

AUBURN UNIVERSITY
Standard Biographical Data

Name: Megan E. Burton, Ph.D.

Department: Curriculum and Teaching

College: Education

Present Rank: Associate Professor

Year in Present Rank: 3

Year in Faculty Service at AU: 5.5

Year in Faculty Service Elsewhere: 5.5

Type of Current Appointment: Tenured

Graduate Faculty Status: Level 2

Date Awarded: April 2013

Education:

Institution	Degree	Major	Date Awarded
The University of Alabama	Ph.D.	Elementary Education	August 2006
Kennesaw State University	M.Ed.	Early Childhood Education	December 1998
Auburn University	B.S.	Elementary Education	March 1994

Professional Experience:

Institution	Rank	Period of Appointment
Auburn University	Associate Professor	August 2014- present
Auburn University	Assistant Professor	January 2012-present
The University of South Carolina	Assistant Professor	August 2006-December 2011
The University of Alabama	Teacher in Residence	August 2004-May 2006
Shelby County Schools	Teacher (grades 2 & 4)	August 1998-May 2004
Gwinnett County Schools	Teacher (grade 2)	August 1997-May 1998
Cherokee County Schools	Teacher (grades 1 & 3)	August 1994-May 1997

HONORS AND AWARDS

2014 *Kennesaw State University Distinguished Alumni Award.*

Nominee for the Bagwell College of Education and selected as one of three distinguished alumni for the university at large. This is based on professional achievements, community activities, and exemplifying the ideals and mission of Kennesaw State University.

2011 *National Association for Professional Development Schools Award for Exemplary Professional Development School Achievement.*

This award was given to the local elementary school, Rice Creek Elementary School, where I served as a university faculty liaison, taught my mathematics methods courses, supervised interns, and worked with teachers on action research projects.

2009 *South Carolina Educators for the Practical Use of Research Distinguished Paper Award.* Vogler, K. & Burton, M. Mathematics teachers' instructional practices in an era of high stakes testing. Submitted paper for state conference; selected as the outstanding paper. Received a cash prize, a certificate, and then presented the paper as a representative for the state organization at the American Educational Researchers' Association Conference.

2005–06 Outstanding Research for a Graduate Student in Elementary Education at the University of Alabama.

2004–05 Outstanding Teaching for a Graduate Student in Elementary Education at the University of Alabama.

2003–04 Outstanding Service for a Graduate Student in Elementary Education at the University of Alabama.

SCHOLARLY CONTRIBUTIONS BY THE CANDIDATE

Part A: TEACHING

1. Courses taught:

TERM	DEPARTMENT AND COURSE NUMBER	COURSE TITLE	CREDIT HOURS	LECTURE	LAB	ENROLL MENT
Fall 2017	CTEE 7910	Practicum Area of Specialization	3	0	3	4
	CTEE 7516	Research Studies	3	3	0	23
Summer 2017	CTEE 7440	Curriculum and Teaching: Math (K-6)	3	3	0	24
	CTEE 7446	Curriculum & Teaching: Math (K-6)	3	3	0	2
Summer 2017	CTEE 4040	Curriculum: Mathematics	4	2	2	24
	CTEE 8990	Research and Dissertation	2	0	2	1
Spring 2017	CTEE 4040	Curriculum: Mathematics	4	2	2	
	CTEE 8990	Research and Dissertation	2	0	2	1
Fall 2016	CTEE 4040	Curriculum: Mathematics	4	2	2	22
	CTEE 7910	Practicum (jointly taught with Dr. Cardullo & the Research Studies Course)	3	0	3	1
	CTEE 7916	Practicum (jointly taught with Dr. Cardullo & the Research Studies Course)	3	0	3	5
	CTEE 8990	Research and Dissertation	2	0	2	1
	CTEE 8990	Research and Dissertation	1	0	1	1
Summer 2016	CTEE 4040	Curriculum: Mathematics	3	2	1	24
	CTEE 7440	Curriculum and Teaching: Math (K-6)	3	3	0	4
	CTEE 7446	Curriculum and Teaching: Math (K-6)	3	3	0	13
	CTEE 8990	Research and Dissertation	1	0	1	2
Spring 2016	CTEE 4040-A	Curriculum: Mathematics	3	2	1	19
	CTEE4923	Clinical Residency	11	0	11	8
	CTEE 4953	Professional Development Seminar	1	1	0	8

TERM	DEPARTMENT AND COURSE NUMBER	COURSE TITLE	CREDIT HOURS	LECTURE	LAB	ENROLL MENT
	CTEE 7916/0	Practicum (with Research Studies with Dr. Cardullo)	3	3	0	10/3
	CTEE 8990/6	Research and Dissertation	1	1	0	1
Fall 2015	CTEE 4040-CCC	Curriculum: Mathematics	3	2	1	25
	CTEE 3100-AA	Introduction to Elementary Education	3	3	0	20
	CTEE 3100-CC	Introduction to Elementary Education	3	3	0	22
	CTEE 8996	Dissertation	1	1	0	1
Fall 2015	CTEE 8980	Field Project	1	1	0	2
	CTEE 7916	Practicum	3	3	0	1
Summer 2015	CTEE 4040-B	Curriculum Mathematics	3	2	1	23
	CTEE 7440/6	Curriculum and Teaching: Math (K-6)	3	3	0	7
	CTEE 8990/6	Research and Dissertation	1	1	0	1
Spring 2015	CTEE 4040-A	Curriculum Mathematics	3	2	1	23
	CTEE 8950	Seminar	3	3	0	1
	CTEE 8980/6	Field Project	3	3	0	8
	CTEE 8996	Research and Dissertation	1	0	0	1
Fall 2014	CTEE 4040	Curriculum: Mathematics	3	2	1	26
Fall 2014	CTEE 3100	Introduction to Elementary Education	3	3	0	24
	CTEE 8980	Field Project	3	1	2	7
	CTEE 7910	Practicum	2	0	2	1
	CTEE 8990	Research and Dissertation	3/1	0	3/1	1/1
Summer 2014	CTEE 4040	Curriculum: Mathematics	3	2	1	24
	CTEE 7440/6	Curriculum & Teaching Mathematics	3	3	0	17
	CTEE 8980	Field Project	3	1	2	3
Spring 2014	CTEE 4040	Curriculum: Mathematics	3	2	1	24

TERM	DEPARTMENT AND COURSE NUMBER	COURSE TITLE	CREDIT HOURS	LECTURE	LAB	ENROLL MENT
	CTEE 3100	Introduction to Elementary Education	3	3	0	25
	CTEE 8950	Seminar	3	1	2	8

4. Courses and curricula developed or revised:

Lab Experiences

Observation Instrument for lab experiences:

This was revised to reflect our SPA and EducateAlabama more fully. In addition, an area of emerging was added, because previously they were either not approaching competency or approaching competency. Since “Approaching Competency” was the requirement to pass the course, the elementary faculty felt an in between category needed to be added. We also adjusted the categories on the observation instrument and added a rubric, because previously there wasn’t a rubric to explain how to score each category. This will be used in all lab placements for our program.

Lesson plan Template for lab experiences:

This was revised to align with EdTPA. It still reflects our core values and beliefs, but pushes students to elaborate on areas that we didn’t require in the past. It added sections for students to consider academic language, descriptions of classroom experiences, and more details about formative and summative assessments.

Canvas Course for Internship Spring 2017 – as supervisor for our intern adjunct professors for several semesters, I have prepared their Canvas courses and made change based on feedback. The seminar and internship courses are merged, to make it easier for adjuncts and students. We changed the requirements for seminar to better reflect our SPA and at the same time allow flexibility to meet the needs of each student. For example, there are now 10 tasks they must complete, 5 are required (such as observe 2 other grade levels or attend an RTI meeting), but the other 5 come from a choice of 10 options they can choose (such as interview a special education teacher or a parent). We added a checklist of assignments and due dates to make it easier for students.

CTEE 7516/0 Research Studies of Education in Areas of Specialization – Spring 2016

Dr. Cardullo and I jointly taught CTEE 7516/0 and 7910/6. Each of us took one section, but we merged the sections. These courses are co-requisites, because one is the study of action research and writing up an actual project. The other course is the practicum placement where the action research course occurs. We split students based on their project and supported their work. We revised the library tutorial, the literature review, the way students received

feedback from peers, and increased expectations to a more scholarly action research project that aligns with the degree programs of students who enroll in this course.

CTEE 4040 (Curriculum: Mathematics) – Spring 2012

Alabama Mathematics, Science, and Technology Initiative (AMSTI) training for preservice teachers has been integrated into the Curriculum: Mathematics course. Previously it was taught as a 3-day training by an AMSTI specialist. I partnered with the AMSTI-AU specialists to create a cohesive course that also certifies preservice teachers for fifth grade mathematics. This included showing how the AMSTI training segments are meaningfully woven with the other course material. For example the AMSTI module on volume is taught after my students have explored the learning trajectory for measurement and geometry. This allows students to make connections between the AMSTI modules and the materials within the course. They are able to discuss classroom instructional activities that would lead to the AMSTI module and what would occur to extend the content. It also creates more cohesion for students to see how both the course and AMSTI reflect research-based strategies for teaching. One requirement of AMSTI is to teach a mathematics lesson (such as place value) using AMSTI strategies to peers. This used to occur at the beginning of the semester, before students learned about the topic, the learning trajectory, common student errors, teaching strategies, and other important mathematical and instructional knowledge for teaching. Students now teach this required AMSTI lesson after learning about the topic. In order to remain a certified AMSTI trainer for our preservice teachers, I periodically attend AMSTI trainer sessions, such as a two-day training during the summer of 2013.

I also require students to join the National Council of Teachers of Mathematics (NCTM), which allows them to see the larger community of teachers that follow research based approaches. Throughout the course they utilize the resources provided to members of NCTM at their website. In addition, the Common Core State Standards have become a central part of the course. Students are prepared for the standards that they will be using.

CTEE 7440/7446 (Curriculum and Teaching in Mathematics K-6) – Summer 2012

This course was adapted to meet the needs of distance learning students. I interviewed former distance students. Based on feedback and experiences, many assignments were changed. Classroom video vignettes, discussion groups, and problem posing were added. In addition, students read many articles from the practitioner journal, *Teaching Children Mathematics*. Students research a topic of personal interest and write an article that could be submitted to the *Alabama Journal of Mathematics* or *Teaching Children Mathematics*. The Common Core Standards play a central part of the course. Students explore and discuss all course content in relation to the Common Core Content Standards and the Standards for Mathematical Practice. They are able to see how both sets of standards in the Common Core connect the NCTM Content Standards and Process Skills, which are research based.

CTEE 7440/7446 Ed.S/ Ph.D (Curriculum and Teaching in in Mathematics K-6) – Fall 2012

This course was offered specifically to Ed.S. and Ph.D. students. Because these students already had earned their M.Ed., the rigor of this course was intensified. Students were

challenged to read, analyze, and synthesize research-intensive articles from journals such as the *Journal of Research in Mathematics Education* and relate this to their current classroom practice, the Common Core Standards, and curriculum. Students created an action research project, authored a manuscript submission for an elementary mathematics practitioner journal, and taught a lesson to the class.

5. Grants related to teaching:

<i>Years</i>	<i>Project</i>	<i>Principal Investigator</i>	<i>Role</i>	<i>Amount/ Source</i>
2010–2011	Teaching Excellence Technology Grant (TETG): iPads in Teaching	Burton, M.	PI: Investigate specific strategies for using an iPad in teaching. Impacted teaching and outreach.	iPad awarded in lieu of monetary support (approximate value \$650). USC Center for Teaching Excellence
2007–2008	TETG: Tablet PCs in Teaching	Burton, M.	PI: Investigate specific strategies for using a tablet PC in teaching. Shared findings in a publication and impacted teaching.	Tablet PC awarded in lieu of monetary support (approximate value \$1200). USC Center for Teaching Excellence
2007–2008	Teaching Excellence Grants on Fundamentals of Inquiry	Burton, M.	PI: collaborated with university faculty across disciplines to develop a general education course on inquiry for undergraduate students. Impacted teaching and service.	\$3,500 USC Center for Teaching Excellence

6. Publications pertaining to teaching:

NOTE: Elementary teacher education is my research focus and my teaching area; I have listed citations of scholarly inquiry into my own teaching in Section 4B "Research and Creative Activity. Some examples publications I have with former students are listed in Section 4B, but also below.

Flores, M., **Burton, M.**, & Hinton, V. (2017). *Elementary Students Who Struggle: Using CRA/CSA for Interventions*. San Diego, CA: Plural Publishing. (33% contribution)

Burton, M. & Mims, P.* (2012) Calculating puddle size. *Teaching Children Mathematics*, 18(8), 474- 480. (80% contribution; 25% acceptance rate).

Evans, K., Holley, J., Richburg-Sellers, F., Robey, S., Suber, S, Field, B., & **Burton, M.** (2012). Rice Creek Elementary School and the University of South Carolina: A shared vision for excellence. *School-University Partnerships: The Journal of the National Association of Professional Development Schools*, 5(1), 19-27 (30% contribution; 35% acceptance rate).

Field, B., Blakeney, R., **Burton, M.**, Dunlap, E., Faile, J., Hudson, Z., & Jackson, M. (2010). The University of South Carolina Professional Development School Network: Twenty years of effective collaboration. *School-University Partnerships: The Journal of the National Association of Professional Development Schools*. 4(10), 31-42. (15% contribution; 35% acceptance rate).

7. Other contributions related to teaching:

Advising:

I advise undergraduate students as well as graduate students that are listed above. Advising consists of mentoring students about professional aspirations, guiding their coursework decisions, serving as a reference for scholarships and job applications, and supporting them as they progress in their degree program.

8. Statement of teaching philosophy and self-evaluation:

My philosophy of teaching focuses on helping my students, whether preservice or inservice teachers, understand themselves, their subject, and their students and how these entities combine to create effective instruction. I am a socio-constructivist, which means I believe that learning is an active social process. Vygotsky (1978) noted the importance of creating learning situations that create cognitive dissonance and scaffold learning through exploration and discussion.

Elementary preservice teachers have the highest mathematics anxiety of any college major (Rech, Hartzell, and Stephens, 1993). Combatting these negative perceptions is critical to my teaching effectiveness. To address this, students write mathematics biographies to explore their own learning experiences, observe positive teaching classrooms, and participate in

classroom activities which encourage productive struggle. Creating a safe, supportive learning environment that challenges students to move beyond past preconceptions is important. My courses are designed to reduce mathematics anxiety and increasing mathematics teacher efficacy, while also focusing on pedagogical content knowledge. This part of my teaching has also been a part of scholarship as well. Currently I am researching mathematics teacher identity and voice in co-teaching settings with pre-service and inservice teachers. I am also exploring how the implementation of Mathematics' Teaching Practices are impacted by teacher identity and collaboration.

A specialized knowledge of mathematics is needed to effectively teach elementary mathematics that has the same level of impact on student achievement as socio-economic status (Hill, Rowen, and Ball, 2005). This involves understanding and connecting the learning trajectories, common errors, and various representations of content. My role is to provide experiences that challenge my students (both preservice and practicing) to critically examine various strategies, content, and understandings. This occurs through exploring elementary mathematics lessons, problem solving, discussing case studies, cooperative learning, and reflection. I challenge my students to evaluate why: Why do students struggle with place value? Why do we invert and multiply? Why do we choose to use or not use technology? This specialized content knowledge for teaching mathematics is an integral part of my research agenda, but also informs my teaching.

Teaching is about relationships. Teachers begin where students are and create situations that challenge them to analyze, clarify, and deepen their knowledge and beliefs. Each week students complete an anonymous reflection. These reflections help to monitor students and evaluate my effectiveness. I also try to provide a safe environment where they can share if there are issues and questions. In addition, I want my students to understand the importance of classrooms that are "mirrors and windows." It is important that students see themselves in their classroom, but also appreciate this diverse world and all that it has to offer. Sometimes this involves pushing students beyond their comfort zone, to ensure they are able to meet the needs of all future elementary students in their classrooms.

Teaching is the heart of teacher education. It involves connecting the research I conduct, the research in my field, my own experiences, with my students' needs in order to support their professional growth. Teaching provides a forum for me to conduct research and share findings about the professional identities of teachers. It allows me to hear the voices and needs of both the pre- and in- service teachers with whom I work. As a socio-constructivist, I believe that learning is an active process that occurs within a community context. As Parker J. Palmer advocates, my teaching combines the needs of the students, subject, and my own experiences.

PART B: RESEARCH/ CREATIVE WORK

Publications:

Refereed *	Invited ^	
Research Journal @	Practitioner Journal	Other
International #	National +	Regional ~

1. Books

*Flores, M. M., **Burton, M.**, & Hinton, V. (2017). *Making Mathematics Standards Accessible to Students with Diverse Learning Needs: Using the Concrete-Representational-Abstract Sequence*. San Diego, CA: Plural Publishing, Inc. (33% contribution).

2. Article-length publications

a. Book chapters

^Silver, E., **Burton, M.** & Audrict, W. (in press). Why Focus on Formative Assessment in Relation to Mathematics Instructional Tools, and Approaches. In *whomever (eds.), Eliciting and Using Evidence of Student Thinking to Guide Instruction: Linking Formative Assessment to Other Effective Instructional Practices*. Reston, VA: NCTM (30% Contribution).

^**Burton, M.** & Audrict, W. (in press). Focusing on Formative Assessment to Improve Mathematics Teaching and Learning. In *Eliciting and Using Evidence of Student Thinking to Guide Instruction: Linking Formative Assessment to Other Effective Instructional Practices*. Reston, VA: NCTM (50% Contribution).

^**Burton, M.** & Mims, P. (in press Fall 2017). Calculating Puddle Size. In S. McMillan (Ed.) *Integrating Math e-book*. Reston, VA: NCTM. (Reprint and expanded from Burton, M. & Mims, P. *Teaching Children Mathematics*, 18(8), 474–480). (70% Contribution).

*#**Burton, M.**, Silver, E., Mills, V., Audrict, W., Strutchens, M., & Petit, M. (in press) Connecting Formative Assessment to Current Instructional Practices. *Thirteenth International Congress on Mathematical Education Classroom Assessment Monograph*. (40% contribution).

^#Cardullo, V. & **Burton, M.** (2015). Building Interactions in Online Learning; Building Relationship through Learning Communities and Participation in Online Learning Environments. In *Handbook of Research on Strategic Management of Interaction, Presence, and Participation in Online Courses*. (40% contribution)

^+ **Burton, M.** & Stockdale, L. (2015). Rural schools. In G. Scarlett (Ed.) *Invitation to Classroom Management: An A-to-Z Guide*. Thousand Oaks, CA: SAGE. (70% contribution).

^+**Burton, M.** (2012). Five strategies for creating meaningful mathematics experiences in the primary years. In A. Shillady (Ed.), *Spotlight on Young Children: Exploring Math*. (pp. 10-14). Washington, D.C.: National Association for the Education of Young Children. (Reprinted from Burton, M (2010)). Five strategies for creating inclusive mathematics communities. *Young Children*, 65(6) 92-96).

@*+**Burton, M.** (2009). Integrating tablet technology into an elementary mathematics methods course. In C. Maddux (Ed.), *Research Highlights in Technology and Teacher Education 2009* (pp. 27-32). Chesapeake, VA: Society for Information Technology and Teacher Education.

b. Articles in refereed journals and invited articles

*@#Cardullo, V., Finley, S., Burton, M., & Tripp, L. (in press). Pre-Service Teachers: Attitudes, Perceptions, and Knowledge about Academic Language and Academic Vocabulary. *Journal of Higher Education Theory and Practice*. (10% contribution).

*@#Hinton, V., Flores, M., Schweck, M., **Burton, M.** (2016). The Effects of a Supplemental Explicit Counting Intervention for Preschool Children. *Preventing School Failure: Alternative Education for Children and Youth*. 60(3).183-193.(20% contribution).

@*+Hinton, V., **Burton, M.**, Flores, M., & Curtis, M. (2015). An investigation into pre-service special education teachers' mathematical skills, efficacy, and teaching methodology. *Issues in the Undergraduate Preparation of School Teachers: The Journal*. 1. Retrieved from <http://www.k-12prep.math.ttu.edu/journal/1.contentknowledge/volume.shtml>. (25% contribution).

@*~Nunes-Bufford, K., **Burton, M.**, & Eick, C. (2013). Developing elementary preservice teachers' initial conceptions of common practices in science and mathematics teaching. *Alabama Journal of Mathematics*, 37. (20% Contribution).

@*# **Burton, M.**, Brown, K., & Johnson, A. (2013). Storylines about rural teachers in the United States: A narrative review of the literature. *Journal of Research in Rural Education*, 28(12). (45% contribution; 22% acceptance rate).

*+**Burton, M.** & Mims, P.* (2012) Calculating puddle size. *Teaching Children Mathematics*, 18(8), 474- 480. (80% contribution; 25% acceptance rate).

@*+Evans, K., Holley, J., Richburg-Sellers, F., Robey, S., Suber, S, Field, B., & **Burton, M.** (2012). Rice Creek Elementary School and the University Partnerships. The University of South Carolina: A shared vision for excellence. *School-University Partnerships: The Journal of the National Association of Professional Development Schools*, 5(1), 19-27 (30% contribution; 35% acceptance rate).

(Teachers from school were listed first, but writing was predominately done by Field, B., and Burton, M.).

- @*+Burton, M. (2012). What is math? Exploring the perception of elementary pre-service teachers. *Issues in the Undergraduate Preparation of School Teachers: The Journal*, 5. Retrieved from <http://www.k-12prep.math.ttu.edu/journal/attributes> (30% acceptance rate).
- @*+Field, B., Blakeney, R., **Burton, M.**, Dunlap, E., Faile, J., Hudson, Z., & Jackson, M. (2010). The University of South Carolina Professional Development School Network: Twenty years of effective collaboration. *School-University Partnerships: The Journal of the National Association of Professional Development Schools*. 4(10), 31-42. (15% contribution; 35% acceptance rate).
- @*+Burton, M. & Johnson, A. (2010). Where else would I teach? *Journal of Teacher Education*, 61(4), 376-386. (50% contribution; 5% acceptance rate; 2.292 impact factor).
- @*+Vogler, K. & **Burton, M.** (2010). Mathematics teachers' instructional practices in an era of high stakes testing. *School Science and Mathematics*, 110(5), 247-261. (35% contribution; 20% acceptance rate).
- *#Burton, M (2010). Five strategies for creating inclusive mathematics communities. *Young Children*, 65(6), 92-96. (25% acceptance rate).
- *+Burton, M. & Baum, A. (2009). Engage families in meaningful mathematics. *Teaching Children Mathematics*, 16(1), 12-15. (50% contribution; 25% acceptance rate).
- *~Burton, M. (2009). Using think- tac- toe in the elementary classroom. *Math Mate: The Official Journal of the South Carolina Council of Teachers of Mathematics*, 32(2), 7-9. (Acceptance rate unknown).
- @*+Burton, M., Daane, C., & Giesen, J. (May 2008). Infusing mathematics content into a methods course: Impacting content knowledge for teaching. *Issues in the Undergraduate Mathematics Preparation of School Teachers: The Journal*, 1. (80% contribution). (30% acceptance rate).
- *~Burton, M. (2006). How can I meet the various needs of ALL students? *Math Mate: The Official Journal of the South Carolina Council of Teachers of Mathematics*, 30(1), 6-8. (Acceptance rate unknown).

d. Published Proceedings

- *#@Burton, M. (September 2017). Co-planning for Inclusive Mathematics in Teacher Preparation: Examining Perspectives. *Proceedings of the Fourteenth International Conference Mathematics Education in a Global Community*. Balatonfured, Hungary.

*@#Cardullo, V., Finley, S., **Burton, M.**, Tripp, O. (January 2017). Preservice teachers: Attitudes, perceptions, and knowledge about academic language and academic vocabulary. *Hawaii International Conference on Education Published Proceedings*. Honolulu, HI. (20% contribution).

*#**Burton, M.**, Silver, E., Mills, V., Audrict, W., & Strutchens, M. (2016) Connecting Formative Assessment to Current Instructional Practices. *Thirteenth International Congress on Mathematical Education Published Proceedings*. (40% contribution).

@#**Burton, M.** (2016). Learning about elementary preservice teachers from their observations of struggling learners. *Proceedings for the 43rd Annual Meeting of the Research Council on Mathematics Learning*. Orlando, FL.

@#**Burton, M.** (2009). Exploring the changing perception of mathematics among elementary teacher candidates through drawings. In S.L. Swars, D.W. Stinson, S. Lemons-Smith (Eds.) *Proceedings of the Thirty First Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. (pp. 363-370). Atlanta, GA: Georgia State University.

@*~**Burton, M.** & Geddings, D. (2008). A triad approach to elementary mathematics teaching. In M. Qazi (Ed.). *Proceedings of the 5th Annual TEAM Math Partnership Conference Pre-Session*. (pp. 62-69). Tuskegee, AL: Tuskegee University.

*#**Burton, M.** (2007). Giving all students a voice in the elementary mathematics classroom. In David K. Pugalee (Ed.). *Proceedings of the Ninth International Conference Mathematics Education in a Global Community*. (pp. 106-111). Charlotte, NC: The Mathematics Education into the 21st Century Project. ISBN Number 83-919465-8-4.

g. Book reviews

^+**Burton, M.** (2012, August). [Review of the book *Old dogs, new math: Homework help for puzzled parents*, by Rob Eastaway and Mike Askew]. *Teaching Children Mathematics*, 19(1), 60–61.

^+**Burton, M.** (2011, April). [Review of book *Knowing and teaching elementary Mathematics: Teachers' understandings of fundamental mathematics in China and the United States*, by Li Ping Ma]. *Teaching Children Mathematics*, 17(8), 507–508.

h. Non-refereed articles

^ +**Burton, M.** & Evans, K. *(2011). Small and tall teachers learning together in a professional development school setting. *PDS Partners*, 7(1), 13–14.

3. Papers or lectures:

Papers at professional meetings:

Refereed*	Student!	Research@
International#	National+	Regional~

*@+ **Burton, M., Cardullo, V., & Tripp, L. O.** (2018, March). Professional identities of teacher candidates: Collaborating and developing in an alternative placement. Presentation to the *American Association of Colleges for Teacher Education*. Baltimore, MD.

~**Burton, M.,** Hinton, V., Flores, M. (2017, November). *Making mathematics accessible when students struggle with mathematics*. Alabama Council of Teachers of Mathematics. Birmingham, AL.

*@+ **Burton, M.** (2017, April). *Utilizing a Collaborative Planning Tool for Inclusive Mathematics*. National Council of Teachers of Mathematics Research Conference. San Antonio, TX.

*+!**Burton, M.** Daniel, E., & Hutto, M. (2017, April). *Fractions: Developing Understanding through Meaningful Tasks and Discussion*. National Council of Teachers of Mathematics Annual Conference. San Antonio, TX.

*+Pugalee, D., **Burton, M.,** Musgrave, S., Conner, K., Bezuk, N. (2017, February). *Global Perspectives on Teacher Preparation: Topics from ICME 13*. Association of Mathematics Teacher Educators. Orlando, FL

*+Lee, J., Salinas, A. Miller, T., Sjostrom, M., Evitts, T., & **Burton, M.** (2017, February). *Individual and Collective Capacities: Strengthening Affiliates to Become Stronger Advocates*. Association of Mathematics Teacher Educators. Orlando, FL

~!**Burton, M.,** Daniel, E., & Hutto, M. (2016, November). *Connecting Formative Assessment to Current Instructional Strategies*. Alabama Council of Teachers of Mathematics Annual Conference. Birmingham, AL

*#Burton, M., Silver, E., Mills, V., Audrict, W., Strutchens, M. (2016, July). *Connecting formative assessment to current educational instructional strategies*. International Congress on Mathematical Education. Hamburg, Germany.

*+Mills, V.L., Silver, E.A., Strutchens, M., Burton, M., & Audrict, W. (2016, April). *Findings from the NCSM/ AMTE Joint Task Force on Formative Assessment: Two new powerful lenses on a familiar topic*. National Council of Supervisors of Mathematics. Oakland, CA.

*@+Burton, M. (2016, February). *Learning about elementary preservice teachers from their observations*. Research Council on Mathematics Learning. Orlando FL.

- *+ Eddy, C; Krupa, E.; Lee, J.; Grady, M.; Miller, T.; & Burton, M. (2016, February). *Connecting and becoming stronger advocates through affiliates*. Association of Mathematics Teacher Educators. Irvine, CA.
- ~!Webb, K. & **Burton, M.** (2015, October). *Cooperative learning in the elementary classroom*. Alabama Council of Teachers of Mathematics. Birmingham, AL.
- ~ !Hutto, M. \$ **Burton, M.** (2015, October). *Listening and learning from our students: One preservice teacher's journey*. Alabama Council of Teachers of Mathematics. Birmingham, AL.
- @+*Struchens, M. & **Burton, M.** (2015, April). *Using Professional Learning Communities to Improve Teacher's Use of Formative Assessment: Increasing Student Learning*. National Council of Supervisors of Mathematics. Boston, MA.
- @+***Burton, M.** (2015, April). *Supporting Teacher Teams in Meeting the Needs of All Students in Inclusive Classrooms: Involving All Educators*. National Council of Supervisors of Mathematics. Boston, MA.
- @Flores, M., **Burton, M.**, Hinton, V., & Smith, M. (2015, February). *Professional Development for Collaborative Mathematics Instruction*. Outreach Scholarship Symposium: Advancing Transformative Engagement. Auburn, AL.
- ##@Coomes, J., Eddy, C. **Burton, M.**, Lee, J., & Franz, D. (2015, February). *Affiliates: Becoming Stronger Advocates*. Association of Mathematics Teacher Educators. Orlando, FL.
- ##@Hinton, V., Smith, M., & **Burton, M.** (2015, February). *Inclusive Classrooms: Special and General Education Teachers Working Together for All Students*. Association of Mathematics Teacher Educators. Orlando, FL.
- ##@Flores, M., **Burton, M.**, & Hinton, V. (2014, October). *Collaborative PD for Effective Differentiated Math Instruction*. Conference on Learning Disabilities. Philadelphia, PA.
- +*Hickman, E., **Burton, M.**, & Rubio, T. (2014, April). *State Initiative and University Professional Development Partnerships*. National Council of Teachers of Mathematics. New Orleans, LA.
- #Barry, N. **Burton, M.**, Tripp, L.O., Love, A., Thomas, C., & Russell, J. (2013, April). *Destination Malawi Africa: Student reactions to a study abroad experience*. Global Perspectives on College and University Teaching. Auburn, AL.
- @*+Hickman, B., Rubio, T., & **Burton, M.** (2013, February). *Advancing Effective PD: The Journey of One State Initiative from Inservice to Preservice*. Association of Mathematics Teacher Educators Annual Conference. Orlando, FL.

@*#**Burton M.** (2012, April). *Storylines about rural teachers in the United States: A synthesis of the research literature*. American Educational Research Association Conference, Vancouver, BC.

*+!**Burton, M.,** Evans*, K. Fickling, J., Holley, J., Richardson, D.* & Sellers, F.* (2011, March). *Brain compatible learning in a PDS? A mind stretching process for all*. National Association of Professional Development Schools Annual Conference. New Orleans, LA.

@*+**Burton, M.** & Geddings, D. (2011, January). *From freshmen to seniors: A triad, collaborative approach to preparing prospective teachers*. Association of Mathematics Teacher Educators Annual Conference. Irvine, CA.

*+!**Burton, M.,** Evans*, K. Suber, S., Robey*, S., & Sellers, F.* (2010, March). *Active instruction in math? The journey of enacting brain-based research for one PDS elementary school and university*. National Association of Professional Development Schools Annual Conference. Orlando, FL.

@*#Johnson, A. & **Burton, M.** (2009, April). “Where else would we teach?” American Educational Research Association Annual Conference. San Diego, CA.

@*#Vogler, K. & **Burton, M.** (2009, April). *South Carolina Educators for the practical use of research: Mathematics teachers’ instructional practices in the era of high stakes testing*. American Educational Research Association Annual Conference. San Diego, CA.

@*+**Burton, M.** (2009, April). *Using a tablet PC in an elementary mathematics methods course*. Society for Information Technology and Teacher Education Conference. Charleston, SC. April 2009.

*+Geddings, D. & **Burton, M.** (2009, April). *The triad approach to preparing preservice teachers to effectively teach elementary mathematics*. National Council of Teachers of Mathematics Annual Conference. Washington, D.C.

*+!**Burton, M.,** Evans, K.*, Suber, S., & Sellers, F.* (2009, March). *Growing as a professional development school: Expanding and enriching*. National Association of Professional Development Schools Annual Conference. Daytona Beach, FL.

@*+**Burton, M.** (2008, April). *Sustaining instructional change through teacher leaders using inquiry and integration*. National Council of Supervisors of Mathematics Annual Conference. Salt Lake City, UT.

*#Baum, A. & **Burton, M.** (2008, March). *Empowering families to engage preschool children in meaningful math*. Association of Childhood Education International Conference. Atlanta GA.

- @*+**Burton, M.** (2008, January). *Experiencing, implementing, and leading mathematics inquiry & integration*. Association of Mathematics Teacher Educators Annual Conference. Tulsa, OK.
- @*+VanScoy, I., Field, B., & **Burton, M.** (2007, October). *Continual renewal of school university partnerships: Analysis of new commitments, roles, and strategies at the University of South Carolina*. National Network for Educational Renewal Conference. Charleston, WV.
- @*+Sternberg, L., VanScoy, I., Field, B., Chaplin, P., **Burton, M.**, & Baum, A. (2007, March). *Sixteen years of professional development schools at the University of South Carolina: The ebb and flow of a partnership*. National Association of Professional Development Schools Conference. Las Vegas, NV.
- *+Daane, C.J., **Burton, M.**, & Green, A. (2007, March). *Improving problem solving skills using non-routine problems*. National Council of Teachers of Mathematics Annual Conference. Atlanta, GA.
- @*+**Burton, M.** (2007, March). *Increasing elementary preservice teachers' mathematical content knowledge for teaching in a combined mathematics methods and content course*. National Council of Teachers of Mathematics Annual Conference. Atlanta, GA.
- @*#**Burton, M.**, Schwery, C., & Ridgway, K. (2006, May). *The changing pedagogical expertise of teacher candidates during their second semester of teaching field experience*. American Educational Research Association Conference. San Francisco, CA.
- *~**Burton, M.** (2005, October). *Dialogue in the mathematics classroom*. National Council of Teachers of Mathematics Regional Conference. Birmingham, AL.
- *+**Burton, M.** (2005, April). *Dialogue in the mathematics classroom*. National Council of Teachers of Mathematics National Conference. Anaheim, CA.
- *~**Burton, M.** (2004, November). *Differentiation of instruction*. National Council of Teachers of Mathematics Regional Conference. New Orleans, LA.
- *+**Burton, M.** (2004, April). *Differentiation of instruction*. National Council of Teachers of Mathematics National Conference. Philadelphia, PA.
- @*#**Burton, M.** & Wilson, E. (2003, April). *Social studies journals to promote higher order thinking*. American Educational Research Association Conference. Chicago, IL.

8. a. Funded grants and contracts:

<i>Years</i>	<i>Project</i>	<i>Principal Investigators</i>	<i>Role</i>	<i>Amount/Source</i>
2015–2017	STEM Enrichment in Physics, Mathematics and Project based Learning: Meeting K-12 Needs in Alabama	Dr. Allen L. Landers & Dr. Marilyn Strutchens	Consultant/ Professional Development Leader. Provide OGAP training and support for professional learning communities for teachers in grades K-5.	\$390,000 Math Science Partnership- Alabama State Department of Education
2014–2015	Improving Students' Mathematical Proficiency through Formative Assessment: Responding to an Urgent Need in the Common Core Era	Edward Silver	Advisory Board. Plan, facilitate and analyze results from a survey and working meeting on formative assessment within existing mathematical frameworks. The working meeting will be held Oct. 12-15 in Ann Arbor Michigan and will include leaders in the field of: Culturally Relevant Pedagogy, Response to Intervention, Cognitively Guided Instruction, Classroom Discourse Tools, & Mathematical Tasks Framework	National Science Foundation
2014	Developing a Mathematical Teaching Anxiety Instrument	Michel Smith, Margaret Flores, Megan Burton	Developing and testing the validity/reliability of an instrument to measure mathematical teaching anxiety.	\$8,000
2012–2013	TEAM-Math and AMSTI Professional Learning Communities Partnership	Strutchens, M., Hickman, E., Martin, W.G., Stuckwisch, S., & Albrecht, U.	Member of Grant Writing and Implementation Team: Senior Researcher and Mathematics Education faculty member. Participate in triads that provide support for professional learning communities and Grade Level Leaders. Provide professional development training	\$234,000 Alabama State Department of Education

9. Description of candidate's scholarly program:

My research agenda is intertwined with my teaching and outreach. All work is based on the underpinning beliefs that people learn through relationships, inquiry, efficacy, and discourse. Currently I am researching teacher voice in three areas: 1) elementary teachers' voice, 2) preservice teachers' voice, and 3) equity and advocacy for student needs. My research gives voice to the teachers with whom I work. I believe in the impact of sharing my work with teachers through publishing manuscripts in teacher practitioner journals and publishing with K-6 classroom teachers as coauthors. Through my relationships with the Alabama Mathematics Science and Technology Initiative faculty, I was trained and hired as a consultant to support local teachers in grades 3-5 related to multiplicative and fractional understanding using the Ongoing Assessment Project (OGAP) model. This research is in the process of being analyzed.

Currently I am working with my elementary colleagues to explore various facets of preservice teacher voice and identity in relation to STEM Education (Science, Technology, Engineering, and Mathematics) in our summer Science, Technology, Engineering, and Mathematics (STEM) Camp. Approximately 100 students attended, under the direction of 24 preservice teachers. I worked with my colleagues to conduct research on the preservice teachers' professional noticing in mathematics, reflections, use of technology to enhance instruction, and beliefs. This is the data I am currently analyzing. We are also working on a longitudinal study with our foundations colleagues to explore and track preservice teachers changing voice in regards to equity and advocacy for student needs throughout their progression in the program.

Advocacy and equity connects to my work with Dr. Margaret Flores and Dr. Vanessa Hinton on ways teachers can support the needs of students with special needs and ways teacher educators can support the development of preservice teachers who may work in inclusive settings. We had two articles published on our work with inservice and preservice teachers working with students with special needs, have two under review, and completed a book based on a compromise in our fields to support teachers working across the general and special education spectrum. We also presented at various conferences on our research. For the past three years, preservice teachers from special and elementary education worked together to develop mathematics lessons in inclusive settings. We are analyzing this work and changes it made in their perceptions about teaching mathematics in inclusive settings and are currently working on publications related to this work.

As my research relates to advocacy and teacher voice, I have found my professional voice and am using it to advocate for the use of assessment in teacher education. I have served on a task force with members of the National Council of Supervisors of Mathematics and the Association of Mathematics Teacher Educators to explore ways to promote formative assessment among our membership. We hosted a working meeting at the University of Michigan, analyzed a survey we sent to our membership, have presented at multiple venues, created a position statement for our organizations on the topic, published our work in published proceedings and our monograph, and are currently working on a book through NCTM to share the findings from our work.

Each of my current research projects evolved from a consideration of teacher voice and needs for advocacy and equity. They provide positive avenues to examine teacher beliefs and voice in greater depth.

2. Activities and Products related to professional development schools

2. a. Instructional activities

Organized an outreach 100 3rd–5th grade students to attend a Science, Technology, and Engineering Camp. Sixty of these students were identified as high needs and received scholarships to benefit from this experience. June 12–30, 2017, Auburn University.

Co-presenter Ongoing Assessment Project – Multiplicative Thinking Training for Opelika and Lee County Teachers. (8am–4pm, July 11–25, 2017, AMSTI Center).

Co-developer an elementary outreach opportunity for students in grades 3–5. Auburn University A+ Elementary Camp. 8am–3pm, June 6–17, 2016, Auburn University.

Presenter on Response to Intervention in the Middle Grades. October 2015, Prattville Junior High School, Prattville, AL

Team member in Response to Intervention Mathematics Research and Support at Pick and Cary Woods Elementary with Drs. Hinton & Flores. We work with 2–5 grade students. October 2014–2016, Cary Woods and Pick Elementary School, Auburn, AL

Team member and participant in triad training meetings to coordinate and plan outreach and progression of grant, July 2012–present, Auburn University, Auburn, AL

Facilitator and Triad Member for “TEAM-Math and AMSTI Professional Learning Communities Partnership” in Alexander City Schools and Tallapoosa County Schools. This includes meeting individually with administrators at six elementary and middle schools in Tallapoosa County Schools and Alexander City Schools, October 2012–present (83 participants; approximately 36 hours), Alexander City and Dadeville, AL

Presenter and participant at “Alabama Mathematics, Science, and Technology Initiative’s training for faculty involved in training preservice teachers” May 9–10, 2013 (25 participants), Birmingham, AL

Leadership team for “TEAM-Math and AMSTI Administrator Professional Learning Communities Meetings” monthly administrator meetings at schools through East Alabama, August 2012–May 2013 (approximately 25 participants each meeting; approximately 24 hours)

Presenter and facilitator of “Teacher Kick-Off of TEAM-Math and AMSTI Professional Learning Communities Partnership,” March 2, 2013 (140 participants), Auburn University, Auburn, AL

Presenter and facilitator at “Grade Level Leader” Workshop of TEAM-Math and AMSTI

Professional Learning Communities Partnership,” February 2, 2013 (68 participants), Auburn University, Auburn, AL

2. Contracts, grants, and gifts

<i>Years</i>	<i>Project</i>	<i>Principal Investigators</i>	<i>Role</i>	<i>Amount/Source</i>
2014	Professional Development: Mathematics in Inclusive Environments	Margaret Flores, Megan Burton, Michel Smith	Grant writing team, planned and co- led a 6 day professional development for elementary and special education teachers in which they planned and co-taught math lessons to elementary students.	\$26,000 Auburn University Outreach Grant
2010–2012	Unveiling Mathematics Standards	Newman, J., Izzard, M.	Member of grant writing team: Mathematics Educator contracted consultant for writing and implementing the grant for the University of South Carolina-Sumter. Provided summer professional development sessions, monthly sessions during the school year, online support, and coaching observations during the school year	\$175,000 South Carolina Commission on Higher Education

PART D: SERVICE

1. University Service

a. Auburn University

2016–2019 Student Conduct Advisory Committee

2013–2017 Auburn University Faculty adviser for Auburn University Wesley Foundation

2013–2016 Advisory Committee for a Drug-free Campus and Workplace

b. College of Education

2017 Undergraduate Education Committee

2015–Present Kappa Delta Pi: Education Honor Society Counselor

2015–2016 Received National Chapter Membership Award

2016–2017 Received Phoenix Rising Award

2012–2015 College of Education Faculty Governance Committee

c. Department

2016–2017 Search Committee for Elementary Clinical Faculty

2016–2017 Search Committee for Elementary Social Studies Faculty

2016–Present Faculty Affairs Committee

2016–Present Program Coordinators Committee

2016 Search Committee for Elementary Faculty (failed)

2016 Search Committee for Department Chair

2015–2016 Graduate Studies Committee

2012–2016 Strategic Planning Equity Working Group

2013 Strategic Planning Professional Learning Community Working Group

2012–2013 Strategic Planning Professional Status Working Group

Program Coordinator (2016–Present):

As program coordinator, I find myself daily answering questions about our programs to potential students, handling issues students have (such as meal plans, placements, scheduling issues, etc.). In addition, I communicate with the Office of Student Services regarding all placements. I also collect and organize internship placements for our students, collect and communicate information regarding those accepted into our professional program, communicate about registration issues with all cohorts, meet with students about petitions, confirm class schedules and room locations, organize comprehensive examinations for our M.Ed. students, communicate with potential students, communicate each semester with distance students, and complete hiring forms for adjuncts and GTAs as well as supervise their work. I create syllabi for all adjuncts teaching our courses, create internship materials for cluster teachers, supervisors, and interns, arrange elementary meetings, and attend program chair meetings. I also communicate with other program areas that teach our students to address scheduling and student issues that arise.

I provide support to adjuncts and GTAs teaching courses and supervising interns in the cluster teacher model. I typically prepare syllabi, prepare the Canvas course, put in requests for placements, contact schools, meet with field experience teachers, meet each adjunct or GTA multiple times before and during the semester to discuss concerns, content, students, and ensure the quality of our program is maintained.

Professional Program Applications (2013-2016):

Through spring 2016, I coordinated the acceptance to the professional program for the elementary education program area. In the fall, Dr. Cardullo shadowed this and will take full lead in this responsibility beginning spring 2017. This responsibility involves coordinating faculty schedules to arrange interview times, organizing interview and writing materials, communicating with students, printing student resumes and preparing folders for faculty, maintaining the database, sharing results with the department head and other departments as needed, etc.

d. Local Community

2012–2014 Auburn City Schools Advisory Federal Programs Advisory Committee

2. Professional service**a. National Level**

2017–2020 Constitution and By Laws Committee of the Association of Mathematics Teacher Educators

2017–present Standards Dissemination Task Force- Association of Mathematics Teacher Educators

2013–2017 Affiliate Director of the Association of Mathematics Teacher Educators

- 2013–present NCSM/AMTE – Formative Assessment Steering Committee
- 2011–2017 Member, Affiliate Committee of Association of Mathematics Teacher Educators
- 2015–2016 AMTE Board Subcommittee on Equity
- 2013–2014 Women in Mathematics Education Bibliography Committee
- 2012–2013 Chair, Affiliate Committee of Association of Mathematics Teacher Educators. Submit proposal and organize affiliate meeting at the national conference, communicate affiliate needs to the AMTE board and board needs to affiliates.
- 2012–2014 Member, Special Task Force on Nonprofit Affiliate Status for Association of Mathematics Teacher Educators

b. State Level

- 2016–2018 AMTE-A President
- 2015–2016 AMTE-A President Elect
- 2012–2015 AMTE-A Board Member at Large
- 2012–2016 NCTM Government Relations Officer for ACTM
- 2007–2010 President/President-Elect, South Carolina Association of Mathematics Teacher Educators (SCAMTE)
- 2008–2011 Representative to Advisory Assembly of South Carolina Council of Teachers of Mathematics
- 2006–2007 Organizational and Constitutional Committee for SCAMTE

c. Editing/Reviewing

- 2017 Served as external reviewer for a candidate seeking promotion from assistant to associate professor at a state university in the Southeast. I was recommended, because my work in rural and elementary education aligns with his research area.
- 2016–present Editorial Board for the Thirteenth International Congress on Mathematical Education Classroom Assessment Monograph.
- 2016–present Editorial Board for book in process: *In Eliciting and Using Evidence of Student Thinking to Guide Instruction: Linking Formative Assessment to Other Effective Instructional Practices*. Reston, VA: NCTM
- 2016–present Reviewer for Investigations in Mathematics Learning

2016–present Reviewer for The Mathematics Educator

2016–present Proposal reviewer for NCTM Research Conference

2012–present Manuscript reviewer for NCSM Journal

2011–present Manuscript reviewer for Journal of Teacher Education

2009–present Proposal reviewer for the Association of Mathematics Teacher Educators

2007–present Manuscript reviewer for Teaching Children Mathematics

2015 Reviewer for the International Congress on Mathematics Education

2008–2015 Manuscript reviewer for The MathMate

2006–2009 Proposal reviewer for Division K, American Educational Research
& 2011 Association

2007–2009 Proposal reviewer for National Council of Teachers of Mathematics

d. Current Membership in Professional Organizations:

American Educational Research Association

Association of Mathematics Teacher Educators

Association of Mathematics Teacher Educators – Alabama

Research Council on Mathematics Learning

Council for Learning Disabilities

National Council for Teachers of Mathematics

National Council of Supervisors of Mathematics

Alabama Council of Teachers of Mathematics