

# MADELON J. MCCALL

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One Bear Place #97314  
Waco, TX 76798-97314  
254-710-6136 (work)  
[madelon\\_mccall@baylor.edu](mailto:madelon_mccall@baylor.edu)

15029 Badger Ranch Blvd.  
Woodway, TX 76712  
254-855-5426 (cell)

## ACADEMIC DEGREES

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2008	Doctor of Education	<b>Baylor University</b> <i>Curriculum and Instruction</i> <i>Specialization: Science Education</i>
1997	Master of Science	<b>Baylor University</b> <i>Biology</i>
1978	Bachelor of Science	<b>Lamar University</b> <i>Secondary Education</i> <i>Specialization: Science Education</i>

## PROFESSIONAL EXPERIENCE

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June 2015-Present	<b>Clinical Assistant Professor, Curriculum and Instruction, Baylor University</b>
August 2011-May 2015	<b>Lecturer, Curriculum and Instruction, Baylor University</b>
August 2010-May 2011	<b>Adjunct Faculty, Curriculum and Instruction, Baylor University</b>
August 2006-May 2011	<b>Science Instructional Specialist, Midway High School, Waco, TX</b>
August 2005-May 2007	<b>Research Assistant, Instructor, Curriculum and Instruction, Baylor University</b>
August 2000-June 2004	<b>Classroom Teacher, Midway High School, Waco, TX</b>
August 1996-May 1997	<b>Graduate Assistant, Department of Biology, Baylor University</b>
August 1992-May 1993	<b>Classroom Teacher, Waco Christian School, Waco, TX</b>
August 1984-May 1985	<b>Classroom Teacher, Waco Christian School, Waco, TX</b>
August 1979-May 1983	<b>Classroom Teacher, Texas Military Institute, San Antonio, TX</b>
August 1978-May 1979	<b>Classroom Teacher, Little Cypress-Mauriceville High School, Orange, TX</b>

## ADMINISTRATOR AND TEACHING CERTIFICATIONS

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**2009 Texas Principal Certification**  
Principal Grades EC-12

**1978 Texas Teacher Certifications (Lifetime):**  
Secondary Chemistry Grades 6-12  
Secondary Biology Grades 6-12  
Secondary Physical Science Grades 6-12  
Secondary Life-Earth Science Grades 6-12  
Secondary General Science Composite Grades 6-12

## SCHOLARSHIP AND CREATIVE ACTIVITIES

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### JOURNAL PUBLICATIONS (PEER-REVIEWED)

**McCall, M.** (2017). Elementary preservice science teaching efficacy and attitude toward science: Can a college science course make a difference? *Electronic Journal of Science Education*, 21(6), 1-11. <http://ejse.southwestern.edu/article/view/17661>

**Journal Information:** The journal publishes manuscripts relating to issues in science education/science teacher education from early childhood through the university level and informal science and environmental education. The journal reviews original science education manuscripts that report meaningful research, present research methodology, develop theory, and explore new perspectives. Manuscripts undergo double blind peer review; 2+ external reviewers; 20-22% acceptance rate; and ranked as *Outstanding Recognition in Field, High Prestigious, Refereed* by the Department of Curriculum and Instruction.

**Significance:** The purpose of the course design and implementation was to promote science content understanding and improve science teaching efficacy and attitudes toward science. The findings from the research suggest that a course specific to the science content needs of elementary preservice teachers can also improve confidence in teaching science and attitudes toward science as a body of knowledge.

**McCall, M.,** Howell, L., Rogers, R., Osborne, L., Goree, K., Merritt, B., Cox, H., Fischer, J., Gardner, P., & Gasaway, J. (2017) Baylor University and Midway Independent School District: An Exemplary Partnership. *School-University Partnerships*, 10(2), 1-5.

**Journal Information:** This journal serves as a forum for the exchange of information and ideas related to teacher education programs and professional development schools. Articles focus on concepts, practices and research, which have implication and applicability for practitioners involved with teacher education and public school impact. Manuscripts are subject to a double-blind review by members of the editorial consultant board.

**Significance:** The purpose of this article was to highlight the Baylor School of Education and Midway Independent School District partnership and their receipt of the Exemplary Professional Development School Achievement Award in 2017. The National Association of Professional Development Schools award was presented to three partnerships that year and this article highlights the history and work of three schools in Midway ISD partnership: Spring Valley Elementary, Midway Middle School, and Midway High School. The strength and success of the partnership was attributed to the K-12 contributions of the MISD/Baylor PDS personnel, Baylor faculty, school administrators, and teachers.

**McCall, M.,** Rogers, R., Gasaway, J., & Veselka, M. (in press). Clinical experiences in middle and high schools: Results of a one-year implementation of the co-teach model. *School-University Partnerships*, to be published spring 2018.

**Journal Information:** This journal serves as a forum for the exchange of information and ideas related to teacher education programs and professional development schools. Articles focus on concepts, practices and research, which have implication and applicability for practitioners involved with teacher education and public school impact. Manuscripts are subject to a double-blind review by members of the editorial consultant board.

**Significance:** The purpose of this research was to determine the impact of the implementation of the co-teach initiative in both Midway High School and Midway Middle School. The research examined the first year of implementation and provided information concerning the benefits and challenges of this implementation by both senior teacher interns and their mentors. University faculty and K-12 administrators can use this data to inform the decision of whether the time and expense of co-teach training and implementation supports continuation of this model as a method of teacher development.

**McCall, M.,** Gasaway, J., & Osborne, L. (2015, December). Interview skills and the PDS partnership at Baylor University. *Stories from the Field*, National Association of Professional Development Schools. Retrieved from <http://napds.org/stories-from-the-field/interview-skills-and-the-pds-partnership-at-baylor-university/>

### **BOOK CHAPTERS (REFEREED)**

Nesmith, S., Park, J., & **McCall, M.** (2014). Longitudinal change in science self-efficacy of elementary teachers. In D. F. Berlin & A. L. White (Eds.), *Initiatives in Mathematics and Science Education with Global Impacts* (pp. 205- 216). Columbus, OH: International Consortium for Research in Science and Mathematics Education: ISBN 0-9727338-5-X.

**Journal Information:** The book is an outgrowth of the International Consortium for Research in Science and Mathematics Education (ICRSME). The mission of ICRSME is the advancement of science and mathematics education and is based on the premise that all peoples can benefit from the knowledge and experiences of their local, national, and international colleagues. ICRSME proposals undergo rigorous review by the program committee, and some of the proposals are cited for full chapter manuscripts. Chapter manuscripts undergo a second round of reviews by the publication committee resulting in limited acceptance for publication. ICRSME has been in existence since 1983, and, to date, the research presented at the consortium has resulted in five edited books.

**Contribution:** Dr. McCall contributed to Dr. Nesmith's lead in the development of the concept, data generation, review, and analysis as well as the final interpretation and write-up. Collaborative contributions of McCall (30%), Nesmith (40%), and Park (30%).

**Significance:** This research reports the results of a long-term, content-focused, science professional development experience on elementary teachers. The findings contribute to the fields of science efficacy and the potential for modifying the two constructs of efficacy (personal teaching efficacy

### **CONFERENCE PROCEEDINGS (PEER-REVIEWED)**

Nesmith, S. M., **McCall, M. J.**, & Park, J. C. (2014). Effects of a science content academy on science self-efficacy of elementary teachers [Abstract]. Proceedings of the 2014 International Association for Science Teacher Education Conference, Paper #10113. Retrieved from <http://theaste.org/publications/2014-proceedings/>

**McCall, J. (1997).** Seasonal fire effects on species richness in a mixed-grass prairie of central Texas. In Warwick, Charles (ed.). *Proceedings Fifteenth North American Prairie Conference*, Chicago, IL. Retrieved from <http://images.library.wisc.edu/EcoNatRes/EFacs/NAPC/NAPC15/reference/econatres.napc15.mccall.pdf>

### **MANUSCRIPTS IN PROGRESS**

Rogers, R. and **McCall, M.** (in progress). Our next generation of co-teachers in secondary clinical experiences: Challenging teachers to move beyond their favorite co-teaching models. *School-University Partnerships*.

**McCall, M.** (in progress). Characteristics of effective secondary teachers: Addressing both high school student and pre-service teacher perspectives. Manuscript to be submitted to *Action in Teacher Education*.

**McCall, M.** (in progress). Co-teaching foundations: The importance of establishing positive intern/mentor relationships. Manuscript to be submitted to *PDS Partners*.

## **EXTERNAL AND UNIVERSITY GRANTS**

**2014** University Teaching Grant, Baylor University

**2012** Baylor/Waco Partnership for Excellence in Science, Baylor University and Waco Independent School District

## **INTERNATIONAL CONFERENCE PRESENTATIONS**

Park, J., Nesmith, S., & **McCall, M.** (2013, March). *Change in Science Content Knowledge and Self-Efficacy of Elementary Teachers*. International Consortium of Research in Science and Mathematics Education, Managua, Nicaragua.

## **NATIONAL CONFERENCE PRESENTATIONS**

Osborne, L., Smith, A., & **McCall, M.** (2018, March). *Pin It: Developing a Professional Learning Network to Equip the Next Generation of Teachers Through the Use of Social Media*. National Association of Professional Development Schools, Jacksonville, FL.

Rogers, Rachele, **McCall, M.**, Osborne, L., Crowley, B. (2018, March). *Our Next Generation of Co-Teachers in Secondary Clinical Experiences: Challenging Teachers to Move Beyond Their Favorite Co-Teaching Models*. National Association of Professional Development Schools, Jacksonville, FL.

Osborne, L., Rubio, B., Talbert, S., **McCall, M.** (2018, March). *Reaching Across the Cultural Divide: How Can Working Across Partnerships Equip Teacher Candidates for Reaching Diverse Learners?* National Association of Professional Development Schools, Jacksonville, FL.

**McCall, M.** (2018, February). *Characteristics of Effective Secondary Teachers: Addressing Both High School Student and Pre-Service Teacher Perspectives*. Association of Teacher Educators, Las Vegas, NV.

Nesmith, S. & **McCall, M.** (2017, November). *Elementary Science Teacher Preparation: Exploring Attitudes, Self-Efficacy and Content Pedagogical Needs and Impacts*. School Science and Mathematics Association, Louisville, KY.

**McCall, M.**, & Rogers, R. (2017, March). *Teacher Training in Middle and High Schools: Results Of An 18-Month Implementation of the Co-Teach Model*. National Association of Professional Development Schools, Washington, DC.

**McCall, M.**, Osborne, L., & Rubio, B. (2017, March). *Best Practices in the Preparation of Preservice Teachers: A 5-Year Process of Collaboration, Reflection, Communication, and Implementation*. National Association of Professional Development Schools, Washington, DC.

**McCall, M.** (2017, March). *College Science Specific to the Needs of Elementary Teachers: A Look at the First Year of Implementation*. National Science Teacher Association National Conference, Los Angeles.

**McCall, M.** (2016, October). *Teaching Elementary Science...I Think I Can?!* School Science and Mathematics Association, Phoenix, AZ.

**McCall, M.**, Rogers, R., Gasaway, J., Cox, H., & Osborne, L. (2016, March). *Implementation of the Co-Teach Model in Secondary Teacher Preparation*. National Association of Professional Development Schools, Washington, DC.

- McCall, M.,** Strange, K., & Rubio, B. (2016, March). *Growing Pains and Gains: School Turn-Around and the PDS Partnership*. National Association of Professional Development Schools, Washington, DC.
- McCall, M.,** & Nesmith, S. (2015, October). *Elementary Science Teacher Preparation: The Importance of Breadth and Depth of Content*. School Science and Mathematics Association, Oklahoma City, OK.
- Rogers, R., Cox, H., Bowden, B., **McCall, M.,** & Osborne, L. (2015, March). *Co-teaching: Equity in the PDS Classroom*. National Association of Professional Development Schools, Atlanta, GA.
- McCall, M.** (2015, February). *Qualities of Effective High School Teachers: Addressing the Pre-Service Teacher Perspective*. Association of Teacher Educators, Phoenix, AZ.
- McCall, M.,** Park, J., & Nesmith, S. (2014, November). *Meeting Their Needs-Science Content Courses for Elementary Pre-service Teachers*. School Science and Mathematics Association, Jacksonville, FL.
- McCall, M.,** Gloer, S., Wood, R., & Almaguer, D. (2014, March). *Never a Dull Moment: Certificate Changes and the PDS*. National Association of Professional Development Schools. Las Vegas, NV.
- McCall, M.,** Gasaway, J., Merritt, B., & Canuteson, A. (2014, March). *Cashing In: Pre-Service Teacher Professional Development in the PDS*. National Association of Professional Development Schools. Las Vegas, NV.
- Nesmith, S., **McCall, M.,** & Park, J. (2014, January). *Longitudinal Change in Science Self-Efficacy of Elementary Teachers*. Association of Science Teacher Educators, San Antonio, TX.
- Park, J., **McCall, M.,** & Nesmith, S. (2013, November). *Science Content Academy for Elementary Teachers: A Reflection on Events*, School Science and Mathematics Association, San Antonio, TX.
- McCall, M.,** Gasaway, J., & Osborne, L. (2013, February). *From Green to Gold: Growing a University and Public School Partnership*. National Association of Professional Development Schools, New Orleans.
- Nesmith, S., **McCall, M.,** & Park, J. (November 2012). *Grappling with Teachers Unnatural Understanding of the Nature of Science*. School Science and Mathematics Association, Birmingham.
- McCall, M.** (2008, February). *Qualities of Effective Secondary Science Teachers: Perspectives of University Biology Students*. Association of Teacher Educators National Conference, San Diego.
- McCall, M.** (1996, October). *Seasonal Fire Effects on the Species Diversity of Mixed Grass Prairies in Central Texas*. North American Prairie Association National Conference, Chicago.

## **REGIONAL AND STATE CONFERENCE PRESENTATIONS**

- McCall, M.,** Crutchfield, R., Moore, J., & Smith, A. (2017, September). *Affecting High School Science Education Through Implementation of the Co-Teach Model of Teacher Preparation*. Southwest Association for Science Teacher Educators. Waco, TX.
- McCall, M.** & Nesmith, S. (2015, October). *Using Required Targeted Content Courses to Prepare Elementary Education Majors to Teach Science*. Southwest Association of Science Teacher Educators, Denton, TX.
- McCall, M.,** Nesmith, S., & de Mesa, M. (2013, April). *Introduction to CCRI*. College and Career Readiness Initiative, Science Faculty Collaborative, Funded by the Texas Higher Education Coordinating Board, Waco, TX.
- Park, J., **McCall, M.,** & Nesmith, S. (2013, October). *Elementary Teachers' Ideas of Density from an Atomic Viewpoint*, Southwest Association for Science Teacher Educators, San Antonio, TX.
- McCall, M.,** Nesmith, S., & de Mesa, M. (2013, May). *The Hows and Whys of Creating a CCRS Continuum in the University Science Classroom*. College and Career Readiness Initiative Faculty Collaborative Culminating Conference, funded by the Texas Higher Education Coordinating Board in Houston, TX.

Nesmith, S., **McCall, M.**, & de Mesa, M. (2012, October). College and Career Readiness Initiative, Science Faculty Collaborative presentation, funded by the Texas Higher Education Coordinating Board in Waco, TX.

## **PROFESSIONAL DEVELOPMENT PRESENTATIONS**

- McCall, M.** (2017, September). *Formative Assessment in a College Biology Classroom*. Biology 3100: Biology Learning Theory. Baylor University, Waco, TX.
- Jenkins, C. & **McCall, M.** (2017, August). *Student Investment in the Learning Process*. Midway High School, Waco, TX.
- McCall, M.**, Osborne, L. & Sanchez, S. (2017, February). *Minecraft: Crafting the Profession-Yours, Mine & Ours*. Midway High School, Waco, TX.
- McCall, M.** & Osborne, L. (2015-17). *Co-teaching Foundations Workshop*. Baylor University, Waco, TX.
- McCall, M.** (2015, October). *No Textbook, No Lecture...No Way!* Baylor Provost Faculty Forum, Waco, TX.
- McCall, M.**, Gasaway, J., & Osborne, L. (2014, August). *From Mentee to Colleague: Mentoring Pre-Service Professionals*. Back to School Summit Midway ISD, Waco, TX.
- McCall, M.** (2012, August). *Becoming a Teacher Leader*. Secondary Teacher Summer Summit, Baylor University, Waco, TX.
- McCall, M.**, Nesmith, S., & Park, J. (2012, August). *Teaching the Essence of Science*. Back to School Summit-Midway ISD in Waco, TX.
- McCall, M.** (2011, August). *Transformative Assessment*, Back to School Summit, Midway ISD, Waco, TX.
- McCall, M.** (2011, August). *Supporting Teaching Associates and Interns Through Classroom Observation*, Secondary Summer Summit, Baylor University, Waco, TX.
- McCall, M.** & Berry, B. (August, 2009). *Cross-Curricular Secondary Instruction*. Midway Independent School District, Waco, TX.
- McCall, M.** (2009) *Data Driven Decisions*, Midway High School, Waco, TX.
- McCall, M.** (2008). *Transitioning to the New Science TEKS*. Midway Independent School District, Waco, TX.
- McCall, M.** (2008). *Best Practices in Math and Science-Using Graphic Organizers for RtI*. Midway Independent School District, Waco, TX.
- McCall, M.** (2007). *Raising the Bar-Midway Style*. Midway High School, Waco, TX.

## **TEACHING ACTIVITY**

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### **UNDERGRADUATE COURSES TAUGHT**

TED 2340: Introduction to Secondary Teaching

Semesters: Fall 2012

Designed to provide teacher education students with an introduction to the role of secondary teacher. This course focuses on preparing students for their role as future educators and involves a field experience at a juvenile justice center school.

TED 3340-41: Secondary Teaching Associate Practicum I & II

Semesters: Fall & Spring, 2014-17

Designed to prepare the junior the teacher candidate to become a highly effective secondary teacher. This course focuses on key research-based instructional strategies and provides in-class opportunities to practice and implement those strategies.

TED 3387-88: Secondary Science Practicum I & II

Semesters: Fall & Spring, 2011-2017

Designed to prepare the junior science education teacher candidate to plan and implement inquiry-based science instruction to meet the needs of diverse learners using appropriate resources and technology. This course includes a daily clinical experience on a PDS campus.

**TED 4325: Teaching Science in Secondary Schools**

Semesters: Fall 2010 & 2011

Designed to pedagogically prepare the secondary science education student to have a working knowledge of national and state standards, curricular approaches to science education, scientific inquiry, assessment, and science laboratory safety.

**ISCI 2420: Integrated Science: Chemistry and Life Science**

Semesters: Fall & Spring 2015-16

Designed to prepare pre-service elementary teachers for the wide range of topics required to effectively teach EC-6 science. The topics for this course are specifically aligned to the Texas Essential Knowledge and Skills, the National Science Teachers Association K-12 Framework for Science, and the Next Generation Science Standards.

**GRADUATE COURSES TAUGHT (STRICKLAND SCHOLARS)**

**TED 5499: Secondary Graduate Teaching Internship**

Semesters: Fall & Spring, 2011-2015

Designed to prepare the Strickland Scholar with key research-based instructional strategies and provide in-class opportunities to practice and implement those strategies. This course includes a full-time clinical experience.

**TED 5317: Special Techniques in Secondary Schools**

Semesters: Summer, 2012-2014

Designed to pedagogically prepare the secondary Strickland Scholar to understand and implement national and state standards, historical and current curricular and reform issues, and special techniques of instruction and assessment required by effective secondary classroom teachers.

## **HONORS AND AWARDS**

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Association of Teacher Educators Clinical Fellow, *2018*

NAPDS Award for Exemplary Professional Development School Achievement-Baylor

University/Midway Independent School District Professional Development School Partnership, *2017*

Baylor Fellow, Academy of Teaching and Learning, Baylor University, *2015-16*

Baylor University Summer Sabbatical: Development of ISCI 2420, *Summer 2015*

Baylor University Summer Faculty Institute, *Summer 2014*

Baylor University Teaching Development Grant Recipient, *2014*

*Quest for Quality Exemplary Faculty Practice Award Winner* – CREATE (Center for Research, Evaluation and Advancement of Teacher Education, *2013-14*)

College and Career Readiness Initiative: Faculty Collaborative Culminating Conference Invited Presenter, *2013*

## **SERVICE**

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### **EDITORIAL POSITIONS**

Reviewer, *Electronic Journal of Science Education*, 2012-17

#### **NATIONAL SERVICE**

Awards and Endowments Committee-School Science and Mathematics Association, 2012-16

#### **REGIONAL AND STATE SERVICE**

Southwest Association of Science Teacher Educators Conference Co-Chair, 2017

Central Texas Engineering and Science Fair Judge, 2012-15

Science Faculty Collaborative of the College and Career Readiness Standards Initiative,  
College/University Faculty Workshop Presenter, 2012-13

#### **BAYLOR UNIVERSITY SERVICE**

Student Success Collaborative Faculty Mentor, 2017-18

Academy of Teaching and Learning/Biology Learning Assistants Program, 2017

Academy of Teaching and Learning Peer Reviewer, 2015-16, 2016-17

Department of Physics/Curriculum & Instruction-new degree plan initiative, 2015-present

Academy of Teaching and Learning Postdoctoral Search Team, 2015-16

Baylor/SOE Science Collaborative, 2011-present

Graduation Marshall, 2013-present

#### **DEPARTMENTAL SERVICE**

School of Education Faculty Mentor, 2017-18

School of Education Recognition and Development Committee, 2015-18

Professional Development School Co-Teach Trainer, 2015-present

Distinguished Scholars Day Presenter, 2016-present

Secondary Teacher Education Team, 2011-present

Curriculum and Instruction Faculty Search Committee Chair, 2016-17

Curriculum and Instruction Faculty Search Team, 2017-18, 2015-16

Learning Resource Center/Media Center Study Group, 2016-17

Strickland Scholar Graduate Program Committee, 2016-17

Prospective Student Visit Team, 2016-present

Dean's Council for Recruiting and Retaining Mathematics and Science Teachers, 2014-16

Secondary Certificate Coordinator, 2012-15

National Council for Accreditation of Teacher Education (NCATE) Science SPA Writer, 2013

Student Recruitment Events Participant (Student Visit Team, Majors Fair, Know Where You Are  
Going, Parents Weekend), 2011-present

School of Education Memorable Teacher Committee, 2013-14

School of Education Scholarship Committee, 2013-14

#### **PROFESSIONAL DEVELOPMENT SCHOOL SERVICE**

Baylor University/Midway High School Steering Committee, 2011-present

Baylor University/Midway High School Campus Improvement Committee/Instructional  
Leadership Team, 2011-present

Baylor University/MISD Coordinating Council, 2011-present

Baylor University/University High School Steering Committee (WISD), 2015-16

Baylor University/WISD Coordinating Council, 2015-16

#### **CHURCH SERVICE**

Member, Crestview Church of Christ-Waco, 1983-Present

Community Care Ministry, Crestview Church of Christ-Waco, 2000-Present

Bereavement Ministry, 1992-Present



Youth Group and Mission Trip Advisor, 1997-2011

## **PROFESSIONAL AND ACADEMIC ASSOCIATIONS**

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Association for Supervision and Curriculum Development  
Association of Teacher Educators  
Association of Science Teacher Educators  
International Consortium of Research in Science and Mathematics Education  
National Association of Professional Development Schools  
National Association for Research in Science Teaching  
National Science Teacher Association  
School Science and Mathematics Association  
Southwest Association for Science Teacher Educators