

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**I. Academic Degrees**

<u>Date</u>	<u>Degree</u>	<u>Major</u>	<u>University</u>
2004	Ph.D.	Mathematics Education	University of Oklahoma, Norman OK
2000	M.S.	Applied Mathematics	University of Oklahoma, Norman OK
1997	B.S.E	Mathematics Education (Endorsement in Computer Science)	Oklahoma Baptist University, Shawnee, OK

**II. Academic Positions**

**A. Teaching Positions**

2018 – Present	<b>Professor.</b> School of Teaching and Learning, College of Education and Human Development, Bowling Green State University, Bowling Green, OH.
2011 – 2018	<b>Associate Professor.</b> School of Teaching and Learning, College of Education and Human Development, Bowling Green State University, Bowling Green, OH.
2004 – 2011	<b>Associate Professor.</b> Mathematics Department, College of Science, Engineering, Technology, and Mathematics, University of Arkansas – Fort Smith, Fort Smith, AR.
2001 – 2004	<b>Mathematics Teacher.</b> Santa Fe South Public Schools, Oklahoma City, OK.
2000 – 2001	<b>Mathematics Teacher.</b> Noble Public Schools, Noble, OK.
1997 – 2004	<b>Graduate Teaching Instructor.</b> Department of Mathematics, College of Arts and Science, University of Oklahoma, Norman OK.

**B. Administrative Positions**

**Department Chair.** (2001 – 2004). Mathematics Department, Santa Fe South Public Schools, Oklahoma City, OK

**Gear-UP Grant Coordinator** (2002 – 2004). Santa Fe South Public Schools, Oklahoma City, OK

**III. Non-academic Positions**

- 1998 – 2000 **Online Tutor.** Tutored mathematics via voice and online whiteboard technology to students from school districts across the United States for Tutornet.com, Reston, VA
- 1996 – 1999 **Dillard’s.** Sales Associate
- 1995 – 1997 **Technology Lab Assistant.** Oklahoma Baptist University
- 1995 – 1996 **Produce Stocker.** Budget Saver Grocery Store
- 1995 **Expo.** Red Lobster
- 1991 – 1995 **Janitorial Supervisor.** JaniKing Franchise #49

#### **IV. Teaching Experiences or Academic Service**

##### **A. Teaching Experiences**

##### **1. Undergraduate Courses**

###### **At Bowling Green State University (2011-Present)**

- EDTL 2742 SP 2018: *Introduction to Secondary Mathematics II* (1 section)
- EDTL 2741 FA 2017: *Introduction to Secondary Mathematics I* (1 section)
- EDTL 2742 SP 2017: *Introduction to Secondary Mathematics II* (1 section)
- EDTL 2741 FA 2016: *Introduction to Secondary Mathematics I* (1 section)
- EDTL 3230 FA 2015: *Early Childhood Mathematics Methods* (2 sections)
- EDTL 4460 FA 2014: *Investigations in Mathematics for the Middle Childhood Teacher*, BGSU (1 section)
- EDTL 4900 FA 2014: *Culture and Learning in Thailand*, BGSU (1 section)
- EDTL 2740 SP 2014: *Introduction to Secondary Mathematics* (1 section)
- EDTL 4900 FA 2013: *Culture and Learning in Thailand* (1 section)
- EDTL 3230 FA 2013: *Early Childhood Mathematics Methods* (2 sections)
- EDTL 4840 SP 2013: *Advanced Seminar in Mathematics Teaching* (1 section)
- EDTL 3230 FA 2012: *Early Childhood Mathematics Methods* (2 sections)
- EDTL 3230 SP 2012: *Early Childhood Mathematics Methods* (1 sections)
- EDTL 2740 FA 2011: *Introduction to Secondary Mathematics* (1 section)
- EDTL 3230 FA 2011: *Early Childhood Mathematics Methods* (2 sections)

###### **At University of Arkansas Fort Smith (2004-2011)**

- MATH 1403 *College Algebra*
- MATH 1453 *College Trigonometry*
- MATH 2333 *Structures of Arithmetic*
- MATH 2343 *Informal Geometry*
- MATH 3803 *Pedagogy for Numeric Systems*
- MATH 3813 *Pedagogy for Geometry and Spatial Reasoning*
- MATH 3823 *Pedagogy for Advanced Mathematics*
- EDUC 490A *Mathematics Education Internship*

###### **At the University of Oklahoma (1997-2004)**

- Calculus for Business, Life, and Social Sciences

Calculus for Engineering and Science  
Geometric Systems  
Introduction to Elementary Functions  
Secondary Mathematics Education Mentoring  
Mathematical Systems  
Mathematical Systems and Data Analysis  
Pre-calculus for Business, Life, and Social Science  
Special Topics and Methods for Secondary Mathematics Teachers

## 2. Undergraduate-Graduate Courses

EDTL 4501/5501 SU 2012: *Upper Elementary Mathematics Instruction*

## 3. Graduate Courses

EDTL 6800 FA 2016: *Researching Teacher Knowledge of the SMP's*

EDTL 6800 FA 2016: *Researching Lesson Study and the SMP's*

EDTL 6800 SU 2016: *Mathematics Learning Across Cultural Contexts*

EDTL 6800 SP 2016: *Culture and Chinese Mathematics Teachers Knowledge*

EDTL 6800 SU 2015: *Culture and Learning in New Zealand and Fiji*

EDTL 6410 SU 2014: *Advanced Methods in Elementary School Mathematics*

EDTL 6800 SP 2014: *Reasoning and Sense Making in Elementary Mathematics*

EDTL 6800 SU 2014: *Curriculum Design for Connections in Elementary Mathematics*

EDTL 6800 FA 2014: *Models for Reasoning in Elementary Mathematics*

EDTL 6800 FA 2013: *Culture and Learning in Thailand*

EDTL 6410 SU 2013: *Advanced Methods in Elementary School Mathematics*

EDTL 6800 SP 2013: *Reasoning and Sense Making in Elementary Mathematics*

EDTL 6800 SU 2013: *Curriculum Design for Connections in Elementary Mathematics*

EDTL 6800 FA 2013: *Models for Reasoning in Elementary Mathematics*

EDTL 6800 SP 2012: *Reasoning and Sense Making in Elementary Mathematics*

EDTL 6800 SU 2012: *Curriculum Design for Connections in Elementary Mathematics*

EDTL 6800 FA 2012: *Models for Reasoning in Elementary Mathematics*

## 4. Other Teaching

### Co-teaching

EDTL 6800 SP 2014: *Reasoning and Sense Making in Middle Grades Mathematics*

EDTL 6800 SU 2014: *Curriculum Design for Connections in Middle Grades*

*Mathematics*

EDTL 6800 FA 2014: *Common Core Instruction in Middle Grades Mathematics*

EDTL 6800 SP 2013: *Reasoning and Sense Making in Middle Grades Mathematics*

EDTL 6800 SU 2013: *Curriculum Design for Connections in Middle Grades*

*Mathematics*

EDTL 6800 FA 2013: *Common Core Instruction in Middle Grades Mathematics*

EDTL 6800 SP 2012: *Reasoning and Sense Making in Middle Grades Mathematics*

EDTL 6800 SU 2012: *Curriculum Design for Connections in Middle Grades*

*Mathematics*

EDTL 6800 FA 2012: *Common Core Instruction in Middle Grades Mathematics*

### International Teaching

EDTL 4900 WT 2018: Culture and Mathematics Learning in Thailand, BGSU  
 EDTL 4900 SP 2017: Australia and Fiji: Systems of Learning Across Cultural Contexts  
 EDTL 4900 FA 2016: Cultural & Mathematics Learning in China  
 FA 2015: Representations in School Mathematics at Khon Kaen University (KKU)  
 EDTL 4900 FA 2015: Culture and Learning in Thailand, BGSU  
 EDTL 4900 FA 2015: Culture and Learning in New Zealand and Fiji, BGSU  
 EDTL 4900 FA 2014: Culture and Learning in Thailand, BGSU  
 EDTL 4900 FA 2013: Culture and Learning in Thailand, BGSU  
 OSS 4203 SP 2011: Cultural Engagement and Travel in Italy, UAFS  
 FA 2011: Mathematics Methods at Kamphaeng Phet Rajabhat University (KPRU)  
 Thailand

## 5. Thesis and Dissertation Students

Master's and Honors Projects:

Julia Porcella -- *Teacher Dialogue About the Standards for Mathematical Practice (SMPs) Occurring in the Debriefing Phase of Open-Approach Lesson Study*. 2018  
 Alyssa Lustgarten -- *Impact of Number Talks on Pre-service Teachers' Number Sense*. 2018  
 Rachel Wiemken -- *Examination of Students' Problem Solving through a Model Eliciting Activity*. 2018  
 Allison Marino -- *Preservice Teacher Knowledge of the Standards for Mathematical Practice*. 2017  
 Nisakorn Boonsena -- *Teachers' Perceptions about Teaching Practice in Lesson Study incorporating Open Approach*. 2017  
 Kelly Largent -- *Preservice Teacher Development through Math Camp Involvement*. 2017  
 Corrinne Sullivan -- *An Investigation of Students' Perceptions of Doing Mathematics*. 2016  
 Gregory Sattler -- *Open to Change; Using the NZ Curriculum Model to Shape a New Curricular Foundation*. 2015  
 Morgan Tucker -- *Enlightenment in Education: Buddhist Influences of Kindness in Thai Education*. 2015

### BGSU ACTION Research

Taylor Nicholson -- *The Effectiveness of Think-Pair-Share in the Classroom*. 2018  
 Jessica Huot -- *The Effectiveness of Lesson Openers on Students' Engagement in Class*. 2018  
 Alyssa Lustgarten -- *Impact of Kinesthetic Learning on Student Knowledge Retention and Attitudes toward Mathematics*. 2017  
 Brittany Gates -- *Student Attitudes towards Mathematical Problem Solving about Athletics Based Questions*. 2017  
 Allison Marino -- *Homework Turn-In Procedures Effect on Student Effort and Time*. 2016  
 Rachel Wiemken -- *Formative Assessment in a Secondary Mathematics Classroom*. 2016

- Megan Kelly -- *Perceived Student Relevance on the Different Contexts of Real World Problems*. 2015
- Georgia Ike – *The Effects of Inquiry Problems on Students Construction of Mathematical Reasoning and Viable Arguments*. 2014
- Arianna Sampsel -- *Finding the Effects of Think-Pair-Share on Student Confidence and Participation*. 2013
- Tyler Erb -- *Gamification of the Math Classroom to Engage Students*. 2013

## 6. Membership on Dissertation Committees

Mohammad Yousef in Mathematics & Statistics - *Two-Stage SCAD Lasso for Linear Mixed Model Selection*

## 7. Membership on Thesis Committees

- Megan Mortier: M.Ed. Curriculum & Teaching, BGSU, 2014
- Tyler Spears: M.Ed. Curriculum & Teaching, BGSU, 2013
- Morayo Omosalewa: M.Ed. Curriculum & Teaching, BGSU, 2013
- Kait Kasperski: M.Ed. Curriculum & Teaching, BGSU, 2013
- Nathan Clark: *An Introduction to Hyperbolic Geometry Design*, UAFS, 2011
- Brooke Daugherty: *Pentominos Groups*, UAFS, 2009
- Phillip Watson: *Fractal Hausdorff-Besicovitch Dimensions*, UAFS, 2008
- Jessica Rainwater: *Effects of Integrated Self-Guided Projects in Calculus*, UAFS, 2008

## V. Curriculum Development

### A. Courses at BGSU

- EDTL 2742 SP 2017: *Introduction to Secondary Mathematics II*
- EDTL 2741 FA 2016: *Introduction to Secondary Mathematics I*
- EDTL 2740 SP 2014: *Introduction to Secondary Mathematics*
- EDTL 6410 SU 2013: *Advanced Methods in Elementary School Mathematics*
- EDTL 6800 SP 2012: *Reasoning and Sense Making in Elementary Mathematics*
- EDTL 6800 SU 2012: *Curriculum Design for Connections in Elementary Mathematics*
- EDTL 6800 FA 2012: *Models for Reasoning in Elementary Mathematics*
- EDTL 6800 SP 2012: *Reasoning and Sense Making in Middle Grades Mathematics*
- EDTL 6800 SU 2012: *Curriculum Design for Connections in Middle Grades Mathematics*
- EDTL 6800 FA 2012: *Common Core Instruction in Middle Grades Mathematics*

### International Studies Program

- EDTL 4900 SP 2016: *Australia and Fiji: Systems of Learning Across Cultural Contexts*, BGSU
- EDTL 4900 FA 2016: *Cultural & Mathematics Learning in China*, BGSU
- EDTL 4900 FA 2015: *Culture and Learning in Thailand*, BGSU
- EDTL 4900 FA 2015: *Culture and Learning in New Zealand and Fiji*, BGSU
- EDTL 4900 FA 2014: *Culture and Learning in Thailand*, BGSU
- EDTL 4900 FA 2013: *Culture and Learning in Thailand*, BGSU

## Courses at UAFS (2004-2011)

### Early Childhood Program

MATH 1333 *Number Sense and Data Analysis I*  
MATH 1343 *Number Sense and Data Analysis II*  
MATH 2233 *Geometry and Measurement I*  
MATH 2243 *Geometry and Measurement II*  
MATH 2353 *Algebraic Thinking for Curricular Connections*

### Middle Level Program

MATH 2333 *Structures of Arithmetic*  
MATH 2343 *Informal Geometry*

### Secondary Program

MATH 3803 *Pedagogy for Numeric Systems*  
MATH 3813 *Pedagogy for Geometry and Spatial Reasoning*  
MATH 3823 *Pedagogy for Advanced Mathematics*  
EDUC 490A *Mathematics Education Internship*

### International Studies Program

OSS 4203 SP 2011: *Cultural Engagement and Travel in Italy*, UAFS

## B. Workshops and Speeches Given

### i. Invited Speeches

[Invited] **Matney, G.** (2018). *Leadership in Mathematics Education: Developing Partnerships across Universities and other difficult distances*. Ignite Leadership Conference at the Sixty-eighth annual conference of the Ohio Council of Teachers of Mathematics, Akron, Ohio.

[Invited **Keynote**] **Matney, G.** (2017). *STEM Learning: The Power and Promise of Developing a Conjecturing Modality*. **Keynote** speech given for the NWO STEM Teaching Symposium Conference. Bowling Green, Ohio, USA.

[Invited **Keynote**] **Matney, G.** (2017). *Model Eliciting Activities: Conversations about Context, Culture, and Mathematical Assumptions: Possibilities for Cross-border Mathematical Discourse among Students*. **Keynote** speech given at the APEC- Khon Kaen International Symposium 2017. Khon Kaen, Thailand.

[Invited **Keynote**] **Matney, G.** (2017). *Creating Global Connections: Engaging the World with a Conjecturing Modality*. **Keynote** speech given at the 4<sup>th</sup> Annual Conference on Global Engagement. Bowling Green, Ohio, USA.

- [Invited] **Matney, G.** (2018). *Developing Leadership Proficiency in Mathematics Education*. Emerging Leadership Conference at the Sixty-seventh annual conference of the Ohio Council of Teachers of Mathematics, Columbus, Ohio.
- [Invited] **Matney, G.** (2017). Preparing for College and Career Readiness in the United States. Special Lecture for the International School of Suva. Fiji, Suva.
- [Invited] **Matney, G.** (2017). Fluency in Mathematics: Authentic Spaces for Number Development in Pre-K to Grade “N”. Special Lecture of Mathematics Numeracy in Primary Contexts for the University of Queensland. Brisbane, Australia.
- [Invited] **Matney, G.** (2017). *Impacts of Lesson Study incorporating Open Approach on U.S. Teachers’ Mathematics Knowledge for Teaching and Students’ Mathematical Knowledge*. Yuelu Mountain Mathematics Education Forum. Hunan Province, Changsha, China.
- [Invited] **Matney, G.** (2016). *Creating Mathematical Thinking in College Courses: Thoughts and Practices from Collective Wisdom*. Special Lecture Series: Graduate Students Learning from Professors’ Mathematics Teaching Experiences sponsored by SetGo/Wider Mathematics Initiatives.
- [Invited] **Matney, G.** (2016). *Leadership in Mathematics Education: The case for how preservice teachers can change the equation on student’s mindset*. Emerging Leadership Conference at the Sixty-sixth annual conference of the Ohio Council of Teachers of Mathematics, Sandusky, Ohio.
- [Invited] **Matney, G.** & Boonsena, N. (2016). *Lesson Study as Professional Learning and Research*. iTeach iLearn Innovations in Teaching and Learning Seminar. Bowling Green State University, Bowling Green, Ohio.
- [Invited] **Matney, G.,** Schlosser, M. Sullivan, C., & Marino, A. (2016, May). *Learning Mathematics through Problem Solving*. Special Lecture for Dizhi Middle School. Changsha, China.
- [Invited] **Matney, G.,** Schlosser, M. Sullivan, C., & Marino, A. (2016, May). *Engaging Students for a Growth Mindset through Mathematics Camps*. Special Lecture for Hunan Normal University. Changsha, China.
- [Invited] **Matney, G.** (2016, May). *Fluency in Mathematics: Spaces of Cognitive Reorganization in a Child*. Special Lecture for the University of Queensland. Brisbane, Australia.
- [Invited] **Matney, G.,** Schlosser, M. Sullivan, C., & Marino, A. (2016, May). *Educational Collaborations in International Contexts*. Special Lecture for the University of Queensland. Brisbane, Australia.

- [Invited] **Matney, G.** (2016, April 28). *Fluency in Mathematics: Meaning and Application for Ohio's Children*. Special Lecture for the Ohio Mathematics Education Leadership Council. Columbus, OH.
- [Invited **Keynote**] **Matney, G.** (2016, February 8). *STEM and the Humanities: Greater than the Sum of Their Parts*. **Keynote** speech given to the Ohio Junior Science and Humanities Symposium. Northwest Ohio Center for Excellence in STEM Education, Bowling Green State University, OH.
- [Invited] **Matney, G.** (2016, February 8). *The Mathematics of Romance: The Intimate Connection between Two Worlds*. Workshop given to the Bowling Green Council of Teachers of Mathematics. Bowling Green State University, OH.
- [Invited] **Matney, G.** (2015, January 21). *Developing Faculty-led International Service Learning Courses*. Service Learning Community Special Lecture. Bowling Green State University, OH.
- [Invited] **Matney, G.** (2015, December 3). *Researching Mathematical Knowledge for Teaching in the Lesson Study Context*. Special Lecture Series for Khon Kaen University, Khon Kaen, Thailand.
- [Invited] **Matney, G.** (2015, November 19). *Teachers' Mathematical Knowledge for Teaching*. US-Thailand Research Collaborative for Mathematics Education. Khon Kaen University, Khon Kaen, Thailand.
- [Invited] **Matney, G.** (2015, November 17). *Experiencing Mathematical Knowledge for Teaching*. Special Lecture Series for Khon Kaen University, Khon Kaen, Thailand.
- [Invited] **Matney, G.** (2014, October-December). *Connecting the Standards to Best Mathematics Teaching Practice*. Northwest Ohio Center for Excellence in STEM Education's Math Mini Series (4 sessions). Bowling Green, OH.
- [Invited] **Matney, G.** (2014, May 6). *K-12 Mathematics Applications and Cognitive Demand*. M-Learning Symposium. Center of Excellence for 21<sup>st</sup> Century Educator Preparation at BGSU, Bowling Green, OH.
- [Invited] **Matney, G.** (2014, February 4). *Using social media to promote reflection during international learning courses*. Program Directors Meeting for BGSU Study Abroad. Bowling Green, OH.
- [Invited] **Matney, G.** (2013). *Energy: Connecting mathematics and science through roller coasters*. Women in Science, Technology, Engineering, and Mathematics Conference, Continuing and Extended Education at BGSU, Bowling Green, OH.
- [Invited] **Matney, G. & Bostic, J.** (2013, August). *GeoGebra as a CCSSM Tool for Reasoning and Sensemaking*. GeoGebra Dynamic Mathematics North American Conference, Miami University, Oxford, OH.



- [Invited] **Matney, G.** & Culver, M. (2013, May). *Reflections from a Digital Texts Learning Community Mathematics and Language Arts*. BGSU Digital Texts Symposium sponsored by 21<sup>st</sup> Century Educator Preparation Center for Excellence.
- [Invited] **Matney, G.** & Panarach, Y. (2013, April). *Internationalizing Research Agenda's in Mathematics Education*. Mathematics Education Seminar, College of Arts and Science, BGSU.
- [Invited] **Matney, G.** & Matney, T. (2011). *Developing number in the early years*. Early Childhood Conference, Continuing and Extended Education at BGSU, Bowling Green, OH.
- [Invited] **Matney, G.** (2011). *Energy: Connecting mathematics and science through roller coasters*. Women in Science Conference, Continuing and Extended Education at BGSU, Bowling Green, OH.
- [Invited] Bostic, J. & **Matney, G.** (2011). *Teaching and assessing through problem-solving contexts*. NWO Symposium on Science, Mathematics, and Technology Teaching, Perrysburg, OH.
- [Invited] **Matney, G.** (2011). *Slide translations*. Invited speaker for the Bowling Green Council of Teachers of Mathematics.
- [Invited] **Matney, G.** (2002). *Algebraic processes of formula creation*. Tulsa Council of Teachers of Mathematics Fall Conference. Tulsa, OK.
- [Invited] **Matney, G.** (2002). *The integration of algebra across subjects: Algebra as formula creation for the enrichment of further student experience*. Algebra Institute at the Annual Meeting of the Oklahoma Council of Teachers of Mathematics. Oklahoma City, OK.
- [Invited] **Matney, G.** (2002). *Math authenticity: A brain storming session*. Fifth Annual Winter Institute of Oklahoma Universities Center for Educational and Community Renewal. Norman, OK.

## ii. Workshops on Mathematics Teaching and Learning

- Caswell, C., Nicholson, T., & **Matney, G.** (2018, October 30). *Become a Mathmagician*. The 34<sup>th</sup> Annual Women in STEM Program of the Northwest Ohio Center for Excellence in STEM Education, Bowling Green State University, OH.
- Matney, G.** (2018, October-November). *How to Develop Students' Mathematics Proficiency*. Six day mathematics professional development series developed for algebra and geometry teachers of Bowling Green High School.
- Matney, G.** & Speer, W. (2018, October). *Teachers Should "Know Relevant Mathematical Content." Do We ALL Agree?* Ohio Council of Teachers of Mathematics conference, Arkon, OH.

- Matney, G. & Lane, S.** (2018, September). *Mathematics Problem Solving and Proficiency in Algebra*. Three day mathematics institute for secondary teachers at Santa Fe South Schools, Oklahoma City, OK.
- Matney, G. & Matney, T.** (2018, July). *Mathematical Development for Algebraic Thinking and Generalization among K-8 Students*. Five day professional learning seminar at STEM House, Ho Chi Min City, Vietnam.
- Matney, G.** (2018, February – March). *Problem Solving Pedagogies for the Development of Student's Mathematical Understanding*. 16 hours of workshops for IREX Teaching Excellence and Achievement fellows from Nigeria, India, Cambodia, and Zambia, Bowling Green State University, OH.
- Matney, G., Wiemken, R., Lustgarten, A., & Porcella, J.** (2017, October 31). *Experiencing Energy in Multiple Forms*. The 33<sup>rd</sup> Annual Women in STEM Program of the Northwest Ohio Center for Excellence in STEM Education, Bowling Green State University, OH.
- Porcella, J., Lustgarten, A., **Matney, G.,** Wiemken, R. (2017, October 31). *Product Design Workshop*. The 33<sup>rd</sup> Annual Women in STEM Program of the Northwest Ohio Center for Excellence in STEM Education, Bowling Green State University, OH.
- Matney, G.** (2018, February – March). *Problem solving and USA mathematics standards*. 20 hours of workshops for IREX Teaching Excellence and Achievement fellows at Bowling Green State University Scholars: Bowling Green, OH.
- Matney, G. & Lane, S.** (2017 March-November). Lesson Study for Secondary Mathematics Professional Learning. Workshop for teachers of Santa Fe South Public Schools, Oklahoma City, OK.
- Polly, D., **Matney, G.,** & Bostic, J. (2017). *Becoming Involved with Investigations in Mathematics Learning*. 44<sup>th</sup> Annual Meeting of the Research Council on Mathematics Learning. Fort Worth, TX.
- Matney, G. & Bostic, J.** (2016, October). *Promoting Mathematical Practices*. Workshop for teacher leaders of Akron Public Schools, Akron, OH.
- Matney, G. & COMP Teachers** (2016, October). *Lessons for Developing Mathematics Proficiency: Grades 6 – 8*. Ohio Council of Teachers of Mathematics conference, Sandusky, OH.
- Matney, G. & COMP Teachers** (2016, October). *Lessons for Developing Mathematics Proficiency: Grades 3 – 5*. Ohio Council of Teachers of Mathematics conference, Sandusky, OH.

- Matney, G.** & COMP Teachers (2016, October). *Lessons for Developing Mathematics Proficiency: Grades K – 2*. Ohio Council of Teachers of Mathematics conference, Sandusky, OH.
- Marino, A., Boonsena, N., & **Matney, G.** (2016, October 21). *The Geometry of Origami* The 32<sup>nd</sup> Annual Women in STEM Program of the Northwest Ohio Center for Excellence in STEM Education, Bowling Green State University, OH.
- Matney, G.** & Nisakorn, B. (2016, October 11). *Math Camp Tasks: Engagement into Deeper and more meaningful Mathematics*. Black Swamp Math Teachers Circle of Northwest Ohio, Bowling Green State University, Bowling Green, OH.
- Marino, A., Nielsen, M., & **Matney, G.** (2016, October 5). *Mathematics Education and Cultural Experiences in Thailand*. Global Engagement Conference, Bowling Green State University, Bowling Green, OH.
- Matney, G.** (2016, April 21). *Thinking More Deeply about Rationale Number Operations: Comparison Research between the US and China*. Workshop for the Black Swamp Math Teachers Circle, Bowling Green, OH.
- Matney, G.** (2016, April 14). *Developing a Meaningful Study Abroad Experience for Education Students*. Workshop for Education Faculty, College of Education and Human Development, Bowling Green State University, OH.
- Matney, G.** (2016, March 22). *Service Learning in International Contexts: The case of Thailand*. Presentation given at 10<sup>th</sup> Annual BGSU Teaching and Learning Fair. Center for Faculty Excellence, Bowling Green, OH.
- Matney, G.** (2016, March 5). *For the Love of Mathematics*. Workshop give to Santa Fe South Schools. Oklahoma City, OK.
- Schlosser, M., Sullivan, C., & **Matney, G.** (2015, November). *Is this game really fair?!* The 31<sup>st</sup> Annual Women in STEM Program of the Northwest Ohio Center for Excellence in STEM Education, Bowling Green State University, OH.
- Matney, G.**, Walston, A., Schlosser, M., Sullivan, C., Kruse, L., Coder, H., Knapke, K., Nielsen, M., Gerges, R., Largent, K. & Lustgarten, A. (2015, October). *Mathematics Camps Activities: Pathways to Student Enjoyment of Mathematics*. Ohio Council of Teachers of Mathematics conference, Cincinnati, OH.
- Matney, G.**, Conrad, J., Coles, E., & Pitcher, D. (2015, October). *Lessons for Developing Mathematics Proficiency: Grades 3 and 5*. Ohio Council of Teachers of Mathematics conference, Cincinnati, OH.
- Coder, H., **Matney, G.**, Kruse, L., Sullivan, C., Schlosser, M. & Haynes, E. (2015). *Mathematics Camps Activities: Pathways to Student Enjoyment of Mathematics Part 2*. Ohio Council of Teachers of Mathematics conference, Cincinnati, OH.

- Bostic, J. & **Matney, G.** (2015, October). *Buy Modeling with Mathematics and Get More SMPs Free*. Ohio Council of Teachers of Mathematics conference, Cincinnati, OH.
- Matney, G.** (2015, June). *Why Good Professional Development Matters*. Ohio Mathematics Professional Development Summit by OCTM and OMELC, Plain City, OH.
- Matney, G.** & Shrewsberry, K. (2015, June). *Planning to Collect, Share and Communicate Success Stories of Teachers, Classrooms, Schools, and PD Projects*. Ohio Mathematics Professional Development Summit by OCTM and OMELC, Plain City, OH.
- Matney, G.** & Bostic J. (2015, April). *Productive Professional Development for Transforming Instruction of K-5 Teachers of Mathematics: The (CO)<sup>2</sup>MP OMSP Grant*. Ohio Mathematics Education Leadership Council conference, Columbus, OH.
- Bostic J., & **Matney, G.** (2015, April). *Professional Development for Transforming Instruction of 6-8 Mathematics Teachers: An overview of the (CA)<sup>2</sup>MP OMSP Grant*. Ohio Mathematics Education Leadership Council conference, Columbus, OH.
- Matney, G.** & Bostic J. (2015, April). *Mathematics Camps as Authentic Experiences in the Field*. Ohio Mathematics Education Leadership Council conference, Columbus, OH.
- Matney, G.** (2015, April). *Developing Rich Mathematics Content Knowledge for Teachers: A report on the Black Swamp Math Teachers Circle*. Ohio Mathematics Education Leadership Council conference, Columbus, OH.
- Matney, G.** & Hern, T. (2015, March). *From Reasoning to Proof: Persuasions on what makes mathematical sense?* Mathematics Education Colloquium. Department of Mathematics and Statistics, Bowling Green State University.
- Matney, G.** (2015, February). *Thailand 2013-2015: Learning and Meaningful Experience*. Study Abroad Directors Meeting. Bowling Green State University.
- Matney, G.** (2015, January). *Teaching and Learning Place Value Mathematics in English*. KPRU- Teaching Mathematics in English Course. Kamphaeng Phet Rajabhat University: Kamphaeng Phet, Thailand.
- Matney, G.** (2014, October). *Early Mathematics Fluency with the Common Core State Standards for Mathematics*. Ohio Department of Education: Network of Regional Leaders Meeting for State Mathematics, Westerville, OH.
- Bostic, J. & **Matney, G.** (2014, October). *Connecting Cedar Point and the Geometry-focused Common Core State Standards*. Ohio Council of Teachers of Mathematics conference, Cleveland, OH.
- Matney, G.**, Bostic, J., Matney, T., Coder, H., Haynes, E., Kruse, L., Schlosser, M. & Sullivan, C. (2014, October). *Mathematics Camps: Overcoming the Stigma*. Ohio Council of Teachers of Mathematics conference, Cleveland, OH.

- Burtchin, D., Gallagher, D., & **Matney, G.** (2014, October). *Math Teachers' Circle: A New Type of Professional Development*. Ohio Council of Teachers of Mathematics conference, Cleveland, OH.
- Matney, G. & CORES Elementary Team** (2014). *Human number line between 6 and 7: A Common Core State Standards lesson for 5<sup>th</sup> grade*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G. & CORES Elementary Team** (2014). *Multiplicative comparison models: A Common Core State Standards lesson for 4<sup>th</sup> grade*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G. & CORES Elementary Team** (2014). *I have you have and understanding rounding: A Common Core State Standards lesson for 3<sup>rd</sup> grade*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G. & CORES Elementary Team** (2014). *Playing with pairs: A Common Core State Standards lesson for 2<sup>nd</sup> grade*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G. & CORES Elementary Team** (2014). *Two color beans: A Common Core State Standards lesson for 1<sup>st</sup> grade*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G. & CORES Elementary Team** (2013). *Trading ten with decimals: A Common Core State Standards lesson for 5<sup>th</sup> grade*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G. & CORES Elementary Team** (2013). *Comparing place values: A Common Core State Standards lesson for 4<sup>th</sup> grade*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G. & CORES Elementary Team** (2013). *Representing preference: A Common Core State Standards lesson for 3<sup>rd</sup> grade*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G. & CORES Elementary Team** (2013). *Problem solving within 100: A Common Core State Standards lesson for 2<sup>nd</sup> grade*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G. & CORES Elementary Team** (2013). *The apple count down: A Common Core State Standards lesson for 1<sup>st</sup> grade*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G. & CORES Elementary Team** (2013). *Mouse count: A Common Core State Standards lesson for Kindergarten*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G., & Bostic, J.** (2013, October). *Promoting Students' Fluency with the Common Core State Standards*. Ohio Council of Teachers of Mathematics, Dayton, OH.
- Bostic, J. & **Matney, G.** (2013, October). *Making Sense of Modeling with Mathematics*. Ohio Council of Teachers of Mathematics conference, Dayton, OH.

- Matney, G. & Panarach, Y.** (2013, April). *Engaging Students in Mathematics through Camp Activities*. Bowling Green Council of Teachers of Mathematics.
- Matney, G.** (2013). *Re-engagement in urban Schools: A case for K-12 student understanding of multiplication* Educators in Context and Community Conference, Bowling Green State University, Bowling Green, OH.
- Pratt, S. & **Matney, G.** (2012). *Motivating Students and Managing Classrooms Based on Theories of Knowledge*. Lecture at the University of North Texas. Denton, TX.
- Matney, G. & CORES Elementary Team** (2012). *Graphing cats and dogs: A Common Core State Standards lesson for 5<sup>th</sup> grade*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G. & CORES Elementary Team** (2012). *Breaking the factor: A Common Core State Standards lesson for 4<sup>th</sup> grade*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G. & CORES Elementary Team** (2012). *Jose's birthday problem: A Common Core State Standards lesson for 3<sup>rd</sup> grade*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G. & CORES Elementary Team** (2012). *Tricky triangles: A Common Core State Standards lesson for 2<sup>nd</sup> grade*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G. & CORES Elementary Team** (2012). *The stuck duck: A Common Core State Standards lesson for 1<sup>st</sup> grade*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G. & CORES Elementary Team** (2012). *Learning number with pumpkins: A Common Core State Standards lesson for Kindergarten*. The Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching, Bowling Green, OH.
- Matney, G. & Daugherty, B.** (2012). *Exploring multiplicative connections: From dot arrays to double distribution*. National Council of Teachers of Mathematics Regional Conference, Chicago, IL.
- Matney, G., Bostic, J.** (2012, October) *The big core theory: Teaching and learning the Common Core*. Ohio Council of Teachers of Mathematics, Columbus, OH.
- Bostic, J. & **Matney, G.** (2012). *Modern standards: Teaching with and for the Common Core State Standards*. Ohio Council of Teachers of Mathematics conference, Columbus, OH.
- Matney, G.** (2012). *Complexity of student mathematical interest: A case of an urban student's engagement with shape*. Urban Education Conference, Bowling Green State University, Bowling Green, OH.
- Matney, G., & Lane, S.** (2010). *Congruence and similarity*. NCTM Regional Conference, New Orleans, LA.
- Matney, G., & Lane, S.** (2010). *Geometric reasoning and proof*. Arkansas Curriculum Conference, Little Rock, AR. November 4-5

- Matney, G., & Lane, S.** (2009) *Engaging students for understanding congruence and similarity*. Arkansas Curriculum Conference in Little Rock.
- Matney, G., & Lane, S.** (2009, November) *Comparing area through tangrams*. Arkansas Curriculum Conference in Little Rock.
- Matney, G. & Lane, S.** (2007). *Shapes, area, perimeter, and relationships*. Arkansas Curriculum Conference, Little Rock, AR.
- Matney, G.** (2004). *Integrating mathematics and science with calculator based laboratories*. Santa Fe South High School, Oklahoma City, OK.
- Matney, G. & Becker, J.** (2004). *Robotics in the mathematics classroom: Oklahoma City student robotics demonstration*. 31<sup>st</sup> Annual Meeting of the Research Council for Mathematics Learning, Oklahoma City, OK.
- Matney, G. & Richardson, K.** (2003). *Building hovercraft with the OU Sooner Flight Academy*. Oklahoma Gear Up 4th Annual State Conference, Tulsa OK.
- Matney, G. & Richardson, K.** (2003). *GEAR UP with the OU Sooner Flight Academy*. National Council for Community and Education Partnerships Annual Conference, Washington D.C.
- Matney, G. & Richardson, K.** (2003). *GEAR UP with the OU Sooner Flight Academy*. 30<sup>th</sup> Annual meeting of the Research Council on Mathematics Learning. Tempe, AZ.
- Matney, G., Desailier, J. & Fry, C.** (2003). *Geometry Learning by Development of the Local Community*. Sixth Annual Winter Institute of Oklahoma Universities Center for Educational and Community Renewal. Norman, OK.
- Matney, G. & Richardson, K.** (2002). *Come and soar with the OU Sooner Flight Academy*. Oklahoma GEAR Up 3rd Annual State Conference, Lone Wolf, OK.

### **C. Educational Materials**

Roller Coaster Physics (2003): Mathematics activity designed for studying Algebra and science concepts for middle grades students. Through the GEAR-UP grant students were supplied materials to create a model of the roller coasters based on their mathematics. Then students analyzed the physics of actual roller coasters at a local amusement park. Students then spent several hours riding the roller coasters and using mathematical measures to solve real-life problems involving total energy, potential energy, kinetic energy, and velocity of the ride.

### **D. Program Development**

2013-2016 Worked with the faculty and director to re-develop the MCE and AYA programs at BGSU. Additionally I worked with mathematics educators in Arts and Science and the College of Education and Human Development to develop new courses for the AYA and MCE mathematics education programs.

2011-2014 Examined and helped develop a program for Kamphaeng Phet Rajabhat University to train teachers to teach mathematics in English to Thailand K-12 students.

2004-2011 During my time at UAFS I helped to develop/revise three programs: Early Childhood Education (P-4), Middle Level Math-Science Education (5-8), and Secondary Education (7-12). All three of these programs were approved by the Arkansas Department of Education and the University of Arkansas. I was the lead developer on the programmatic adjustments that took place in the Mathematics with Secondary Licensure degree for the mathematics education majors as well as the lead developer for the mathematics portions of the Middle Level Math-Science degree and the Early Childhood degree.

## **VI. Professional Development**

- 2018 Association of Mathematics Teacher Educators  
 Research Council on Mathematics Learning  
 National Council of Teachers of Mathematics  
 Ohio Council of Teachers of Mathematics  
 Ohio Mathematics Education Leadership Council  
 Fleet Defense – Alert Driving Training (15 Passenger Vans)
- 2017 EduRisk Prevention of Sexual Violence  
 EduRisk Prevention of Discrimination and Harassment  
 OHIO Desmos Institute  
 Association of Mathematics Teacher Educators  
 Research Council on Mathematics Learning  
 National Council of Teachers of Mathematics  
 Ohio Council of Teachers of Mathematics  
 Ohio Mathematics Education Leadership Council
- 2016 Campus SaVE Act Training  
 CITI IRB Training  
 Association of Mathematics Teacher Educators  
 Research Council on Mathematics Learning  
 Chicago Lesson Study Conference  
 World Association of Lesson Study Conference (England)  
 National Council of Teachers of Mathematics  
 Ohio Council of Teachers of Mathematics  
 Ohio Mathematics Education Leadership Council
- 2015 World Association of Lesson Study Conference (Thailand)  
 Asia-Pacific Economic Cooperation Meetings (APEC)  
 EDU: Eliminate Campus Sexual Violence (OH)  
 EDU: Stop Harassment & Discrimination (Lenses US-13F)  
 Research Council on Mathematics Learning  
 School Science and Mathematics Association  
 National Council of Supervisors of Mathematics  
 National Council of Teachers of Mathematics



Ohio Council of Teachers of Mathematics  
Ohio Mathematics Education Leadership Council

- 2014      How to Run a Math Teachers' Circle (AIM, Washington D.C.)  
EDU: Stop Harassment & Discrimination (Lenses US-13F)  
EDU: Report and Prevent Sexual Misconduct (Ohio)  
EDU: Stop Harassment & Discrimination (US-13H)  
Research Council on Mathematics Learning  
National Council of Supervisors of Mathematics  
National Council of Teachers of Mathematics  
Ohio Council of Teachers of Mathematics  
Ohio Mathematics Education Leadership Council  
M-Learning Symposium  
Digital Texts Learning Community
- 2013      GeoGebra North American and Digital Ethics Conference  
East Asia Regional Conference on Mathematics Education  
Annual Mathematics Meetings of Thailand  
Research Council on Mathematics Learning  
National Council of Teachers of Mathematics  
Ohio Council of Teachers of Mathematics  
Ohio Mathematics Education Leadership Council  
EDHD International Research Learning Community  
EDHD Digi-Texts Learning Community  
EDHD Education Lecture Series  
BGSU Urban Education Conference  
BGSU Apple's Reaching All Learners  
BGSU Canvas for EDHD  
BGSU Canvas 101  
BGSU Canvas 102  
BGSU Canvas 201  
NCSM Webinar on the Common Core State Standards for Mathematics
- 2012      International Group for the Psychology of Mathematics Education  
International Congress on Mathematics Education  
Research Council on Mathematics Learning  
School Science and Mathematics Association  
National Council of Teachers of Mathematics  
Ohio Mathematics Education Leadership Council  
Ohio Council of Teachers of Mathematics  
EDHD Research Learning Community  
EDHD International Research Learning Community  
BGSU Urban Education Conference
- 2011      Research Council on Mathematics Learning

School Science and Mathematics Association  
 National Council of Teachers of Mathematics  
 Arkansas Council of Teachers of Mathematics  
 Ohio Mathematics Education Leadership Council  
 Ohio Council of Teachers of Mathematics  
 Ohio Confederation of Teacher Education Organizations  
 EDHD Research Learning Community

2010 Research Council on Mathematics Learning  
 National Council of Teachers of Mathematics  
 Complexity Science and Educational Research  
 Arkansas Council of Teachers of Mathematics  
 Arkansas Curriculum Conference

2009 Research Council on Mathematics Learning  
 National Council of Teachers of Mathematics  
 Complexity Science and Educational Research  
 Arkansas Council of Teachers of Mathematics  
 Arkansas Curriculum Conference

2008 Research Council on Mathematics Learning  
 National Council of Teachers of Mathematics  
 Association of Mathematics Teacher Educators  
 Complexity Science and Educational Research  
 Arkansas Council of Teachers of Mathematics  
 Arkansas Curriculum Conference

**VII. Academic Advising (as assigned by EDHD Student and Academic Affairs)**

**A. Undergraduate**

<u>Year</u>	<u>Number of Students</u>	<u>Institution</u>
2018	36	Bowling Green State University
2017	23	Bowling Green State University
2016	18	Bowling Green State University
2015	34	Bowling Green State University
2014	36	Bowling Green State University
2013	26	Bowling Green State University
2012	14	Bowling Green State University
2011	0	Bowling Green State University
2010	18	University of Arkansas Fort Smith
2009	24	University of Arkansas Fort Smith

2008 21 University of Arkansas Fort Smith

## **B. Graduate**

<u>Year</u>	<u>Number of Students</u>	<u>Institution</u>
2017	3	Bowling Green State University
2016	2	Bowling Green State University
2015	2	Bowling Green State University
2014	2	Bowling Green State University
2013	1	Bowling Green State University
2012	1	Bowling Green State University

## **VIII. Research Interests**

My research focuses on areas related to understanding the authenticity of learning, specifically how we come to know and think about the relationships among number, algebra, and spatial quantity. What does it mean to really know mathematics and to have quantitative understandings as well as sense making abilities about number, algebra and spatial relationships? How do our own interest, family, and societal cultural experiences affect mathematics learning? Authenticity has many interactive and reflexive elements within educative phenomena and as such is connected to complexity theory.

Next, I want to understand how authenticity plays a role in teacher's professional learning, including practicing professionals and preservice teachers at the university level. How does engagement in authentic teaching contexts, whether formal or informal, affect the professional growth of a teacher?

In order to begin to grasp at authenticity in the context of mathematics learning and teaching I have chosen several more focused research selections including mathematical proficiency, teacher efficacy, problem solving professional development, culture, and the experience of authentic learning for birth to 12<sup>th</sup> grade students, preservice teachers, graduate students, and teachers. Improvement of mathematics teaching and student learning is at the core of my research. How can teachers improve students' mathematical proficiency? Through continued research I have found and published meaningful results that pragmatically address ways in which teachers have accomplished this. I continue to search for ways in which the teaching community can improve students' mathematical proficiency. I have also found that teachers' understanding about the interconnectedness of mathematics is profoundly transformative. My research continues to look for ways to help teachers see mathematics, not as discrete disconnected procedures, but as meaningfully interconnected relations among quantitative ideas. Lastly, I am interested in the way culture (societal, department, and classroom) can shape the learning and teaching of mathematics. These elements, student mathematical proficiency, professional development of teachers, and culture are three nodes upon which I am furthering the study of authenticity of mathematics learning as a career research goal.

### Current Projects:

1. *Curriculum Development of Mathematics Camps for the Enhancement of Problem Solving for students in Grades 1 through 3* - An international research collaboration being done with Dr. Panarach in Thailand of Kamphaeng Phet Rajabhat University. Approved HSRB [308970-2]
2. *Lesson Study* – Researching Lesson Study effects on students’ mathematics learning and teachers’ professional learning.
3. *The Effect of Mathematics Camps on Preservice Teacher Efficacy* - An international research collaboration being done with Dr. Panarach in Thailand of Kamphaeng Phet Rajabhat University. Approved HSRB [KPRU]
4. *Examining the effects of problem-solving professional development on K-10 teachers' and students' outcomes.* Working with Dr. Bostic on a full scale research project involving qualitative and quantitative measures to analyze the impact of 1-year long professional developments. Approved HSRB [313774]
5. *Restructure and Approach in Algebra 1: Helping At-Risk Urban Students Succeed on End of Instruction Exams* – A longitudinal project done in conjunction with the teachers of Algebra 1 in Santa Fe South Public Schools.

## **IX. Research Projects And Grants**

(List the funding agency, the agency project number if known, the dates, the dollar amount of support, and the title of the project. Do not list pending or unsuccessful applications. Any special research equipment or travel grants should be included under this heading.)

### **A. Funded Grants while at BGSU**

**Total Grant Funding at BGSU: \$4,794,731**

Consultant: \$1,256,862. <i>Improvement of Functions Instruction for U.S. Mathematics Teachers: Using Lesson Study and Functions Resource Kit</i> , Funding from U.S. Department of Education, Institute of Education Sciences, submitted August 23, 2018. Tracking #GRANT12699640 (PI: Eddy 18-0551)	
Bostic, J., PI, <b>Matney, G., Co-PI</b> , Sondergeld, T., Co-PI (2017-2021). <i>Developing &amp; Evaluating Assessments of Problem Solving (DEAP)</i> . funded by National Science Foundation under DRK-12 program	\$1,543,241
<b>Matney, G., PI</b> & Bostic, J., Co-PI (2014-2018). <i>Common Core for Mathematical Proficiency in Elementary Schools (CO)<sup>2</sup>MP</i> . Funded by Ohio Department of Education under Ohio Mathematics Science Partnership program. Grant Number 10009927 (ODE)	\$1,858,362
Bostic, J., PI, <b>Matney, G., Co-PI</b> (2014-2017). <i>Common Core for Achievement and Middle Grades Mathematical Proficiency (C<sup>2</sup>AM<sup>2</sup>P)</i> . Funded by Ohio Department of Education under Ohio Mathematics Science Partnership program.	\$798,149
Gallagher, D. & <b>Matney, G.</b> Improving Teacher Quality State Grants Program from the Ohio Board of Regents. 1/2015-5/2016, <i>Black Swamp Math Teachers Circle (BS-MTC)</i> . Grant Number 14-06	\$46,595
Peet, S., Bertelsen, C., Green, R., Wooldridge, D., <b>Matney, G.</b> , & Newbury, K (January 2015). Developing Math-Ready Kindergarten Students through Adaptive Dual Platform Scalable Software Applications. Awarded by the Faculty Research Committee – “Building Strengths” Grant Program, BGSU.	\$10,000
<b>Matney, G.</b> , Lustgarten, A., Wilcox, C. & Fischer, C. (2016). Emmalou Brumfield Affiliate grant through the Ohio Council of Teachers of Mathematics. <i>Changing K-12 and College Students Mathematics Mindset</i> .	\$500.00

<b>Matney, G.</b> , Cassel, C., Lustgarten, A., Nielsen, M. & Knapke, K. (2015). NCTM Affiliate grant funded through the Mathematics Education Trust grant. <i>Enhancing Mathematical Experiences through Math Camps</i> . Funding for this grant was for enacting mathematics camps to improve students problem solving.	\$1,500
Gallagher, D. & <b>Matney, G.</b> American Institute of Mathematics Seed Grant for Mathematics Teachers Circles. Awarded 3/10/2015. Award given for the startup of the Black Swamp Math Teachers Circle.	\$2,000
Gallagher, D. & <b>Matney, G.</b> American Institute of Mathematics Award. Awarded 4/2/2014. This award paid for our team of teachers, mathematicians, mathematics educators, and school administrators to go to Washington D.C. to be trained and start a Mathematics Teacher Circle in our local area.	\$10,000
<b>Matney, G.</b> Capacity Building in International Contexts Faculty Travel Award from the International Coordinating Committee for the College Educations and Human Development. Awarded 11/8/2012, Culture and Learning in Thailand. My responsibilities for this grant were to work with my partners at Kamphaeng Phet Rajabhat University to establish a student travel course to Thailand.	\$1500.00
<b>Matney, G.</b> Research and Travel Grant from BGSU's Office of Sponsored Programs and Research. Awarded 12/21/2012. The East Asia Regional Conference on Mathematics Education accepted two research papers for their peer-reviewed proceedings. The names of the two papers were Matney, G., Panarach, Y. & Jackson, J. (2013). Translating mathematics efficacy. Proceedings of the 6th East Asia Regional Conference on Mathematics Education. Phuket, Thailand and Panarach, Y. & Matney, G. (2013). Developmental 5T model for learning and enjoying. Proceedings of the 6th East Asia Regional Conference on Mathematics Education. Phuket, Thailand.	\$750.00
<b>Matney, G., PI</b> , Bostic, J., Co-PI, & Brahier, D., Co-PI. Improving Teacher Quality State Grants Program from the Ohio Board of Regents. 1/2014-5/2015, <i>Common Core for Reasoning and Sense Making in Elementary Schools (CO2RES Elementary)</i> . Grant Number 13-05	\$93,006
<b>Matney, G., PI</b> & Bostic, J., Co-PI, & Brahier, D., Co-PI. Improving Teacher Quality State Grants Program from the Ohio Board of Regents. 1/2013-5/2014, <i>Common Core for Reasoning and Sense Making in Elementary Schools (CO2RES Elementary)</i> . Grant Number 12-08	\$89,164

**Matney, G., PI**, Bostic, J., Co-PI, & Brahier, D., Co-PI. Improving Teacher Quality State Grants Program from the Ohio Board of Regents. 1/2012-5/2013, *Common Core for Reasoning and Sense Making in Elementary Schools (CO2RES Elementary)*. Grant Number 11-08 \$81,476

The three grants above are yearlong grant projects which provided K-5 teacher participants professional development to deeply know the format and mathematics content of the CCSSM and Ohio's College and Career Ready Standards and to assist teachers with developing strategies that promote reasoning and sense making in the classroom through the use of technology and research-based best practices such as inquiry and the use of effective questioning strategies. My duties as PI included developing grant based research projects, grant management and coordination of partners, facilities arrangement, curriculum development and alignment across instructions, coordinating data collection, providing the majority of instruction in spring, summer, and fall, and disseminating findings through different venues such as conferences and peer-reviewed journals.

Bostic, J., **Matney, G., Co-PI** & Brahier, D. (). Improving Teacher Quality State Grants Program from the Ohio Board of Regents. Common 1/2014 – 5/2015, *Common Core for Reasoning and Sense Making: Secondary (CO) ^2RES Secondary*. Grant Number 13-04. \$92,753

Bostic, J., PI, **Matney, G., Co-PI**, & Brahier, D., Co-PI. Improving Teacher Quality State Grants Program from the Ohio Board of Regents. 1/2013-5/2014, *Common Core for Reasoning and Sense Making: Secondary (CO) ^2RES Secondary*. Grant Number 12-07 \$87,545

Bostic, J., PI, **Matney, G., Co-PI**, & Brahier, D., Co-PI. Improving Teacher Quality State Grants Program from the Ohio Board of Regents. 1/2012-5/2013, *Common Core for Reasoning and Sense Making: Secondary (CO) ^2RES Secondary*. Grant Number 11-07 \$78,190

The three grants above are yearlong professional developments aimed to help grades 5-10 mathematics teachers become familiar with the content and format of the new Ohio Standards and develop instructional strategies that promote effective problem solving through reasoning and sense-making activities, technology, and research-based practices such as inquiry-oriented lessons and fostering mathematical discourse. My duties as Co-PI included curriculum development, instruction in the spring, summer, and fall, helping to coordinate data collection with the PI, and disseminating findings through different venues such as conferences and peer-reviewed journals.

**B. Grants Under Review**

**C. Unfunded Grants**

**Matney, G.** (2004). Oklahoma City Public Schools Foundation Great Ideas Grants, \$1000: "Autonomous Robotics and the Mathematics Curriculum."

#### **D. Grants Before BGSU**

**Algebra II: Gateway to a Smart Future (AGSF):** This was a three year project funded by a competitive USDOE Title II Part B Mathematics/Science Partnership grant to the Arch Ford Education Service Cooperative. I was brought on as a mathematics content specialist to mentor teachers in their classroom instruction and instruct them on mathematics content knowledge (2009-2011) \$241,000.00

**Enrich, Enhance, and Engage (E-Cubed):** E<sup>3</sup> was a three year Mathematics and Science Partnership grant written and developed by Sherry Lane, Caroline Neel, and myself. The grant was operated out of the Fort Smith Public School district for teachers of grades 4-10. Besides development of the grant and curriculum I was the mathematics content and pedagogy instructor for 40 local area teachers from the districts of Fort Smith, Alma, Waldron, and Van Buren AR (2007-2009) \$105,548.40

**Total PI/Co-PI Funding 2008-2011 before BGSU: \$346,548.40**

**Western Arkansas Middle School Mathematics Partnership:** This grant was a three year Mathematics and Science Partnership grant for \$100,025.00, originally written by Tim Martin of UAFS. After year one, Sherry Lane and I took over the grant and began instructing. In addition to helping create the grants mathematics curriculum I mentored the 40 middle school teachers who took part in the grant by visiting their schools several times a semester to observe and discuss improving their teaching. As the grant was finishing out Sherry Lane took a position elsewhere and I finished writing the reports and assessments (2004-2007)

**Matney, G.** (2004). *Texas Instruments Pre-service Teacher Mini-grant.* I applied for this mini-grant to provide UAFS preservice teachers with a short course on integrating calculator technology into the classroom.

**Matney, G.** (2004). Oklahoma City Public Schools GEAR-UP Grant, \$4799.50: Grant proposal for school wide technology in math and science.

**Matney, G.** (2004). Best Buy [Te@ch](#) Grant, \$2500: Grant awarded to teachers who are creatively integrating interactive technology into the curriculum.

**Matney, G.** (2003). University of Oklahoma Roberson Travel Grant, \$500: Grant given to Graduate Students who desire to present their work at national conferences.

**Matney, G.** (2002). The Zoo Fund for Kids Grants, Oklahoma City Zoo, \$700: Zoo Mobiles for authentic and interdisciplinary study.

**Matney, G.** (2001). Noble Public Schools Foundation for Academic Excellence, \$500: "Algebra Alive."



**Matney, G.** (2000). Faculty Enrichment Grant Proposal. University of Oklahoma, \$702.05: Mathematics teaching aids for Math 4232 Mathematics Methods.

**X. Publications or Equivalencies [Authors listed in order of contribution]**

**A. Publications at BGSU**

**1. Books**

- a. Textbooks**
- b. Scholarly Books**
- c. Anthologies**
- d. Chapters of books – Peer Reviewed**
- e. Contributions to Books**

**Matney, G.** Contributor to Collins, J., & O'Brien, N. (Eds.) (2003). Greenwood Dictionary of Education. Westport, CN. Greenwood Press.

**2. Journals Articles**

**a. Refereed articles**

**1) Journals**

Bostic, J., **Matney, G.**, & Sondergeld, T. (in press). A validation process for observation protocols: Using the Revised SMPs Look-for Protocol as a lens on teachers' promotion of the standards. *Investigations in Mathematics Learning*. Advance online publication. (DOI): <https://doi.org/10.1080/19477503.2017.1379894>

Yuan, X., & **Matney G.** (2018). Searching for the middle zone of Chinese and American Mathematics Teaching through Math Camps. *Journal of Mathematics Education*, 11(2), 1-16. (DOI): <https://doi.org/10.26711/007577152790024>  
Retrieve from: [http://educationforatoz.com/images/2018-7-1\\_JME\\_Yuan.pdf](http://educationforatoz.com/images/2018-7-1_JME_Yuan.pdf)

**Matney, G.** (2018). Peer Mentoring Professionalism among Preservice Mathematics Teachers: Safe Spaces for Community Teaching Practice. *Investigations in Mathematics Learning*, 10(2), 67-84. [Acceptance rate 19.76%] (DOI): 10.1080/19477503.2017.1375351

Isoda, M., Araya, R., Eddy, C., **Matney, G.**, Williams, J., Calfucura, P, Aguirre, C., Becerra, P., Gormaz, R., Soto-Andrade, J., Noine, T., Mena-Lorca, A., Olfos, R., & Baldin, Y. (2017). Teaching energy efficiency: A Cross-Border Public Class and Lesson Study in STEM. *Interaction Design & Achitecture(s)*, 35, 7-31. [Acceptance rate  $\cong$  10%]

- Matney, G.** & Jackson, J. (2017). Research Projects and Secondary Mathematics Preservice Teachers' Sense of Efficacy. *Investigations in Mathematics Learning* 9(4), 171-186. [Acceptance rate  $\cong$  20%]  
(DOI): 10.1080/19477503.2016.1245048
- Bostic, J., & **Matney, G.** (2016). Leveraging Modeling with Mathematics-focused Instruction to Promote Other Standards for Mathematical Practice. *Journal of Mathematics Education Leadership* 17(2), 21-33. [Acceptance rate  $\cong$  15%]
- Matney, G.**, Panarach, Y., & Jackson, J. (2016). Establishing Validity of the Thai Mathematics Teaching Efficacy Beliefs Instrument. *School Science and Mathematics Journal* 116(3), 164-172.
- Bostic, J. & **Matney, G.** (2014). Role-playing the Standards for Mathematical Practice: A Professional Development Tool. *Journal of Mathematics Education Leadership* 15(2), 3-10. [Acceptance rate  $\cong$  25%]
- Matney, G.** (2014). Early Mathematics Fluency with the CCSSM. *Teaching Children Mathematics* 21(1), 26-35. Reston, VA: National Council of Teachers of Mathematics. [Acceptance rate  $\cong$  22%]
- Matney, G.** (2014). Deepening Teachers' Understandings of Mathematical and Pedagogical Connectedness. *Journal of Mathematics Education Leadership* 15(1), 50-59. [Acceptance rate  $\cong$  15%]
- Davis, S., & **Matney, G.** (2014). "I had never really made sense of that before": Constructing Mathematical Content Knowledge and Teaching through Story Telling. *Journal of the Arkansas Association of Colleges of Teacher Education*. Retrieve at: [http://aracte.org/publications/Davis\\_Fall2013.pdf](http://aracte.org/publications/Davis_Fall2013.pdf)
- Matney, G.**, Jackson, J., & Bostic, J. (2013). Effects of Minute Contextual Experience on Realistic Assessment of Proportional Reasoning. *Investigations in Mathematics Learning*, 6(1), 41-68.
- Matney, G.**, & Daugherty, B. (2013). Seeing spots and developing multiplicative sense making. *Mathematics Teaching in the Middle School*, 19(3), 148-155. Reston, VA: National Council of Teachers of Mathematics.
- Matney, G.** & Matney, T. (2013). Leaping without bridges: Implementing the common core with students not previously instructed within its expectations. *Oklahoma Journal of School Mathematics*, 5(1), 14-21.
- Bostic, J. & **Matney, G.** (2013). Overcoming a Common Storm: Designing PD for Teachers Implementing the Common Core. *Ohio Journal of School Mathematics*, 67, 12-19.

**Matney, G.** & Fleener, M.J. (2007). Curriculum clearings as being-with mathematics experiences: Authentic learning through a Heideggerian lens. *Journal of Curriculum and Pedagogy*, 3(2), 92 - 106.

Fleener, M.J., Richardson, K.D. & **Matney, G.** (2004). Deterritorializing the curriculum: Poststructural logic and dynamic process. In L. Coia et al. (Eds.), *Democratic Responses in an Era of Standardization* (pp. 27-38). Troy, NY: Educators International Press.

### **Under Review**

Sondergeld, T., Stone, G., Kruse, L., Bostic, J., **Matney, G.**, Gerber, D., & Nicholson, T. (2019, April). Evaluating the differential impact of dichotomous and partial credit scoring models on a problem-solving measure. *assessment* (pp. X-XX). Proceedings of the 2019 Annual Meeting of the American Educational Research Association. Toronto, CA.

Largent, K., & **Matney, G.** (2019). *Preservice Teacher Professional Learning through Math Camp Involvement*. Manuscript submitted for publication.

Sullivan, C., **Matney, G.**, & Jackson, J. (2019). *Learning about Students' Perceptions of Doing Mathematics*. Manuscript submitted for publication.

### **2) Proceedings**

Bostic, J., **Matney, G.**, Sondergeld, T., & Stone, G. (2018, November). Content validity evidence for new problem-solving measures (PSM3, PSM4, and PSM5). In XXX, YYYY, & ZZZ (Eds.), Proceedings for the 40<sup>h</sup> Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (pp. 1641-1647). Greenville, SC. Retrieved from [Acceptance rate  $\cong$  30%].

Bostic, J., **Matney, G.**, & Sondergeld, T. (2017). (Re)Considering Teachers' Promotion of the Standards for Mathematical Practice. In Olson, T. and Venenciano, L. (Eds.). *Proceedings of the 44th Annual Meeting of the Research Council on Mathematics Learning* (pp. 1-8). Fort Worth, TX.

Sullivan, C., **Matney, G.**, & Jackson, J. (2017). An Investigation of Students' Perceptions of Doing Mathematics. In Olson, T. and Venenciano, L. (Eds.). *Proceedings of the 44th Annual Meeting of the Research Council on Mathematics Learning* (pp. 81-88). Fort Worth, TX.

Bostic, J., **Matney, G.**, & Sondergeld, T. (2016). Exploring Validity and Reliability for the Revised SPMs Look-For Protocol. In Adolphson, K. A. and

Olson, T. (Eds.). *Proceedings of the 43rd Annual Meeting of the Research Council on Mathematics Learning* (pp. 9-17). Orlando, FL.

Pratt, S., **Matney, G.**, Kadroon, T., Changsri, N., Saengpun, J., & Sudejammong, A. (2015). Choosing appropriate measures of Mathematical Knowledge for Teaching (MKT) for research studies across international boundaries. *Proceedings for the 13th Annual Hawaii International Conference on Education*, Honolulu, HI.

Bostic, J. & **Matney, G.** (2015). Supporting K-10 Teachers' Instructional Changes to Promote the Standards for Mathematical Practice. In Che, S. M. and Adolphson, K. A. (Eds.). *Proceedings of the 42nd Annual Meeting of the Research Council on Mathematics Learning* (pp. 109-117). Las Vegas, NV.

Bostic, J. & **Matney, G.** (2014). Looking for elementary mathematics teachers' common core-focused instruction. In Matney, G. T. and Che, S. M. (Eds.). *Proceedings of the 41st Annual meeting of the Research Council on Mathematics Learning* (pp. 113-120). San Antonio, TX.

**Matney, G.**, Panarach, Y. & Jackson, J. (2013). Translating mathematics efficacy. *Proceedings of the 6<sup>th</sup> East Asia Regional Conference on Mathematics Education*. Phuket, Thailand.

Bostic, J. & **Matney, G.** (2013). Preparing K-10 teachers through common core for reasoning and sense making. In Reeder, S. L. and Matney, G. T. (Eds.). *Proceedings of the 40th Annual meeting of the Research Council on Mathematics Learning* (pp. 85-92). Tulsa, OK.

Panarach, Y. & **Matney, G.** (2013). Development of the 5T model for the enjoyment of learning together. *Proceedings of the 6<sup>th</sup> East Asia Regional Conference on Mathematics Education*. Phuket, Thailand.

**Matney, G.** (2012). Generating a peer mentoring culture through mathematics camps. In Van Zoest, L. R., Lo, J.-J., & Kratky, J. L. (Eds.). *Proceedings of the 34<sup>th</sup> annual meeting of the North American chapter of the International Group for the Psychology of Mathematics Education*. Kalamazoo, MI: Western Michigan University.

**Matney, G.**, Panarach, Y., & Matney, T. (2012). Improving attitude and problem solving through mathematics camps. *Proceedings of the 12<sup>th</sup> International Congress on Mathematical Education*. Seoul, Korea.

**Matney, G.**, Bostic, J., & Brahier, D. (2012). Overcoming a common storm: Designing the PD teachers need for successful common core implementation. *Proceedings of the 39th Annual meeting of the Research Council on Mathematics Learning* (162-172). Charlotte, NC.

**Matney, G.,** and Jackson, J. (2010). The effective difference of research projects on secondary mathematics preservice teachers' sense of efficacy. *Proceedings of the 37<sup>th</sup> Annual meeting of the Research Council on Mathematics Learning* (73-83). Conway, AR.

**Matney, G.** (2003). *Using robotics to throw mathematics learning into different combinations.* Proceedings of the 2nd National Conference on Educational Robotics, Norman, OK.

**Matney, G. & Murphy, T. J.** (September 2002). Online Diagnostic Mathematics Test for High School Students. *Proceedings of 37th American Society for Engineering Education Midwest Section Conference*, Norman Oklahoma.

## **b. Non-refereed articles**

### **1) Journals**

**Matney, G.** (2002). *Tower Patterns: Creating Algebraic Representations.* Oklahoma Mathematics Teacher. Oklahoma Council of Teacher of Mathematics.

**Matney, G. & Farris, K.** (2002). *Castles of the Gods.* Oklahoma Mathematics Teacher. Oklahoma Council of Teacher of Mathematics.

### **2) Newsletters**

Conrady, K., **Matney, G.,** & Cerezo, N. (2016, May). Report on the 43rd Annual Conference of the Research Council on Mathematics Learning. *Intersection Points: News Letter of the Research Council on Mathematics Learning.*

**Matney, G.** (2016, April). The Pulse of Investigations. *Intersection Points: News Letter of the Research Council on Mathematics Learning.*

**Matney, G.** (2008). Operating in an Epsilon Neighborhood. *Intersection Points: News Letter of the Research Council on Mathematics Learning.*

**Matney, G.** (2003, December). *Santa Fe South School: Aerospace America.* Gear-Up Oklahoma City Public Schools Newsletter. Volume IV Issue 2.

### **3) Proceedings**

### **4) Miscellaneous**

## **c. Editorships of journals**

**Matney, G.** (2015-Present). Editorial Board for the Research Council on Mathematics Learning. *Investigations in Mathematics Learning.*

**Matney, G. & Che, S. M.** (2013-2014). Editor for the Research Council on Mathematics Learning 41st annual conference proceedings publication.

**Matney, G. & Reeder, L.** (2012-2013). Co-Editor for the Research Council on Mathematics Learning 40<sup>th</sup> annual conference proceedings publication.

**Matney, G.** (2007-2010). **Editor** - *Intersection Points*, a publication of the Research Council on Mathematics Learning.

### 3. Book Reviews

### 4. Abstracts

### 5. Reports

#### a. Published

**Matney, G.,** Burgoon, J., & Belcher, J. (2017). Year 3 report for common core for mathematics proficiency in elementary schools. Bowling Green, OH: Author.

**Matney, G.,** Burgoon, J., & Belcher, J. (2016). Year 2 report for common core for mathematics proficiency in elementary schools. Bowling Green, OH: Author.

**Matney, G.,** Burgoon, J., & Belcher, J. (2015). Year 1 report for common core for mathematics proficiency in elementary schools. Bowling Green, OH: Author.

#### b. Unpublished

Belcher, J., Stearns, S., Pollock, J., Steiner, J., Midden, W., **Matney, G.,** Bostic, J., & Burgoon, J., (2016). Annual report for NWO FY16. Bowling Green, OH: Author.

**Matney, G.,** Burgoon, J., & Belcher, J. (2016). Year 2 report for common core for mathematics proficiency. Bowling Green, OH: Author.

Belcher, J., Stearns, S., Pollock, J., Steiner, J., Midden, W., **Matney, G.,** Bostic, J., & Burgoon, J., (2015). Annual report for NWO FY15. Bowling Green, OH: Author.

**Matney, G.,** Burgoon, J., & Belcher, J. (2015). Final project report for year 3 of common core for reasoning and sense making in elementary schools. Bowling Green, OH: Author.

**Matney, G.,** Burgoon, J., & Belcher, J. (2014). Interim project report for year 3 of common core for reasoning and sense making in elementary schools. Bowling Green, OH: Author.

**Matney, G.,** Burgoon, J., & Belcher, J. (2014). Final project report for year 2 of common core for reasoning and sense making in elementary schools. Bowling Green, OH: Author.

**Matney, G.,** Burgoon, J., & Belcher, J. (2013). Interim project report for year 2 of common core for reasoning and sense making in elementary schools. Bowling Green, OH: Author.

**Matney, G.,** Burgoon, J., & Belcher, J. (2013). Final project report for year 1 of common core for reasoning and sense making in elementary schools. Bowling Green, OH: Author.

**Matney, G.,** Burgoon, J., & Belcher, J. (2012). Interim project report for year 1 of common core for reasoning and sense making in elementary schools. Bowling Green, OH: Author.

## **6. Dissertation**

**Matney, G.** (2004). *The Clearings of Authentic Learning in Mathematics*. (Doctoral Dissertation, University of Oklahoma, 2004). *Dissertation Abstracts International* (UMI No. AAT 3138956).

## XI. Papers Read to Professional Societies [Names listed in order of contribution]

### A. Invited Papers

**Matney, G.** (2018, January). Safe Spaces to Connect Preservice Teachers' Mathematical Reasoning with Pedagogical Content Knowledge: Informal Opportunities to Grow in Teaching Competence. **Keynote** presentation for the plenary session of the Japanese Academic Society of Mathematics Education, Hiroshima, Japan.

**Matney, G.** (2017, September). *Model Eliciting Activities: Context, Culture, and Mathematical Assumptions: Possibilities for Cross-border Mathematical Discourse among Students.* **Keynote** presentation at the APEC- Khon Kaen International Symposium 2017: Innovation of Mathematics Education through Lesson Study Textbook Development for SDGs, STEM, and Energy by Cross-border Education, Khon Kaen, Thailand.

**Matney, G.** (2017, September). *Cross Border Lesson Study on Energy Efficient between the United States and Chile.* The 10th International Conference on Educational Research (ICER) 2017, Khon Kaen, Thailand.

**Matney, G.** (2017, September). *Lesson Study Challenges to Energy Efficiency on STEM and Cross-border Education.* Paper presented at the APEC- Khon Kaen International Symposium 2017: Innovation of Mathematics Education through Lesson Study Textbook Development for SDGs, STEM, and Energy by Cross-border Education, Khon Kaen, Thailand.

Bostic, J. & **Matney, G.** (2017, May). *Leveraging classroom observation data for meaningful growth: Using the revised standards for mathematical practice protocol.* Paper presented at the Maryland Council of Teachers of Mathematics Coaching Conference, Stevenson, MD.

Bostic, J. & **Matney, G.** (2017, June). *Rough drafts and mathematics teaching practices: Supporting teachers' promotion of the mathematics teaching practices.* Paper presented at the Elementary Mathematics Specialists and Teacher Leaders Conference, Westminster, MD.

Eddy, C., Araya, R., **Matney, G.** (2016). *Energy Efficiency and Cross-Border Education* **Keynote** paper presented at APEC-ICER joint conference: Innovation of Mathematics Education through Lesson Study Challenges to Energy Efficiency on STEM and Cross-border Education and The 9th International Conference on Educational Research (ICER). Khon Kaen, Thailand.

**Matney, G.** (2016). *The Common Core State Standards for Mathematics: The U.S.A's Quest for Greater Focus and Coherence.* **Keynote** paper presented at SEAMEO RECSAM-



University of Tsukuba Joint Seminar: Searching for Quality Mathematics Curriculum Framework on the Era of Globalization, Tokyo, Japan.

Eddy, C., **Matney, G.**, & Wang-Iverson, P. (2016). *Lesson Study across Borders for Student Modeling of Energy Footprints*. Paper presented at SEAMEO RECSAM-University of Tsukuba Joint Seminar: Searching for Quality Mathematics Curriculum Framework on the Era of Globalization, Tokyo, Japan.

Eddy, C., **Matney, G.**, & Wang-Iverson, P. (2016). *United States: Explorations of the Household Energy Footprint*. Paper presented at APEC-Tsukuba International Conference X. Innovation of Mathematics Education through Lesson Study: Challenges to Energy Efficiency on STEM and Cross-border Education, Tokyo, Japan.

**Matney, G.** (2015). *Teachers Mathematical Knowledge for Teaching in the Application of Open Approach*. Paper presented at the US-Thailand Research Collaborative for Mathematics Education. Khon Kaen, Thailand.

Bostic, J., Burgoon, J., **Matney, G.**, & Belcher, J. (2015, November). *Addressing research designs: A close look at (CO)<sup>2</sup>MP*. Paper presented at the fall meeting of the Ohio Mathematics Science Partnership, Columbus, OH.

Bostic, J., & **Matney, G.** (2013). *An overview of Common Core for Reasoning and Sensemaking: Secondary*. Poster presented at Association of Mathematics Teacher Educators conference. Orlando, FL.

## **B. Refereed Papers**

Bostic, J., **Matney, G.**, Sondergeld, T., & Stone, G. (2018, November). *Content validity evidence for new problem-solving measures (PSM3, PSM4, and PSM5)*. Poster presented at the 40<sup>th</sup> Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Greenville, SC.

Wiemken, R., & **Matney, G.** (2018, February). *Lesson Studies on Model Eliciting Activities*. Paper presented at the 45th Annual Meeting of the Research Council on Mathematics Learning. Baton Rouge, LA.

Lustgarten, A., & **Matney, G.** (2018, February). *Impacts of Number Talks on Pre-service Teachers' Number Sense*. Paper presented at the 45th Annual Meeting of the Research Council on Mathematics Learning. Baton Rouge, LA.

Porcella, J., & **Matney, G.** (2018, February). *Teacher Views on Lesson Study*. Paper presented at the 45th Annual Meeting of the Research Council on Mathematics Learning. Baton Rouge, LA.

- Bostic, J., & **Matney, G.** (2018, February). *Current Trends: Improving Test Development and Implementation Practices*. Paper presented at the 45th Annual Meeting of the Research Council on Mathematics Learning. Baton Rouge, LA.
- Brahier, D., Bostic, J., & **Matney, G.** (2018, February). *Action Research in Undergraduate Teacher Preparation*. Paper presented at the 45th Annual Meeting of the Research Council on Mathematics Learning. Baton Rouge, LA.
- Mizoguchi, T., **Matney, G.**, Wagner, D. (2018, February). *Conditions and Constraints on the Notion of a Good Mathematics Teacher*. Paper presented at APEC & UNESCO-MGIEP-Tsukuba Conference XII: Innovation of Mathematics Education through Lesson Study Textbook Development for SDGs, STEM, and Energy by Cross-border Education, Tokyo, Japan.
- Matney, G.** & Bostic, J. (2018, February). *Examining preservice Teachers informal field experiences*. Paper presented at the meeting of the Association of Mathematics Teacher Educators conference. Houston, TX.
- Matney, G.** & Sullivan, C. (2017, November). *Lesson Study and Problem Solving as Impactful Professional Learning*. Paper presented at the School Science and Mathematics Convention. Lexington, KY.
- Sullivan, C. & **Matney, G.** (2017, November). *Students' Perceptions of Doing Mathematics through Drawing*. Paper presented at the School Science and Mathematics Convention. Lexington, KY.
- Boonsena, N., **Matney, G.**, Inprasitha, M., & Changsri, N. (2017, September). *Teachers' Perceptions about Teaching Practice in Lesson Study incorporating Open Approach*. The 10th International Conference on Educational Research (ICER) 2017, Khon Kaen, Thailand.
- Wiemken, R., & **Matney, G.** (2017, September). *Exploring the Benefits of Formative Assessment in a Secondary Mathematics Context*. The 10th International Conference on Educational Research (ICER) 2017, Khon Kaen, Thailand.
- Matney, G.**, & Porcella, J. (2017, September). *Informal Learning Experiences and the Promotion of Peer Mentoring Professionalism among Preservice Teachers: Connections between the US and Thailand*. The 10th International Conference on Educational Research (ICER) 2017, Khon Kaen, Thailand.
- Boonsena, N., Inprasitha, M., Changsri, N., & **Matney, G.** (2017). *A Comparative Study of Teaching Practice in Lesson Study incorporating Open Approach*. Paper presented at World Association of Lesson Study Conference. Nagoya, Japan.
- Bostic J., & **Matney, G.** (2017, October). *Promoting the Standards for Mathematical Practice during classroom instruction*. Paper presented at the meeting of the Ohio Council of Teachers of Mathematics conference, Columbus, OH.

- Bostic, J. & **Matney, G.** (2017, April). *Considering K-10 Teachers' Promotion of the SMPs*. Poster presented at the meeting of the National Council of Teachers of Mathematics research conference. San Antonio, TX.
- Matney, G.**, & Marino, A. (2017). *Surveying Preservice Teachers' Knowledge of the SMPs*. Paper presented at the 44<sup>th</sup> Annual Meeting of the Research Council on Mathematics Learning. Fort Worth, TX.
- Matney, G.**, & Boonsena, N. (2017). *Comparison of Lesson Studies that Incorporate Open Approach: Thailand and US*. Paper presented at the 44<sup>th</sup> Annual Meeting of the Research Council on Mathematics Learning. Fort Worth, TX.
- Sullivan, C. & **Matney, G.** (2017). *An Investigation of Students' Perceptions of Doing Mathematics*. Paper presented at the 44<sup>th</sup> Annual Meeting of the Research Council on Mathematics Learning. Fort Worth, TX.
- Bostic, J. & **Matney, G.** (2017). *(Re)Considering Teachers' Promotion of the Standards for Mathematical Practice*. Paper presented at the 44<sup>th</sup> Annual Meeting of the Research Council on Mathematics Learning. Fort Worth, TX.
- Matney, G.**, & Bostic, J. (2017). *Aligning Lesson Study with Professional Development Aims*. Poster presented at the 21<sup>st</sup> Annual Conference of the Association of Mathematics Teacher Educators. Orlando, FL.
- Matney, G.** (2017). *Application of Validity Acceptance in Mathematics Education*. *Validity Evidence for Measurement in Mathematics Education (V-M<sup>2</sup>Ed)* conference, San Antonio, TX.
- Matney, G.** (2016, December). *Quantitative Evidence of Teacher MKT and Student Achievement from Common Core for Mathematics Proficiency*. National Science Teachers Association Conference, Columbus, OH.
- Matney, G.**, Sullivan, C., & Bostic, J. (2016, November). *Using Lesson Study to Connect Actions with Students Mathematical Proficiency*. Paper presented at the meeting of the National Council of Teachers of Mathematics regional conference, Philadelphia PA.
- Matney, G.**, & Lane, S. (2016). *Lesson Study by Open Approach in the USA: A Comparison of Students' Mathematical Knowledge*. Paper presented at World Association of Lesson Study Conference. Exeter, United Kingdom.
- Pratt, S., Eddy, C. **Matney, G.**, Wilkerson, T., Inprasith, M., Inprasith, N., Srichompoo, S., Changsri, N., Kadroon, T., & Moonpoo, P. (2016, July). *Facilitating Teachers' Instruction to Elicit Student Processes in Thinking of Mathematics*. The 13<sup>th</sup> International Congress on Mathematics Education, Hamberg, Germany.

- Eddy, C., Pratt, S., **Matney, G.**, Thinwiangthong, S., Suttiamporn, W., Wilkerson, T., Saengpun, J., Sudejamnong, A., & Premprayoon, K. (2016, July). *Common Observation Tool for Math Teacher's Use of Formative Assessment in the U.S. and Thailand*. The 13<sup>th</sup> International Congress on Mathematics Education, Hamberg, Germany.
- Matney, G.** (2016, March). *Lesson Study Development for Student Learning: The Case for Lesson Study by Open Approach*. Paper presented at the meeting of the Ohio Middle Level Association. Bowling Green, OH.
- Bostic, J., **Matney, G.**, & Belcher, J. (2016, March). *Fostering Mathematical Proficiency and Developing At-Scale Problem-solving Measures*. Poster presented at meeting of the U.S. Department of Education Mathematics and Science Partnership Research Council on Mathematics Learning. Baltimore, MD.
- Matney, G.**, Belcher, J., & Bostic, J. (2016, March). *Lesson Study Approach to Teacher and Student Learning and Engagement in Grades K – 8 Urban/Sub-Urban Districts*. Poster presented at U.S. Department of Education - Mathematics and Science Partnerships Program Conference, Baltimore, MD.
- Matney, G.** (2016). *Developing a Peer Mentoring Culture among Mathematics Preservice Teachers*. Paper presented at the 43<sup>rd</sup> Annual Meeting of the Research Council on Mathematics Learning. Orlando, FL.
- Sullivan, C. & **Matney, G.** (2016). *Impacts of the Launch of Professional Development on Teachers' Instruction*. Paper presented at the 43<sup>rd</sup> Annual Meeting of the Research Council on Mathematics Learning. Orlando, FL.
- Bostic, J., & **Matney, G.** (2016). *First Look! A Validation Study of the SMPs Look-for Protocol*. Paper presented at the 43<sup>rd</sup> Annual Meeting of the Research Council on Mathematics Learning. Orlando, FL.
- Bostic, J., & **Matney, G.** (2016). *Measuring Teachers' Promotion of the Standards for Mathematical Practice*. Paper presented at the Association of Mathematics Teacher Educators conference. Irvine, CA.
- Pratt, S., Eddy, C., **Matney, G.**, Wilkerson, T., Inprasitha, M., Inprasitha, N., Srichompoo, S., Changsri, N., Kadroon, T., & Moonpoo, P. (2016). *Facilitating teachers' instruction to elicit student processes in thinking of mathematics*. Paper accepted to the 13<sup>th</sup> International Congress on Mathematical Education 2016, Hamburg, Germany.
- Eddy, C., Pratt, S., Thinwiangthong, S., Suttiamporn, W., Wilkerson, T., **Matney, G.**, Saengpun, J., Sudejamnong, A., & Premprayoon, K. (2016). *Common observation tool for math teacher's use of formative assessment in U.S. and Thailand*. Paper accepted to the 13<sup>th</sup> International Congress on Mathematical Education 2016, Hamburg, Germany.

- Bostic, J., & **Matney, G.** (2015, November). *What do you want on it? Statistics, modeling, and pizza*. Paper presented at the meeting of the National Council of Teachers of Mathematics regional conference, Minneapolis, MN.
- Matney, G.**, Bostic, J., & Mortier, M. (2015, October). *Profession Development for Growth in Middle-Grades Teachers' Classroom Discourse*. Paper presented at the 2015 Annual Meeting of the School Science and Mathematics Association. Oklahoma City, OK.
- Matney, G.**, Bostic, J., & Sullivan, C. (2015, October). *Thinking Differently about Preservice Teacher Field Experiences: Benefits of Math Camp*. Paper presented at the 2015 Annual Meeting of the School Science and Mathematics Association. Oklahoma City, OK.
- Bostic, J., & **Matney, G.** (2015, April). *Using the look-for rubric to examine elementary teachers' instruction*. Paper presented at the 2015 Annual Meeting of the American Educational Research Association. Chicago, IL.
- Matney, G.**, & Bostic, J. (2015, February). *Supporting K-10 Teachers' Instructional Changes to Promote the Standards for Mathematical Practice*. Presented at the 42nd Annual Meeting of the Research Council on Mathematics Learning. Las Vegas, NV.
- Bostic, J., & **Matney, G.** (2015, February). *Fostering growth in middle-grades teachers' classroom discourse practices*. Paper presented at the Association of Mathematics Teacher Educators conference. Orlando, FL.
- Matney, G.**, & Pratt, S. (2015, January). *Choosing Appropriate Measures of Mathematical Knowledge for Teaching for Research Studies*. Presented at the 13th Annual Hawaii International Conference on Education. Honolulu, HI.
- Matney, G.**, & Bostic, J. (2014, April). *Creating Spaces to Develop Mathematically Proficient Students: Essential Instructional Elements of the CCSSM*. Annual Meeting of the National Council of Supervisors of Mathematics. New Orleans, LA.
- Matney, G.**, & Bostic, J. (2014, April). *Spaces for Children's Development of Structure, Pattern, and Repeated Reasoning*. Annual Meeting of the National Council of Teachers of Mathematics. New Orleans, LA.
- Pratt, S., **Matney, G.**, & Richardson, K. (2014, March). *Conceptual Tasks in Secondary Mathematics*. Paper presented at the 41<sup>st</sup> Annual Meeting of the Research Council on Mathematics Learning. San Antonio, TX.
- Eddy, C., **Matney, G.**, Pratt, S., Wilkerson, T., Kuehnert, E., & Olsen, M. (2014, March). *A Bilateral, International Research Network for Algebraic Reasoning*. Paper presented at the 41<sup>st</sup> Annual Meeting of the Research Council on Mathematics Learning. San Antonio, TX.

- Bostic, J., **Matney, G.** (2014, March). *Opportunities to Engage in the Standards for Mathematical Practice*. Paper presented at the 41<sup>st</sup> Annual Meeting of the Research Council on Mathematics Learning. San Antonio, TX.
- Bostic, J., & **Matney, G.** (2014, February). *Role-playing the Standards for Mathematical Practice: A Professional Development Tool*. Association of Mathematics Teacher Educators conference. Irvine, CA.
- Matney, G.**, & Matney, T. (2013, October). *Promoting Students' Fluency with the Common Core State Standards*. National Council of Teachers of Mathematics, Louisville, KY.
- Matney, G.** & Bostic J. (2013, October). *Promoting Students Fluency with the Common Core State Standard*. Ohio Council of Teachers of Mathematics, Dayton, OH.
- Bostic J. **Matney, G.** (2013, October). *Making Sense of Modeling with Mathematics*. Ohio Council of Teachers of Mathematics, Dayton, OH.
- Matney, G.** & Bostic J. (2013, October). *Issues with the transition to Common Core instruction and resources to overcome them*. Ohio Mathematics Education Leadership Council conference, Dayton, OH.
- Matney, G.**, Panarach, Y. & Jackson, J. (2013). Translating mathematics efficacy. *Proceedings of the 6<sup>th</sup> East Asia Regional Conference on Mathematics Education*. Phuket, Thailand.
- Bostic, J., **Matney, G.**, Brahier, D., Gojak, L., & Speer, W. (2013, March). *Preparing teachers for the CCSS: Looking towards the future*. Paper presented at the 40<sup>th</sup> Annual Meeting of the Research Council on Mathematics Learning. Tulsa, OK.
- Panarach, Y. & **Matney, G.** (2013). *Developmental 5T model for learning and enjoying*. Proceedings of the 6<sup>th</sup> East Asia Regional Conference on Mathematics Education. Phuket, Thailand.
- Matney, G.**, & Daugherty, B. (2012). *We're seeing spots: Visions of multiplicative sense making*. Regional meeting of the National Council of Teachers of Mathematics. Chicago, IL.
- Matney, G.** (2012, November). *Improving Mathematics Preservice Teacher Efficacy through Field Based Research*. School Science and Mathematics Association annual meeting, Birmingham, AL.
- Matney, G.** (2012, November). *Generating a Peer Mentoring Culture through Mathematics Camps*. North American Chapter of the International Group for the Psychology of Mathematics Education, Kalamazoo, MI.
- Matney, G.**, Bostic, J. (2012, October). *Divergent Perceptions of the SfMP among K- 10 Teachers*. Ohio Mathematics Education Leadership Conference, Columbus OH.

- Matney, G.,** Panarach, Y., Matney, T. (2012). *Improving Attitude and Problem Solving through Mathematics Camps*. The 12<sup>th</sup> International Congress on Mathematics Education, Seoul, Korea.
- Matney, G.,** Jackson, J. (2012). *Researching Connections between Real-World Assessments and Student Experiences*. 39<sup>th</sup> Annual meeting of the Research Council on Mathematics Learning, Charlotte NC.
- Matney, G.,** Bostic, J., & Brahier, D. (2012). *Overcoming a common storm: Designing the PD teachers need for successful common core implementation*. Proceedings of the 39<sup>th</sup> Annual meeting of the Research Council on Mathematics Learning, Charlotte, NC.
- Matney, G.,** & Jackson, J. (2011). *Assessment and complexity of non-routine problem solving involving proportion reasoning of middle school students*. 38<sup>th</sup> Annual meeting of the Research Council on Mathematics Learning, Cincinnati, OH.
- Matney, G.,** & Jackson, J. (2010). *Effects of research projects on undergraduate preservice teachers' sense of teacher efficacy*. 37<sup>th</sup> Annual meeting of the Research Council on Mathematics Learning, Conway, AR.
- Matney, G.** (2008) *Teacher Openings: Emergence of a learning community among middle school mathematics teachers*. 35<sup>th</sup> Annual meeting of the Research Council on Mathematics Learning, Oklahoma City, OK.
- Matney G.** (2007). *Emergent mathematics teacher communities*. 34<sup>th</sup> Annual meeting of the Research Council on Mathematics Learning, Cleveland, OH.
- Matney G.** (2006). *Relational spaces for the learning of mathematics*. 33<sup>th</sup> Annual meeting of the Research Council on Mathematics Learning, Las Vegas, NV.
- Matney G.** (2005). *Authentic learning and complexity*. Complexity Science and Education Research Annual meeting, Roberts, LA.
- Matney G.** & Fleener, M.J. (2005). *Curriculum Clearings as Being-With Experiences: Authentic Learning Through a Heideggerian Lens*. American Educational Research Association Annual meeting, Montreal, Canada.
- Matney G.** (2005). *Experiencing Authenticity in Mathematics*. 32<sup>nd</sup> Annual Meeting of the Research Council for Mathematics Learning, Little Rock, AR.
- Fleener, M.J., Richardson, K. & **Matney G.** (2004). *Fights of Fancy: Deleuze meets Foucault in a High School Flight Academy*. Foucault and Education SIG Roundtable 20, 62.019. San Diego California.
- Fleener, M. J., **Matney, G.** & Richardson, K. (2004, January). *Expanding the Curricular Terrain*. Annual Meeting of the Oklahoma Educational Studies Association.

**Matney, G.,** Che, M. & Arbuckle, W. (2003). *Exploring the Ramifications of Enacting the Spirit of Problem Centered Learning in a Standardized Environment.* Fourth Annual Curriculum and Pedagogy Conference, Decatur, Georgia.

Fleener, M.J., Richardson, K. & **Matney G.** (2003). *Experiences of Authenticity and Meaning: Post-Phenomenological Approaches to Curriculum Studies.* Fourth Annual Curriculum and Pedagogy Conference, Decatur, Georgia.

**Matney, G.** (2003). *Using robotics to throw mathematics learning into different combinations.* The 2nd National Conference on Educational Robotics, Norman, OK.

Fleener, M. J., **Matney, G.,** Reynolds, A. & Richardson, K. (2003). *What is mathematics?* 30th Annual Meeting of the Research Council for Mathematics Learning, Arizona State University.

**Matney, G.** & Murphy, T. J. (2002). *Online Diagnostic Mathematics Test for High School Students.* 37th American Society for Engineering Education Midwest Section Conference, Norman Oklahoma.

### **C. Non-refereed Papers**

## **XII. Service**

### **A. Department/School**

Mentor: Junior Faculty T & P Mentor (2017 – Present; BGSU)

Member: STL Curriculum Committee (2014 – Present; BGSU)

Member: STL TPRC (2014 – Present; BGSU)

STL Representative: Family Campaign (2013—2017; BGSU)

Member: Adult and Young Adolescent Program (2012-Present; BGSU)

Member: Mathematics Education Program Content (2011-Present; BGSU)

Member: Inclusive Early Childhood Faculty Search Committee (2016; BGSU)

Member: Early Childhood Methods Committee (2011-2015; BGSU)

Member: Early Childhood Education Program Committee (2011-2014; BGSU)

Chair: Mathematics Education Assessment Committee (2004-2011; UAFS)

Member: Mathematics Curriculum Committee (2006-2008; UAFS)



Member: Faculty Search and Hiring Committee (2006-2011; UAFS)

Co-Chair: Technology and Website Committee (2004-2005; UAFS)

Member: Mathematics Senior Project Development Committee (2005-2006; UAFS)

## **B. College**

Member: CAEP Committee - Adolescence/Young Adult Mathematics Education Advisory Board (2017; BGSU)

Member: International Coordinating Committee (2012-Present; BGSU)

Member: Multicultural Initiatives Committee (2014 – 2016; BGSU)

Member: Course Evaluation Committee (2014 -2015; 2017-2018, BGSU)

Member: Inclusive Early Childhood Program Steering Committee (2012; BGSU)

Member: Technology Task Force (2012; BGSU)

Member: College of Education NCATE Committee (2007-2011; UAFS)

Member: Teacher Education Council (2006-2011; UAFS)

Member: Secondary Education Advisory Committee (2004-2011; UAFS)

Coordinator: Early Childhood Mathematics Education (2005-2011; UAFS)

Member: NCATE Standard 5 Assessment Committee (2008-2011; UAFS)

Member: College of Education Dean Search Committee (2006; UAFS)

## **C. University**

Member: Elliott L. Blinn Award Selection Committee (2017-2018)

Member: Embracing Global Engagement Advisory Council (2016-2018)

Advisor: BGSU Math Camps (2013-Present)

Co-advisor: Bowling Green Council of Teachers of Mathematics (2012-Present)

Judge: Ohio Junior Science and Humanities Symposium (2011-Present)

Faculty Associate: Northwest Ohio Center of Excellence in Science and Mathematics Education, Bowling Green State University (2011-Present)

Friends of the University Libraries Member (2017)

Faculty Marshall A: Commencement (2016; BGSU)

Board Member: Academic Investment in Math and Science – AIMS Program (2014-2015; BGSU)

Member: Civic Engagement Rubric Committee; Office of Service Learning (2015-2016; BGSU)

Co-Chair: Mathematics Education Seminar (2012-2015; BGSU)

Advisor: Bowling Green Christian Educators Organization (2013-2015)

Advisor: Crosswalk Campus Ministries (2011-2013)

Faculty Marshall: Commencement (2015; BGSU)

Member: Student Union Advisory Committee (2011-2015; BGSU)

Faculty Marshall A: Commencement (2014; BGSU)

Member: International Studies Committee (2008-2011; UAFS)

Member: Student Life Advisory Board (2008-2011; UAFS)

Member: Order of Omega (2008-2011; UAFS)

Chair: Faculty Senate Standing Committee for Academic Integrity (2005-2008; UAFS)

Member: Greek Life Faculty Advisors Committee (2008-2011; UAFS)

Sponsor: Sigma Nu Fraternity (2007-2011; UAFS)

Member: Social Interaction Committee; Learning Community Board (2005-2006; UAFS)

Member: Student Learning Committee (2005-2007; UAFS)

Member: Investiture Committee (2006; UAFS)

Member: Graduate Student Senate Committee on Academic Misconduct (1998-1999; OU)

#### **D. Profession**

## **International**

Moderator: World Association of Lesson Study Conference (2015)

Poster Evaluator: World Association of Lesson Study Conference (2015)

Speaker: Asia-Pacific Economic Cooperation (2015)

## **National**

Vice-President for Publications: Research Council on Mathematics Learning (2016-Present)

Editorial Board Member: Investigations in Mathematics Learning (2015-Present)

Chair of Publications Committee: Research Council on Mathematics Learning (2016-Present)

Manuscript Reviewer: *Journal for Research in Mathematics Education* (2016-Present)

Manuscript Reviewer: *Origami in Science, Mathematics, and Education* (2017-Present)

Manuscript Reviewer: *Action in Teacher Education* (2015-Present)

Manuscript Reviewer: *Journal of Mathematics Education Leadership* (2013-Present)

Manuscript Reviewer: *School Science and Mathematics Journal* (2012-Present)

Manuscript Reviewer: *Investigations in Mathematics Learning* (2007-Present)

Manuscript Reviewer: *Mathematics Teaching in the Middle School* (2013 – Present)

Manuscript Reviewer: *Research Council on Mathematics Learning Proceedings* (2009-Present)

Publications Committee: School Science and Mathematics Association (2014-2016)

Research Journal Editor Search Committee: Research Council on Mathematics Learning (2015)

Publications Committee: Research Council on Mathematics Learning (2014-2015)

Nominations Committee: Research Council on Mathematics Learning (2014)

Editor: Research Council on Mathematics Learning 41<sup>st</sup> annual research proceedings (2013-2014)

Co-Editor: Research Council on Mathematics Learning 40<sup>th</sup> annual research proceedings (2012-2013)

Member: Program Committee for the National Council of Teachers of Mathematics New Orleans Regional Conference (2009-2010)

Member: Conference Committee; Research Council on Mathematics Learning (2010-2013)

Editor - *Intersection Points* a publication of the Research Council on Mathematics Learning (2007-2010)

NCATE SPA Reviewer: Served as a Program Reviewer for the mathematics Specialized Program Area for universities submitting to NCATE for national recognition and teacher certification (2007-2011)

Manuscript Reviewer: AERA proposal and manuscript reviewer for Division B Curriculum Studies (2006-2008)

Member: Conference Committee of Mathematics Assoc. of America Section Conference (2008)

### **State**

Ohio Junior Science and Humanities Symposium Judge (2012-Present)

Vice-President for Universities: Ohio Council of Teachers of Mathematics (2015-2018)

Faculty Associate Director: Northwest Ohio Center of Excellence in Science and Mathematics Education, Bowling Green State University (2014 – Present)

Math Teacher Circles: During 2013 and 2014 I worked to find a team of mathematics teachers and mathematics educators to work together to create a Math Teacher Circle in Northwest Ohio. From my inquiries via personal communication Deb Gallagher, Tami Matney, Joan Funk and Marcia Miller agreed to work as a team to start the Black Swamp Math Teachers Circle. This team completed Math Teacher Circle training from the American Institute of Mathematics in Washington DC in the summer of 2014. Deb Gallagher and I wrote an ITQ grant to fund the start-up of the Math Teachers Circle (2013 – Present)

Network of Regional Leaders: In 2014 I was invited by the Ohio Department of Education to join their efforts by being a member of their Network of Regional Leaders for mathematics teachers. I have presented to these state leaders on several topics including the Common Core State Standards and mathematical fluency (2014 – Present)

Higher Education Member: Ohio Performance Assessment Pilot Project. I applied and was approved to work with ODE on developing and implementing mathematics performance assessments for grades 4 and 5 in the state of Ohio. The project will establish the reliability factor for large scale performance assessments. If the reliability factor is good, the model is likely to be adopted by PARCC and Smarter Balance consortiums for assessing the Common Core State Standards for Mathematics (2011-2014)

Vice-president: Arkansas Council of Teachers of Mathematics (2010-2011)

State Exam Writer: Wrote, edited, and distributed the Algebra I test for the regional mathematics competition put on by the Arkansas Council of Teachers of Mathematics.

The test was aligned to the NCTM Standards and the Arkansas Frameworks for Mathematics Learning and was analyzed for reliability and content validity (2006-2008)

Advance Baton Rouge – At the invitation of the Dean of College of Education at LSU I attended to the Community and Education: Leadership Conversations” in order to invigorate ideas to help post Katrina Louisiana rebuild its community and educational endeavors (2007)

## **Local**

Advisor: Crosswalk Ministries (2012-2014)

Sebastian County, AR, Conservation Education Program Consultant – Volunteer mathematical and education expertise to the State and County Conservation groups who were working on statewide educative modules for soil, water, vegetation, forestry, energy, recycling, pollution, and schoolyard habits (2006 - 2008)

Member: Mathematics Task-Force of Fort Smith Public Schools, AR. Task force assembled to help Fort Smith Public Schools increase their mathematics achievement and student understanding by aligning curriculum across grade levels. Evaluated the end of quarter assessments and gave feedback on its validity and reliability. Worked with teachers in the district to make curriculum maps and pacing guides and provide supplementary materials for SLEs not adequately addressed in the textbook (2005-2011)

Outdoor Education Week Committee Chair: Santa Fe South High School. Chaired the committee of faculty responsible for organizing, curriculum developing, and planning an entire week of educational "minds-on" experiences outside of the school building. Events included learning experiences at the Omniplex and Air Space Museum, Titanic Exhibit, Little River Zoo, Fred Jones Art Museum, the University of Oklahoma, and the Oklahoma City Zoo (2003-2004).

GEAR-UP Site Leader: Santa Fe South High School. Administered and coordinated all GEAR-UP related activities for the faculty and students. Partnered with Oklahoma University, Oklahoma City University, Rose State College, Langston University and Oklahoma State University Oklahoma City Campus (2002-2004)

Robotics Club Sponsor: State and national robotics competitions for secondary school students organized by the KISS Robotics Institute, Botball. In 2003 the Santa Fe South School robotics team won first place in a \*national\* competition for their robotics drilling research. In 2004 the Santa Fe South School robotics team won third place in a \*national\* competition for their research on Assistive Robotics (2001-2004)

Member: Authentic Teaching Alliance. I was a teacher participant with the University of Oklahoma’s ATA. Designed and collected data on authentic secondary mathematics projects. Projects include function modeling in basketball, learning geometry through CAD design of buildings, studying volumetric flow rates and volumes through a trip to

the local water treatment plant, and constructing model geodesic domes as well as a 25ft diameter geodesic dome to study complex networks of triangles are related to 3-dimensional figures, patterns, and to study efficiency of spherical surfaces versus the more common rectangular prisms (2001-2003)

Aerospace Expo: Organized school wide trip for 300+ students and faculty to Aerospace day. Students learned about aviation careers and received some hands on instruction as to what different people in the aviation industry do on a daily basis (2003)

Sooner Flight Academy: Partnered with Oklahoma University's flight academy to teach mathematics content involving aviation to students. Students and their teachers participated in aviation training and flight practice with a certified instructor. The students also build their own hover-craft and compare the aviation principles in hover-craft to those of an airplane (2001-2004)

Noble High School Attendance Committee Member (2000-2001)

## **E. Community**

Co-Creator and Advisor for BGSU's Math Camps:

- BGSU 4<sup>th</sup> and 5<sup>th</sup> grade Mathematics Camp given at Ottawa Hills Elementary School in Sylvania Ohio (April, 2018).
- BGSU 6-8<sup>th</sup> grade Mathematics Camp given at Imagine Middle School in Toledo Ohio (March, 2018).
- BGSU 6-8<sup>th</sup> grade Mathematics Camp given at Bowling Green Middle School in Bowling Green Ohio (March, 2018).
- BGSU 4<sup>th</sup> grade Mathematics Camp given at Central Elementary School in Napoleon Ohio (February, 2018).
- BGSU 4<sup>th</sup> and 5<sup>th</sup> grade Mathematics Camp given at Hull Prairie Intermediate School in Perrysburg Ohio (February, 2018).
- BGSU 1<sup>st</sup> and 2<sup>nd</sup> grade Mathematics Camp given at Osborne Elementary School in Sandusky Ohio (January, 2018).
- BGSU 6-8<sup>th</sup> grade Mathematics Camp given at McComb Middle School in McComb Ohio (March, 2017).
- BGSU 6-8<sup>th</sup> grade Mathematics Camp given at Imagine Middle School in Toledo Ohio (March, 2017).
- BGSU 4<sup>th</sup> grade Mathematics Camp given at Central Elementary School in Napoleon Ohio (February, 2017).
- BGSU 1<sup>st</sup> and 2<sup>nd</sup> grade Mathematics Camp given at Osbourne Elementary School in Sandusky Ohio (February, 2017).
- BGSU 5-6<sup>th</sup> grade Mathematics Camp given at Ottawa Hills Elementary School in Ottawa Hills Ohio (February, 2017).
- BGSU 5-6<sup>th</sup> grade Mathematics Camp given at Springfield Local Schools in Springfield Ohio (February, 2017).

- BGSU 6-8<sup>th</sup> grade Mathematics Camp given at Imagine City Schools in Toledo Ohio (March, 2016).
- BGSU K-5<sup>th</sup> grade Mathematics Camp given at Imagine City Schools in Toledo Ohio (March, 2016).
- BGSU 6-8<sup>th</sup> grade Mathematics Camp given at McComb Schools in McComb Ohio (February, 2016).
- BGSU 4<sup>th</sup> grade Mathematics Camp given at Napoleon City Schools in Napoleon Ohio (February, 2016).
- BGSU 6-8<sup>th</sup> grade Mathematics Camp given at McComb Schools in McComb Ohio (March, 2015).
- BGSU 4<sup>th</sup> grade Mathematics Camp given at Napoleon City Schools in Napoleon Ohio (February, 2015).
- BGSU 5-7<sup>th</sup> grade Mathematics Camp given at Imagine Clay Avenue School in Toledo Ohio (March, 2014).

Thailand Diversity Project: Worked with elementary teachers in Bowling Green and Toledo to provide diversity experiences for their students involving visiting professors from Thailand and my own experiences in Thailand via pen pal letters with pictures (2011)

Volunteer: Volunteer for Fort Smith Public Schools, AR. Booneville Elementary, Chaffin Jr. High, Sunny Meade Elementary, Spradling Elementary, Trinity Jr. High, and Darby Jr. High. Teachers requested to work with me and asked for model lessons. I taught elementary students at two elementary schools in the Fort Smith district. I volunteered at Bonneville and Sunny Meade. At Sunny Meade I engaged the students in the study of the relationship between mathematics, science, and utility in the real world. We studied the connections of creating formulas using mathematical operations that match our sense of what something “is.” Then we used these formulaic creations practically to design safe and stable roller coasters. The principle scientific ideas were energy, potential, kinetic, and total (2004-2011)

Class Sponsor: Santa Fe South High School class of 2005; freshman, sophomore, and junior class sponsor (2001-2003)

Student Council Sponsor: Santa Fe South High School (2001-2003)

Website Designer and Manager: Created and maintained Santa Fe South Website (2003-2004)

President: Sigma Beta Mu, Men’s Fraternity (1996-1997)

President: Delta Sigma Pi, Mathematics Organization (1996-1997)

Member: Omicron Delta Kappa and Kappa Delta Pi, Academic Honors Society (1995-1997)

### **XIII. Research or Professional Consultantships**

- [Invited] **Matney, G.,** Lane, S., & Howell, M. (2017, July). *Re-envisioning Mathematics Teaching for Student Learning through Understanding*. A mathematics professional development institute at Santa Fe South Secondary School, Oklahoma City, OK.
- [Invited] **Matney, G.,** & Lane, S. (2016, July). *Designing Student Understanding in Geometry through Problem Solving and Modeling*. A mathematics professional development institute at Santa Fe South Secondary School, Oklahoma City, OK.
- [Invited] **Matney, G.,** & Lane, S. (2015, February). *Understanding Precision and Accuracy in Mathematics and Statistics*. A mathematics professional development institute at Santa Fe South Secondary School, Oklahoma City, OK.
- [Invited] **Matney, G.** (2015, February). *Numerical Connections among Language, Quantity, and Symbol*. A mathematics professional development for Findlay City Schools, Findlay, OH.
- [Invited] **Matney, G.,** & Bostic, J. (2014, December). *Common Core for Reasoning and Sense Making in Secondary Schools*. A mathematics professional development for Sidney City Schools, Sidney, OH.
- [Invited] **Matney, G.** (2014, November). *Developing K-5 Student's Mathematics Proficiency: Important Aspects of Curriculum to Meet the Expectations of the Common Core State Standards*. A mathematics professional development for Maumee City Schools, Maumee, OH.
- [Invited] **Matney, G.,** Lane, S. & Matney, T. (2014, October). *Developing preK-5 Students' Mathematical Voices*. A mathematics professional development institute at Santa Fe South Elementary School, Oklahoma City, OK.
- [Invited] **Matney, G.,** Bostic, J., & Matney, T. (2014, July). *Implementing the Mathematical Practices with the Common Core State Standards in Grades K-5*. A week long professional development institute, Sidney, OH.
- [Invited] **Matney, G.,** & Matney T. (2014, June 16-17). *Mathematical Discourse among K-2 Students*. Millstream Career Center, Findlay OH.
- [Invited] **Matney, G.,** & Matney T. (2014, June 9-10). *Mathematical Discourse among 3-5 Grade Students*. Millstream Career Center, Findlay OH.
- [Invited] **Matney, G.,** Bostic, J., & Matney, T. (2014, January). *Implementing Research Based Best Practice with the Standards for Mathematical Practice in Grades K-5*. Sidney, OH.
- [Invited] **Matney, G.** & Lane, S. (2013, July). *Designing Ecologies of Effective Mathematics Discourse*. Three day mathematics institute for Santa Fe South Schools, Oklahoma City, OK.
- [Invited] **Matney, G.** (2013, June). *Essential Components of Implementing the Common Core State Standards*. Imagine Schools, Toledo, OH.
- [Invited] **Matney, G.** (2013, May). *Understanding the Real-World with Mathematics*. Findlay City Schools, Findlay OH.
- [Invited] **Matney, G.** (2013, April). *Implementing the 6 through 8<sup>th</sup> grade Common Core State Standards for Mathematics*. Findlay City Schools, Findlay OH.



[Invited] **Matney, G.** & Matney, T. (2013, February). *Learning to Implement the Kindergarten through 5<sup>th</sup> grade Common Core State Standards for Mathematics*. Findlay City Schools, Findlay OH.

[Invited] **Matney, G.** & Matney, T. (2013, February). *Learning to Implement the Common Core State Standards for Mathematics for Grades 6-10*. Millstream Career Center, Findlay OH.

[Invited] **Matney, G.** & Matney T. (2012). *Learning to implement the Common Core State Standards for Mathematics*. 4-day PD for 25 teachers in the district of Finlay, Ohio.

[Invited] **Matney, G.** & Matney T. (2012). *Teaching the Common Core State Standards for Mathematics*. 2-day PD for 30 teachers in the districts of Hancock County, Ohio.

[Invited] **Matney, G.** & Panarach, Y. (2011). *Teaching mathematics through games and puzzles*. Education Exhibition: Kamphaeng Phet Rajabhat University, Kamphaeng Phet, Thailand.

**Matney, G.** & Lane, S. (2009 - Present). *SFS mathematics teaching institute for middle and high school classrooms* (16 days per year). Santa Fe South Public Schools, Oklahoma City, OK.  
[Partially funded by a grant through NCLR and the Bill and Melinda Gates Foundation]

International Educational Consultant: Examined and helped develop a program for Kamphaeng Phet Rajabhat University to train teachers to teach mathematics in English to Thailand K-12 students (2011)

Educational Consultant: Santa Fe South Public Schools in Oklahoma City requested an evaluation of the mathematics teaching for the entire schools system. I conducted a program analysis using observations, interviews, the RTOP instrument, and survey data. Offer professional development for teachers of mathematics district wide. I then develop a series of professional developments to help their teachers grow and their students to be successful in mathematics. Through this collaboration I have the longitudinal study on *Restructure and Approach in Algebra I* and the publication *We're seeing spots: Visions of multiplicative sense making* in Mathematics Teaching in the Middle School (2007-Present)

#### **XIV. Membership in Professional Organizations**

World Associating of Lesson Study ([WALS](#))  
 Asia-Pacific Economic Cooperation ([APEC](#))  
 Ohio Mathematics Education Leadership Council ([OMELC](#))  
 Ohio Council of Teachers of Mathematics ([OCTM](#))  
 Bowling Green Council of Teachers of Mathematics ([BGCTM](#))  
 School Science and Mathematics Association ([SSMA](#))  
 American Educational Research Association ([AERA](#))  
 Association of Mathematics Teacher Educators ([AMTE](#))  
 Research Council on Mathematics Learning ([RCML](#))  
 Complexity Science and Educational Research ([CSER](#))  
 National Council of Teachers of Mathematics ([NCTM](#))  
 National Council of Supervisors of Mathematics ([NCSM](#))  
 Arkansas Council of Teachers of Mathematics ([ACTM](#))  
 Oklahoma Council of Teachers of Mathematics ([OkCTM](#))  
 Coalition for the Advancement of Science and Mathematics Education in Oklahoma (CASMEO)

## **XV. Honors And AWARDS**

### **A. Membership in Honor Societies**

Omicron Delta Kappa – National Leadership Honor Society

Order of Omega – Greek Leadership Honor Society

### **B. Awards**

Ohio Council of Teachers of Mathematics Kenneth Cummins Award (2018)

Finalist – David Hoch Memorial Award for Excellence in Service (2018) from Ohio Campus Compact

Embracing Global Engagement Award – Caswell and Nicholson (2017; Advisor)

Nominated – Outstanding Community Partnership, Center for Community and Civic Engagement; Math Camp (2016-2017)

Nominated - Master Teacher Award, BGSU Office of Alumni & Development (2016-2017)

Kurt E. Hofmeister Outstanding Undergraduate Student Group Award (2016; Advisor)

Embracing Global Engagement Award – Marino and Nielsen (2016; Advisor)

NRHH Enlightening Educator Award, BGSU Chapter (2015-2016)

Embracing Global Engagement Award – Tucker (2015; Advisor)

Group Excellence in Service Learning and Civic Engagement Award (2015; Advisor)

NRHH Deb Novak Advisor Achievement Award, BGSU Chapter (2013-2014)

Lucille Speakman Excellence in Teaching Award, UA-Fort Smith (2010)

Distinguished Alumni Award, ODK (2007)

Who's Who Among America's Teachers (2005)

Teacher of the Year for Oklahoma City/Moore Region (2004)

Who's Who Among America's Colleges, Oklahoma Baptist University (1997)

Oklahoma Baptist University Outstanding Senior in Mathematics Education (1997)

## XVI. Teaching Evaluations and Merit

<b>Bowling Green State University</b>						
<b>Year and Term</b>	<b>Course #</b>	<b>Enrollment</b>	<b>Mean Rating 5 point scale</b>	<b>Standard Deviation</b>	<b>College Unit Mean Rating (SD)</b>	<b>STL Unit Mean Rating (SD)</b>
S 2018	EDTL 2742 - 1001	28	4.82	0.408		4.35 (0.860)
F 2017	EDTL 2741-1001	30	4.91	0.267		4.26 (0.907)
F 2017	EDTL 4900-1001	10	4.85	0.376		4.26 (0.907)
S 2017	EDTL 2742-1001	17	4.78	0.417		4.30 (0.899)
F 2016	EDTL 2741-1001	15	4.88	0.328		4.24 (0.939)
F 2016	EDTL 4900-1004	12	4.81	0.417		4.24 (0.939)
F 2015	EDTL 3230-1001	23	4.63	0.581		4.19 (0.953)
F 2015	EDTL 4900-1004	10	4.93	0.163		4.19 (0.953)
SU 2015	EDTL 4900-1001	8	4.6	0.704		4.29 (0.95)
F 2014	EDTL 4460-1001	23	4.64	0.734		4.19 (1.011)
F 2014	EDTL 6800-5002	24	4.77	0.462		4.19 (1.011)
S 2014	EDTL 2740-1002	21	4.56	1.012		4.37 (0.894)
F 2013	EDTL 3230-1001	29	4.55	0.629	4.37 (0.897)	4.32 (0.903)
F 2013	EDTL 3230-1002	27	4.57	0.701	4.37 (0.897)	4.32 (0.903)
F 2013	EDTL 6800-5002	23	4.9	0.330	4.37 (0.897)	4.32 (0.903)
SU 2013	EDTL 6410-501W	16	4.90	0.141	4.36 (0.917)	4.32 (0.938)
<b>Year and Term</b>	<b>Course #</b>	<b>Enrollment</b>	<b>Mean Rating 5 point scale</b>	<b>Standard Deviation</b>	<b>Unit Mean Rating (SD)</b>	
S 2013	EDTL 6800-5008	25	4.88	0.316	4.40 (0.867)	
S 2013	EDTL 4840-1001	25	4.86	0.373	4.40 (0.867)	
F 2012	EDTL 6800-5002	23	4.33	1.238	4.30 (0.955)	
F 2012	EDTL 3230-1003	27	4.74	0.45	4.30 (0.955)	
F 2012	EDTL 3230-1004	25	4.62	0.964	4.30 (0.955)	
S 2012	EDTL 3230-11233	28 (n = 4)	3.975	0.92	4.348 (0.958)	
<b>Year and Term</b>	<b>Course #</b>	<b>Enrollment</b>	<b>Mean Rating 4 point scale</b>	<b>Standard Deviation</b>	<b>Unit Mean Rating (SD)</b>	
F 2011	EDTL 2740-1001	27	3.92	0.27	3.58 (0.64)	
F 2011	EDTL 3230-1001	27	3.99	0.14	3.58 (0.64)	

<b>F 2011</b>	EDTL 3230-1002	27	3.92	0.29	3.58 (0.64)	
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**Previous Merit Scores**

Year	Score
2012	Level 3 Exceeds Expectations
2013	Level 3 Exceeds Expectations
2014	Level 3 Exceeds Expectations
2015	Level 3 Exceeds Expectations
2016	Level 3 Exceeds Expectations

## University of Arkansas Fort Smith

Year and Term	Course #	Enrollment	Mean Rating 5 point scale	College Mean	University Mean
<b>F 2010</b>	Math 2343-0G2	30	4.89	4.32	4.41
<b>F 2010</b>	Math 2333-0G2	30	4.87	4.32	4.41
<b>F 2010</b>	Math 1403-020	37	4.77	4.32	4.41
<b>F 2010</b>	Math 3823-001	6	4.69	4.32	4.41
<b>F 2009</b>	Math 2333-0G1	35	4.86	4.28	4.40
<b>F 2009</b>	Math 1403-0X3	27	4.74	4.28	4.40
<b>F 2009</b>	Math 2333-0G2	32	4.72	4.28	4.40
<b>F 2009</b>	Math 1403-0X5	22	4.45	4.28	4.40
<b>S 2009</b>	Educ 490A-003	1	4.92	4.39	4.44
<b>S 2009</b>	Math 1403-010	34	4.82	4.39	4.44
<b>S 2009</b>	Math 3803-001	9	4.79	4.39	4.44
<b>S 2009</b>	Math 2343-0G1	28	4.73	4.39	4.44
<b>S 2009</b>	Math 2343-0G2	30	4.70	4.39	4.44
<b>F 2008</b>	Math 2333-0G1	34	4.80	4.28	4.40
<b>F 2008</b>	Math 1453-001	29	4.76	4.28	4.40
<b>F 2008</b>	Math 2333-0G2	22	4.71	4.28	4.40