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Professor and Chair, Department of Life Sciences

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**ACADEMIC PREPARATION (Education)** \_\_\_\_\_

<b>Ph.D.</b>	<b>The University of Texas at Austin</b> (Science Education)	<b>2005</b>
<b>M.S.</b>	<b>Baylor University</b> (Biology)	<b>1999</b>
<b>B.S.</b>	<b>Baylor University</b> (Education- Biology/Earth Sci)	<b>1994</b>

**ACADEMIC EXPERIENCE (Faculty, Tenure-Track)** \_\_\_\_\_

<b>Professor, Science Education</b>	<b>Sept 2018-present</b>
<b>Associate Professor, Science Education</b>	<b>Sept 2011-2017</b>
Texas A&M University-Corpus Christi; Science, Math and Engineering Education (SMTE) Program	

<b>Instructor</b>	<b>1999-2000</b>
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Central Texas College, Killeen, Texas.	Full time faculty instructor,
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Biology, Zoology

<b>Classroom Teacher</b>	<b>1998-1999</b>
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**Assistant Professor, Science Education Jan 2006- Aug 2011 ACADEMIC EXPERIENCE (Faculty- Non-Tenure-Track & K-12 Classroom)**

Temple Independent School District, Temple, TX. Travis Middle School

**ADMINISTRATIVE EXPERIENCE – COLLEGE LEVEL**

<b>Chair, Department of Life Sciences – College of Science</b>	<b>Sept 2019 - present</b>
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and Engineering <b>Interim Chair, Department of Life Sciences</b> -College of Science and Engineering	<b>August 2018-Sept 2019</b>
<b>Assistant to the Chair of Life Sciences</b> – College of Science and Engineering, Chair Dr. Ed Proffitt	<b>Sept 2016 - Aug 2017</b>
<b>Assistant to the Chair of Life Sciences</b> – College of Science and Engineering, Chair Dr. Joe Fox	<b>July 2013-July 2015</b>
<b>Program Chair</b> – Science, Mathematics & Technology Education (SMTE) Program	<b>Aug 2013-present</b>
<b>Coordinator of NSF Science Talent Expansion Program 2014 (STEP) Mentoring Program</b> – College of Science and Engineering	<b>Aug 2013-Aug</b>

#### **OTHER ADMINISTRATIVE EXPERIENCE**

**Executive Director Annenberg Rural School and Community 2000-2001  
Trust** – Schleicher County Independent School District.

#### **ACADEMIC EXPERIENCE (Graduate)**

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<b>Graduate Research Assistantship</b> University of Texas at Austin: Vanderbilt, Northwestern, Texas, Harvard/MIT Engineering Research Center (VANTH-ERC) ( <a href="http://www.vanth.org">www.vanth.org</a> ).	<b>2001-2004</b>
<b>Graduate Research Assistantship</b> , University of Texas at Austin: Texas State Reading and Literacy Program.	<b>2001</b>
<b>Teaching Assistant II</b> , Department of Biology, Baylor University, Natural World Science Composite Science, Baylor Interdisciplinary Core (BIC).	<b>1996-1998</b>
<b>Teaching Assistant</b> Department of Biology, Baylor University, Ecology (Biology 3303/3103).	<b>1995-1996</b>

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### **TEACHING**

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#### **TEACHING CERTIFICATION**

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Texas Education Agency  
Provisional (lifelong) certificate to teach Secondary Biology and Secondary Earth  
Science (grades 6 – 12), Texas Public Schools; Date Issued 12-17-1994; LIFE

#### **AWARDS, HONORS AND RECOGNITION**

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##### **Community Awards**

2018	Conservation & Environmental Stewardship Award in Higher Education, Coastal Bend Bays Foundation.
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### University Awards

- 2017 Excellence in Teaching Award, TAMUCC Faculty Senate  
2012 (Fall & Spring) Teaching Excellence Award – Texas A&M University System  
2011 (Spring) Teaching Excellence Award – Texas A&M University System  
2011 Inducted into Chancellors Academy of Teacher Educators,  
Texas A&M University System  
2008, 2009 Nominated Piper Teaching Award – Dept. Life Sciences  
2006 Inducted into Sigma Xi Scientific Research Honor Society

### Undergraduate/Graduate Student Awards

- 1996 Graduate Research Project Award in Special Topics, Baylor  
1994 Graduated *Cum Laude*  
1994 Outstanding Senior in Biology, Baylor University  
1994 Beta-Beta-Beta Research Award, Baylor University  
1994 Inducted Honor Society of Alpha Chi, Baylor University  
1994 Inducted Honor Society of Kappa Delta Pi, Baylor  
1994 Inducted Golden Key National Honor Society  
1993 Dean's Honor List, College of Arts and Sciences, Baylor  
1991 Inducted Phi Theta Kappa Honor Society

## TEACHING EXPERTISE AND COURSES TAUGHT

Name of Course	Course Number	Content	Audience and Number	University	Semester & Sections Taught
Biology II	BIOL 1407	Introductory Biology Concepts	Primarily freshman with some upper level students (~100).	Texas A&M University-Corpus Christi	Fall, Spring (1 section per semester)
Foundations of Life Science **	SMTE 3316	Life Science Content	Kindergarten- 8 <sup>th</sup> grade future teachers (~30)	Texas A&M University-Corpus Christi	Fall/ Spring (2 -3 sections per semester) , Summer (1 section)

Secondary Science Lab Techniques	SMTE 4320	Laboratory Techniques and Safety	7 <sup>th</sup> -12 <sup>th</sup> grade future teachers (~10)	Texas A&M University-Corpus Christi	Fall (1 section)
Science Education Topics I**	SMTE 4270	Reform, Pedagogy, Research and Practice in 7th-12 <sup>th</sup> grade Science Classrooms	7 <sup>th</sup> -12 <sup>th</sup> grade future teachers (~10)	Texas A&M University-Corpus Christi	Fall (1 section)
Science Education Topics II **	SMTE 4217	Preparation for TExES Science Certification Exam; Science Teaching Curriculum & Design	7 <sup>th</sup> -12 <sup>th</sup> grade future teachers (~10)	Texas A&M University-Corpus Christi	Spring (1 section)
Teaching Assistant (TA) Seminar **	SMTE 5104	Student centered teaching techniques, classroom	New College of Science and Engineering teaching	Texas A&M University-Corpus Christi	Fall / Spring (1 section per semester)

Name of Course	Course Number	Content	Audience and Number	University	Semester & Sections Taught
		management, microteaching, evaluation, time management	assistants (~35 Fall, ~20 Spring)		
Professional Skills	BIOL 2200	Scientific research, writing, presentation skills.	Biology and Biomedical Sciences majors (~30).	Texas A&M University-Corpus Christi	Fall (1)
Biology I and Biology II	BIOL1406 & BIOL 1407	Instructor of record for basic biology concepts, instructor of record, also taught associated laboratory sections	Biology majors, primarily freshman. (~70)	Central Texas College Killeen, Texas	Fall, Spring
Zoology	BIOL 1413	Instructor of record for basic zoological concepts, also taught associated laboratory sections.	Biology majors. (~50)	Central Texas College, Killeen, Texas.	Fall, Spring,

\*\* Note: These courses were completely redesigned as curriculum was re-written to reflect student-centered approach to teaching (National Research Council, 2001) and with significant expansion of science content and

pedagogical (teaching and learning) practices.

**NEW COURSES DEVELOPED**

Science for Life I	BIOL 1308	Basic biological principles and concepts.	Non-major biology.	TAMUCC	Fall, Spring (currently taught by another instructor)
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Science for Life II	BIOL 1309	Basic biological principles and concepts, building upon BIOL 1308.	Non-major biology.	TAMUCC	Fall, Spring (has not been taught)
Teaching Assistant (TA) Seminar	SMTE 5004	Workshop format for TA, making the course mandatory yet none credit to avoid course fee/ tuition.	Entering TA's	TAMUCC	Fall (~40), Spring (~20).  I teach this course without being paid as service for College of Science and Engineering.

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**SCHOLARSHIP**

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**FUNDED GRANT PROPOSALS (Total Awarded \$3,802,069)**

**EXTERNAL FUNDING (\$3,874,798 awarded)**

Funding Agency	Name of Proposal	Amount (Portion) Funded/ length of time	My Role	Allocation Dates
National Science Foundation	Noyce STEM INSPIRES:	\$74, 999 1 year	Principle Investigator; research and publication lead	March 1, 2019- Feb 29, 2020

National Science Foundation	Elementary Teachers Engaged in Authentic Math and Science (ETEAMS)	\$1.5 Million/3 years (1 year awarded for no cost extension)	Co-PI; Led research and publication efforts	2013-2017
Texas Higher Education Coordinating Board (THECB)	College and Career Readiness Standards (CCRS)	\$10,000/6 months	PI; worked with THECB to professionally develop faculty across Texas with CCRS curriculum.	2010



Funding Agency	Name of Proposal	Amount (Portion) Funded/length of time	My Role	Allocation Dates
Texas Higher Education Coordinating Board	Changes in College Climate and Global Climate: Infusing the College and Career Readiness Standards in Science Classrooms	\$9,969/6 months	PI: Writing curriculum for use in science classrooms across Texas.	2009
National Oceanic and Atmospheric Association (NOAA) - Sea Grant	Marine Education- Teaching High School Students the Scientific Methods Through Involvement in an Ongoing Field Experiment	\$93, 180/12 months	Co-PI; Coordinate, evaluate, plan implementation of education component including student perceptions of nature of science and understanding science content in quasi-experimental study.	8/2009 - 8/2010

Texas Higher Education Coordinati ng Board	College and Career Readiness Initiative Faculty Collaborati ve in Science	\$1,065,000/4 5 months (includes \$350,000 extension to original 2 0 1 0 grant)	Co-PI; Contribute to professional seminars, conferences and assist Texas CCRS collaboratives with interdisciplinary symposia, evaluation, budgets, organizational efforts.	2/2009- 10/2012
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Funding Agency	Name of Proposal	Amount (Portion) Funded/ length of time	My Role	Allocation Dates
National Science Foundation	Science Talent Expansion Grant (STEP)	\$1Million/6 years (includes 1 year no-cost extension)	Co-PI: Coordinate and train all STEP undergraduate peer mentors in chemistry, biology, college algebra, pre-calculus and calculus (n`~15/ semester); coordinate mentor sessions (n~30/ week), assist with collection of data for evaluation and assessment of program.	2006-2012
National Science Foundation	Pre-service Teaching and Learning to Engage Hispanic Parents in Mathematics and Science (PTEP)	\$120,650/3 years	PI: Train pre-service teachers to conduct Family Learning Science Events (FLSE's) by incorporating into SMTE 3316 curriculum; provide professional development for inservice teachers to implement Family Learning events; present research at conferences/peer reviewed publications.	2006-2009

**INTERNAL FUNDING** (Texas A&M University - Corpus Christi; Total awarded \$3,270)

<b>Funding Agency</b>	<b>Name of Proposal</b>	<b>Amount (Portion) Funded/ length of time</b>	<b>My Role</b>	<b>Allocation Dates</b>
Research Enhancement Grant	Qualitative Research for Family Science Learning Events	\$3270	PI: Collected data from over 300 preservice teachers, analyzed with NVIVO software; peer reviewed paper resulted	2010

**NOT FUNDED**

<b>Funding Agency</b>	<b>Name of Proposal</b>	<b>Amount (Portion) Funded/ length of time</b>	<b>My Role</b>	<b>Allocation Dates</b>
National Science Foundation	Islander STEM +C (Science, Technology, Engineering and Mathematics Plus Computational Thinking	\$2.5 Million/3 years	CoPI: Introduce inservice and preservice grades 4-8 teachers to STEM+C curriculum through professional development and curriculum creation; use Family Learning Events to extend outreach component (Faye Bruun, PI)	2017-2020

National Science Foundation	Scholarships in Science, Technology, Engineering, and Mathematics (S- STEM)	\$5 Million/5 years	Co-PI: Develop and implement peer mentoring program for BIO, CHEM, Physics, Mathematics for fresh and soph. students. Also develop authentic summer research experiences for S- STEM undergraduate students (Barbara Szczerbinska, PI)	2017-2022
National Science Foundation	NSF CAREER Award: Toward an understanding of cryptic methane cycling in salt marsh-mangrove transition zones.	\$516,000	Senior Personnel: Design, implement research design and analysis of education outreach component (Brandi Reese, PI)	2018-2022

**NOT FUNDED**

Funding Agency	Name of Proposal	Amount (Portion) funded/ Length of Time	My Role	Application Year
United States Department of Agriculture (USDA)	Improving farming opportunities for low income farmers in Rio Grande Valley via aquaponics.	\$814,000/2 years	CoPI: Education and outreach component that included school district, university and agriculture extension office (Joe Fox, PI).	2015
National Aeronautics and Space Association (NASA)	Enhancement of STEM education in a South Texas HIS: Integration of atmospheric research with innovative course development.	\$289,000/3 years	CoPI: Curriculum development using NASA modeling and data. (Chantao Liu, PI)	2015
National Science Foundation	Integrated Science Undergraduate Education (IUSE): STEM Teaching Using Authentic Research and Scholarship (STARS)	\$1.8 Million/5 years	PI: Expansion of former STEP program funded 2006-2013. Freshman and sophomore level courses redesigned using student centered learning and peer mentoring program.	2015

Funding Agency	Name of Proposal	Amount (Portion) funded/ Length of Time	My Role	Application Year
National Science Foundation	GK-12 initiative. INSPIRES: Innovative STEM Practitioners Integrating Research in Elementary Schools.	\$3 Million/5 years *note, this grant received favorable funding reviews via program officer communication but federal budget cuts deleted GK-12 program prior to actual funding.	CoPI: design and implement professional increasing in science content and skills development for elementary teachers (Suzette Chopin, PI).	2010
Department of Education (DOE)	ED Grants: Investing in Innovation.	\$4,587,974/3 years	CoPI: Curriculum development for water as an educational and community integrator in South Texas (PI Larry McKinney).	2010
National Aeronautic and Space Association (NASA)	The Art and Science of Climate Change	\$407,634/3 years	CoPI: Curriculum development and in/ preservice teacher training. (PI James Silliman).	2010

National Aeronautic and Space Association (NASA)	DR K-12 initiative. The Art and Science of Climate Change	\$2,651,372/5 years	CoPI: Curriculum development and in/ preservice teacher training. (PI James Silliman).	2009
Texas Higher Education Coordinating Board	College Career and Readiness Standards: Preparation for Demonstration Sites Pilot	\$432,341/2 years	CoPI: Plan professional development for CCRS across collaborative in Texas (Margaret Bolick, PI).	2009



Funding Agency	Name of Proposal	Amount (Portion) funded/ Length of Time	My Role	Application Year
National Science Foundation	Preservice Teachers Learning to engage Hispanic Parents in Mathematics and Science (PTEP2)	\$300,000/2 years	PI: Continue work with Family Science and Family Math, incorporate Family Engineering.	2008
National Science Foundation	DRL Informal Science Education: Laguna Outreach Project	\$1,907,185/ 2 years	CoPI: Using Laguna Madre and field station for summer outreach (Wes Tunnel, PI).	2008
National Science Foundation	GK-12 Program: Promoting Excellence, Achievement and Knowledge (PEAK)	\$1,897,271/ 4 years	CoPI: curriculum design and integration of math and science (George Tintera, PI).	2007

## PUBLICATIONS

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**Published:** *in all cases, all authors contributed equally to these papers.*

- (28) **McCollough, C.** Wolff-Murphy, S., Blalock, G. (2019). Reforming Science Teacher Education with Cultural Reflection and Practice. *International Journal of Learning, Teaching and Educational Research* 18, (1). 31-49.
- (27) **McCollough, C.** and Bargmann, S. (2019) Informal Science Challenges Science Perceptions. *Academic Exchange Quarterly*, 23(1). **(Received Editors Choice Award)**.
- (26) **McCollough, C.** (2018). Extending social justice beyond the classroom. *Academic Exchange Quarterly*, Guest Editorial, Volume 22, Issue 2.

- (25) **McCullough, C.**, Ramirez, O. & Carranza-Alvarez, A. (2018). A case study using culturally relevant math. *Academic Exchange Quarterly*, Fall volume, 7-17.
- (24) **McCullough, C.** (2018). Scholarship and Learning, Vol. XIV. (editor). Rapid Intellect/Academic Exchange Quarterly. Spring 2018 volume.
- (23) \*Gil, E. & **McCullough, C.** (2018). Preservice Teachers' Perceptions of Climate Change. *Academic Exchange Quarterly*, Spring 2018 volume.
- (22) **McCullough, C.** (2017) Guest Editorial: Challenges, responsibilities and motivation dilemmas present in today's classrooms. *Academic Exchange Quarterly*, SIB Volume XIV, STEM, summer edition.
- (21) \*Bargmann, S. & **McCullough, C.** (2017). Investigating changes in science perceptions. *Academic Exchange Quarterly*, Summer edition.
- (20) **McCullough, C.** (2017). Guest Editorial: Research in informal learning environments. *Academic Exchange Quarterly*, Spring edition.
- (19) **McCullough, C.** (2017). Education reform: Caring matters. *Academic Exchange Quarterly*, Fall edition.
- (18) Jeffery, T., **McCullough, C.** & Moore, K. (2016). Impact of collaborative teaching on K-12 mathematics and science learning. *Journal of Effective Schools Project 23*, 37-44.
- (17) **McCullough, C.**, Jeffery, T., Moore, K., Champion, J. (2016) Improving Middle Grades STEM Teacher Content Knowledge and Pedagogical Practices through a School-University Partnership. *School-University Partnerships 9* (2), 50-59.
- (16) Jeffery, T., **McCullough, C.** & Moore, K. (2016). Crabby Interactions. *Science and Children* (NSTA). 53 (7), 64-71.
- (15) Ramirez, O., **McCullough, C.** & Dias, O. (2016). Creating a model of acceptance: Preservice teachers interact with non-English speaking Latino parents using culturally relevant math and science activities at family learning events. *School, Science and Mathematics 116* (1), 43-54.
- (14) Jeffery T., **McCullough, C.** & Moore, K. (2015). Puff mobile derby, *Science Scope* (NSTA), 39 (4), 64-71.
- (13) **McCullough, C.** (2015). Academic Exchange Quarterly: Introduction (peer reviewed): *Scholarship of Teaching and Learning*: Rapid Intellect Group 7, (1),

(AEQ), iv-v.

- (12) **McCullough, C.** (2015). Student-centered learning with caring in an era of accountability. *Academic Exchange Quarterly* 19 (2), 92-98.
- (11) Jeffery, T., **McCullough, C.** & Moore, K. (2015) Growing STEM roots: Preparing preservice teachers. *Academic Exchange Quarterly*, (19), 3.
- (10) Ramirez, O. **McCullough, C.** and Diaz. Z. (2015) The Quincera Event : Pre-service teachers implementing a culturally relevant math activity in a Hispanic Community *Journal of Mathematics and Culture*, 8 (2), 57-69.
- (9) Jeffery, T., **McCullough, C.** & Moore, K. (2014). Connecting preservice teachers from college to field experience: Case studies using professional development in an authentic, situated context. *Proceedings of School, Science and Mathematics association (Voll)*, Jacksonville, FL:SSMA 127-134.
- (8) Ramirez, O. and **McCullough, C.** (2012). La Loteria: Using a culturally relevant math activity with preservice teachers at a family math learning event. *Teaching for Excellence and Equity In Mathematics.*(4), 1, 24-33.
- (7) **McCullough, C.** and Ramirez, (2012) Cultivating culture: Preparing future teachers for diversity through family learning events. *School Science and Mathematics*, (112) 7, 443-451
- (6) **McCullough, C.** (2011). Creating A college going culture: Disadvantaged high school students teaching family science. *The Science Teacher* (78), 3, 51-55.
- (5) \*Bargmann, S. and **McCullough, C.** (2011). An informal program changes science perceptions. *Academic Exchange Quarterly* 15 (1), 97-104.
- (4) **McCullough, C.** and Strychar, K. (2010) Teach ecology: College student awareness and perception of genetically modified foods. *Nature Education Knowledge* 1(8), 52.
- (3) **McCullough, C.**, Ramirez, O. (2010) Connecting math and science to home, school and community through preservice teacher education. *Academic Leadership*, 8(2).
- (2) **McCullough, C.** (2010). A promising pedagogy: Linking learning and

caring. *Academic Exchange Quarterly* (14), 2. (**Received Editor's Choice Award**).

- (1) **McCollough, C.**, McDonald, J., and Canales, J. (2008). The power of family science learning events: All stakeholders benefit. *Education for a Changing World*, Center For Educational Development Evaluation & Research. Cassidy, J., Grote-Garcia, S. and P. Maxfield, Eds., pp.27-39

#### **Citations:**

Contributor: *Grzimek's Animal Life Encyclopedia*, Volumes 8-11: Birds  
Michael Hutchins (ed), et al. *Second Ed*: Gale Group, Detroit, MI, October 2002.

#### **Mass Media Published Interviews**

Interviewed and reported by: Mendoza, S. (2009). Dialogue and Conversations on Latinos in Higher Education: Implementing Culturally Relevant Curriculum for Math & Science. *The Hispanic Outlook in Higher Education* (19), 22, pp. 22-24.

Interviewed and reported by: Mendoza, S. (2009). Dialogue & Conversation on Latinos in Higher Education: Implementing Culturally Relevant Curriculum for Math & Science. *The Hispanic Outlook in Higher Education* (19) 23, pp. 18-20.

#### **PRESENTATIONS**

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##### **Invited (Peer-Reviewed) Oral Presentation– National/International**

- (37) **McCollough, C.** Reforming Teacher Education with Cultural Reflection And Practice. American Education Research Association (AERA), Toronto, April (2019).
- (36) **McCollough, C.** & Ramirez, O. Investigating Changes in Students' Perceptions Of Science in an After School Science Program. National Association of Research in Science Teaching, Atlanta, GA., March 2018. (Oral)
- (35) **McCollough, C.** & Moore, K. Walking the walk: Authentic science and mathematics research conducted by pre-service and inservice teachers. American Education Research Association (AERA), San Antonio, TX, April 2017. (Oral)
- (34) **McCollough, C.** & Ramirez, O. Latino families and pre-service teachers: An investigation of perspectives in culturally relevant mathematics and Science. American Education Research Association (AERA), San Antonio, TX, April 2017. (Oral)
- (33) **McCollough, C.**, Ramirez, O. & Diaz, Z. Creating a model of acceptance: Using culturally relevant science and mathematics at family learning Events. National Association of Research in Science Teaching (NARST), Baltimore, MD. April 2016. (Oral)
- (32) Jeffery, T., **McCollough C.**, Moore, K. Assessing pre-service teachers'

- mathematics and science content knowledge, perceptions of self-efficacy and Nature of Science Conceptions. National Association of Research in Science Teaching (NARST), Baltimore, MD. April 2016. (Oral)
- (31) **McCullough, C.**, Jeffery, T., Moore, K. Elementary teachers engaged in authentic math and science. (Oct. 2016). School, Science and Mathematics National Conference (SSMA), Phoenix, AZ. (Oral)
- (30) **McCullough, C.** & Ramirez, O. (April 2015). Creating a model of acceptance in teacher preparation: Family learning events with Latino parents using culturally relevant mathematics and science. American Educational Research Association (AERA), Chicago, IL. (Oral)
- (29) **McCullough, C.** & Ramirez, O. (Oct. 2015). Changing cultural perceptions and misconceptions through family math and science learning events. School Science and Mathematics (SSMA), Oklahoma City, OK. (Oral)
- (28) Jeffery, T. **McCullough, C.** (Nov 2015). Elementary teachers engaged in authentic math and science (ETEAMS) – Year 2. School Science and Mathematics Association (SSMA), Oklahoma City, OK. (Oral)
- (27) Jeffery, T., **McCullough, C.** (April 2015). Elementary and secondary pre-service teachers' science content knowledge and conception of nature of Science. National Association of Research in Science Teaching (NARST), Chicago, IL. (Oral)
- (26) **McCullough, C.** & Ramirez, O. (Nov 2014). Creating a model of acceptance: math and science family learning events. School, Science and Mathematics Conference (SSMA), Jacksonville, FL. (Oral)
- (25) Jeffery, T., **McCullough, C.** & Moore, K. (Nov 2014). Elementary teachers engaged in authentic math and science (ETEAMS). School, Science and Mathematics Conference (SSMA), Jacksonville, FL. (Oral)
- (24) **McCullough, C.**, Jeffery, T. & Silliman, J. (Oct 2014). Increasing STEM teacher quality by connecting college courses to field experience: A mixed-methods research study. Consortium of State Organizations for Texas Teacher Education (CSOTTE), Austin, Texas. (Oral)
- (23) **McCullough, C.** Increasing culturally relevant teaching in science through family learning events. (Oct 2014). Consortium of State Organization for Texas Teacher Education (CSOTTE), Austin, Texas. (Oral)
- (22) Zulmaris, D., **McCullough, C.** and Ramirez, O. (April 2014). Family math and science for non- English speaking students. American Educational Research Association (AERA). Pittsburg, PA. (Oral)
- (21) **McCullough, C.**, Ramirez, O. (Nov 2013). Culturally relevant science and mathematics through family learning events. School Science and Mathematics (SSMA), San Antonio, TX. (Oral)
- (20) **McCullough, C.** Giraldo, J., Grise, D. Silliman J, McKoewen, S. (May 2012). STEP: Stem Talent Expansion Program at Texas A&M University – Corpus Christi. International Supplement Instruction Conference, San Diego, CA. (Oral)

- (19) **McCollough, C.** and Giraldo, J. (May 2012) Active learning and peer mentoring using an interdisciplinary approach. International Supplemental Instruction Conference, San Diego, CA.(Oral)
- (18) **McCollough, C.,** (April 2012). Preservice teachers experience authentic parental involvement in culturally relevant science teaching, American Educational Research Association (AERA), Vancouver, BC. (Oral)
- (17) **McCollough, C.** and Ramirez, O. (March 2011) Family science and family math in culturally relevant teaching for preservice programs. American Association of Hispanic Higher Education (AAHHE), San Antonio, Texas. (Oral)
- (16) **McCollough C.** and Giraldo, J. (March 2011) Active learning and peer mentoring using an interdisciplinary approach. American Association of Hispanic Higher Education (AAHHE), San Antonio, Texas. (Oral)
- (15) **McCollough, C.** and Metoyer, S. (Feb 2011). College readiness: Preparing science educators for closing the gaps in participation and success in science. Southwest Educational Research Association, San Antonio, Texas. (Oral)
- (14) **McCollough, C.** and Ramirez, O. (March 2010). Culturally relevant teaching in science and mathematics through family learning events. American Association of Hispanics in Higher Education (AAHHE), Costa Mesa, CA.(Oral)
- (13) **McCollough, C.,** Ramirez, O., Canales, J. (April 2009) Preservice teacher education: Connecting math and science to home, school and community. Conference Proceedings American Educational Research Association (AERA), San Diego, CA. (Oral)
- (12) **McCollough, C.** (April 2009) Authentic contexts in preservice teacher education: Student and parental involvement through culturally relevant science teaching. Conference Proceedings National Association of Research in Science Teaching (NARST), Garden Grove, CA. (Oral)
- (11) **McCollough, C.,** Ramirez O., & McDonald, J. (March 2009). Science and mathematics faculty development: Implementing culturally relevant curriculum. Conference Proceedings American Association of Hispanics in Higher Education (AAHHE), San Antonio, TX. (Oral)
- (10) **McCollough, C.** and Giraldo, J. (March 2009) Helping college students succeed in math and science. Conference Proceedings American Association of Hispanics in Higher Education(AAHHE), San Antonio, TX. (Oral)
- (9) **McCollough, C.,** Giraldo, J., and Grise D. (2009) Teaching and mentoring for understanding in math and science: An HSI model program. Conference Proceedings National Association of Research in Science Teaching (NARST), Garden Grove, CA. (Oral)
- (8) **McCollough, C.** (2008, April). New pre-service experiences in authentic settings: Family learning events in science teacher education. National Association for Research in Science Teaching (NARST), Baltimore, MD. (Oral)

- (7) **McCollough, C.,** Ramirez, O. & Canales, J. (2008, March) Promising models for engaging Hispanic students and their families in quality math and science instruction. American Association of Hispanics in Higher Education, Miami (AAHHE), FL. (Oral)
- (6) Wertz, S. & **McCollough, C.** (2008, February) Gathering qualitative data with focus groups. International Conference for Supplemental Instruction Conference, University of Kansas at Missouri. (Oral)
- (5) Canales, J., **McCollough, C.** & McDonald, J. (Nov. 2007). Family science and math learning events for Hispanic students and their families: Personal and professional growth achievements. Center for Educational Development and Evaluation Research Conference, Texas A&M University – Corpus Christi. (Oral)
- (4) **McCollough, C.** (2007, April). The creation of a pedagogy of promise: Examples of educational excellence in high-stakes science classrooms. National Association for Research in Science Teaching (NARST), New Orleans, LA. (Oral)
- (3) **McCollough, C.,** & Welch, A. J. (2005, April). Assessing adaptive expertise in the problem based science classroom. National Association of Research in Science Teaching, Dallas, TX (NARST). (Oral)
- (2) **McCollough, C.,** Petrosino, A. J., & Welch, A. J. (2004, March). Explicit versus implicit instructional strategies in the project based science classroom. National Association for Research in Science Teaching (NARST), Vancouver, BC. (Oral)
- (1) **McCollough, C.,** Gehlbach, F. R. (1996, August) A population comparison of Eastern screech owls in central Texas: effects of urbanization, climatic warming and comparative environmental variables.” American Ornithologist’s Union/Raptor Research Foundation, Idaho. (Oral)

**Invited (Peer-Reviewed) Poster Presentations – National/International**

- (8) **McCollough, C.,** Ramirez, O. (April 2013). Preservice teaching using family science/family math: Culturally relevant projects for content integration. American Educational Research Association, San Francisco, CA. (Oral)
- (7) **McCollough, C.,** Ramirez, O. (April 2012) Family science and family math using culturally relevant teaching strategies., American Educational Research Association, Vancouver, BC. (Poster)
- (6) **McCollough, C.** Giraldo, J., Grise, D. and Silliman, J. (May 2012). STEP: STEM Talent Expansion Program at Texas A&M Corpus Christi. International Supplemental Instruction Conference, San Diego. (Oral)
- (5) **McCollough, C.** and Ramirez, O. (April 2012). Family science and family math using culturally relevant teaching strategies. American Educational Research Association, Vancouver, BC. (Oral)
- (4) Giraldo, J., **McCollough, C.** (March 2013). STEP: STEM Talent Expansion Program at TAMUCC. NSF STEP Evaluation Meeting, NSF, Washington, DC. (Poster)

- (3) **McCollough, C.** and Ramirez, O. (May 2010) Preservice teachers implementing culturally relevant science and mathematics through family learning events American Educational Research Association, Denver, CO.(Poster)
- (2) **McCollough, C.** and Price Blount, Katherine. (August 2008). AAAS: Inventions and impact 2: Building excellence in undergraduate STEM education. Washington, DC, Washington, DC.(Poster)
- (1) **McCollough, C.** Petrosino, A., & Welch, A. J. (2004, April). Assessing instructional strategies in the problem based science classroom. American Educational Research Association, San Diego, CA. (Poster)

**Invited (Peer-Reviewed) Oral and Poster Presentations – State/Regional**

- (10) Jeffery, T., **McCollough, C.** & Moore, K. (2016). Using inquiry to enhance learning in a School-University partnership: Assessing pre-service teachers' content knowledge, self-efficacy, and perceptions of nature of science. Engaging Culture and Elevating Disciplined Inquiry conference, Texas A&M University, Corpus Christi (Oral)
- (9) Smee, L. and **McCollough, C.** (Sept 2011) Teaching high school students the scientific method through involvement in an ecological experiment. Texas Sea Grant College Program, Galveston, Texas. (Oral)
- (8) **McCollough, C.**, McDonald, J. A., Marinez, D.I. & Price-Blount, K. P. (2007, April). Reciprocal science teaching: How family learning events enhance teaching and learning for preservice teachers, students and parents. Conference paper Hispanics in the Southwest, Texas Tech University, Lubbock, TX. (Oral)
- (7) **McCollough, C.** (2007, February). Ecological characteristics of a colonizing population of eastern Screech Owls (*Otus asio*) in suburban Temple, Texas. Conference paper, Texas Academy of Science, Waco, Texas. (Oral)
- (6) **McCollough, C.** (2007, February). Exemplary science teaching in TAKS-tested science classrooms. Conference paper, Texas Academy of Science, Waco, TX. (Oral)
- (5) **McCollough, C.**, Petrosino, A. J., & Welch, A. J. (2004, February). Problem based instruction using optics and the properties of light. Southwest Association for the Education of Teachers of Science, Georgetown, TX. (Poster)
- (4) **McCollough, C.**, Petrosino, A. J., Welch, A. J., Hyder, Z., & Humphrey, C. (2003, June). Problem based instruction in Optics: A VaNTH Legacy Unit. NSF-VaNTH Site Visit, Nashville, TN. (Poster)
- (3) **McCollough, C.**, Ricks, M. R., Petrosino, A. J., Welch, A. J. (2003, February). Designing science education modules through the use of technology and the Legacy Cycle. The Inquiry and Information Technology in Science Teaching and Learning/Southwest Association for the Education of Teachers In Science, Fort Worth, TX. (Poster)
- (2) **McCollough, C.**, Ricks, M. R., Petrosino, A. J., & Welch, A. J. (2002, June). Why do People need glasses? – A VaNTH Legacy unit. NSF-VaNTH Site



Visit, Nashville, TN. (Poster)

- (1) **McCollough, C.**, Gehlbach, F. R. (1996) New and old populations of eastern screech owls: Breeding age versus resources. Southwest Association of Naturalists, Waco, Texas. (Oral)

### **Invited Guest Speaker - Professional Development Presentations**

- (19) McCollough, C. & Ramirez, O. (May 2018) Invited speakers Ascender Foundational Summit, University of Texas at Austin, Texas.
- (18) McCollough, C., Turner, J., Walther, B. Hands-on Minds-on Teaching: Active Strategies for improving student learning outcomes. TAMUCC College of Science And Engineering Professional Development Workshop. January, 2017.
- (17) McCollough, C. (Jan 2015). Invited Keynote: Effective STEM teaching: A journey of persistence.: RGV Conference for High School Science Education, Rio Grande Valley Science Association of Texas.
- (16) McCollough, C. (Sept 2014). Invited Presenter Student Reading Council, “What Makes a teacher a true professional?” Texas A&M University Corpus Christi.
- (15) McCollough, C. (Sept 2011) Texas A&M System Chancellor’s Academy of Teacher Educators. “A journey in becoming a culturally relevant teacher.” – Presenter at Teacher Summit, College Station, Texas.
- (14) McCollough, C. (Feb 2011) How People Learn: Teaching and studying for retention of knowledge. University of Texas at Austin, Office of Student Services and Center for Teaching, Austin.
- (13) McCollough, C. (July 2010) Infusing science curriculum with college career and readiness standards: How People Learn. Stephen F. Austin State University, Nacogdoches, Texas.
- (12) McCollough, C. (July 2010) Understanding by Design: Infusing College and Career Readiness Standards in science classrooms, Corpus Christi, Texas.
- (11) McCollough, C. (Mar 2010) How People Learn: Teaching for understanding and retention of knowledge/classroom action research model. Science collaborative workshop: College Career and Readiness Standards Initiative. San Antonio, Texas.
- (10) McCollough, C. (Sept 2009). Grants and Funding – Where to apply and how to get funded. Invited speaker for Biotech Summit 2008: Biotechnology and Agriculture in the Classroom. DelMar College, Corpus Christi, Texas.
- (9) McCollough, C. (Feb 2009). Teaching and mentoring for understanding in math and science. Facilitating Significant Learning Conference. Texas A&M University –Kingsville.
- (8) McCollough, C. (Sept 2008) How People Learn: Teaching and learning in biotechnology for understanding and retention. Invited speaker for Biotech Summit 2008: Biotechnology and Agriculture in the Classroom. Delmar College, Corpus Christi, Texas.
- (7) McCollough, C. (June 2008). How People Learn Mathematics. A presentation for the (ME)<sup>2</sup> by the Sea Conference, Texas A&M

University – Corpus Christi.

- (6) McCollough, C. (May 2008) How People Learn: New curriculum in science and mathematics. Invited speaker for STEP professional Development (CCISD Teachers and Del Mar instructors), Corpus Christi, Texas.
- (5) McCollough, C. (December 2007). Culturally relevant teaching in Science. Invited speaker, EDCI 3311, TAMUCC.
- (4) McCollough, C. (April 2007) Education in the field: A five-year study of the eastern screech owl in Central Texas. Coastal Audubon Society, Corpus Christi, Texas.
- (3) McCollough C. (November 2004). How People Learn: Making meaningful connections between the brain and the classroom. Presentation to Austin Independent School District Fall Professional Development, Austin, TX.
- (2) McCollough, C. (June 2004). Problem based instructional strategies: Using the How People Learn framework in the college science classroom. NSF Chautauqua Short Course – Project Based Instruction, University of Texas at Austin.
- (1) McCollough C. (July 2003) How People Learn and the Legacy Cycle: New Ideas in science education. Galveston Independent School District Teacher Development Summer Program. Galveston, Texas.

### **Thesis and Dissertation**

McCollough, C. A. (2005). The creation of pedagogy of promise: Examples of educational excellence in high-stakes science classrooms. Ph.D.

dissertation, The University of Texas at Austin, United States-Texas. Retrieved April 18, 2010, from Dissertations & Theses: Full Text. (Publication No. AAT 3217125).

McCollough, C. (1999). Ecological characteristics of a colonizing population of eastern screech owls (*Otus asio*) in Suburban Temple, Texas, 1994-1997. Unpublished Master's thesis, Baylor University, Waco, Texas.

### **PROFESSIONAL DEVELOPMENT**

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- (34) 2019 Community Engaged Teacher Preparation Summer Institute, (Muncie, Indiana) - Presenter
- (33) 2018 Community Engaged Teacher Preparation Summer Institute, Muncie, Indiana. - Participant
- (32) 2017 Project Kaleidoscope STEM Leadership Institute Webinar
- (31) 2016 Texas Association for Literacy Education workshop, Texas A&M University, Corpus Christi.
- (30) 2016 Completed Center for Faculty Excellence course redesign: Engaging Diversity in Undergraduate Classrooms
- (29) 2015 Completed Center for Teaching Excellence Course Redesign: Infusing intensive writing into course (Communities of Practice)

- (28) 2015 Completed TAMUCC Distance Education and Learning Technologies Professional Development for Online Course Design Certification.
- (27) 2015 Completed TAMUCC Distance Education and Learning Technologies Online Course Delivery and Peer Review certification.
- (26) 2014 Attendee Diversity and Innovation of Texas, University of Texas at Austin Geosciences, geoscience curriculum development, June.
- (25) 2014 Attendee NSF Noyce Webinar/Training PD for Panel Reviewers, April, WebEX.
- (24) 2014 Attendee Texas A&M University STEM collaborative for Professional learning, STEM Teacher Education Colloquium, Austin, TX, October.
- (23) 2014 Attendee Consortium of State Organizations for Texas Teacher Education Professional Development, Austin, TX., October.
- (22) 2014 Office of Distance Education Online Course Development, TAMUCC. Completed 40 hours professional development.
- (21) 2014 Attended Professional Enhancement Day at TAMUCC, August.
- (20) 2013 American Association of Colleges and Universities annual Meeting: Transforming STEM Education: San Diego, CA (October)
- (19) 2013 Identifying Best Practices – STEP Grantees Meeting, DC (March)
- (18) 2013 Invited Participant Challenge Based Learning Using Legacy Cycle, March – May, TAMUCC.
- (17) 2013 American Association of Colleges and University conference, Transforming STEM education (November)
- (16) 2011 Attendee Course Design for the Millennial Student, Sept 2011, TAMUCC.
- (15) 2011 Attendee Teaching Strategies using Team Based Learning, Texas Higher Education Coordinating Board, San Antonio,

Texas. March 2011.

- (14) 2010 Invited Participant, STEP Strategic Planning: Research and Analysis Workshop, October 2010, Houston, Texas.
- (13) 2010 Invited Participant, Strategies for Integrating Cross Disciplinary Standards, Writing Workshop, College Career and Readiness Standards Symposium, Dallas, Texas.
- (12) 2010 Invited Participant AAAS Climate Literacy Conference; March 2010, San Diego, CA.
- (11) 2009 Invited Participant, College Career and Readiness Initiative Math and Science Symposium, Corpus Christi, Texas.
- (10) 2008 Invited participant: Project Kaleidoscope Interdisciplinary Curriculum (KECK-PKAL) – Philadelphia, Pennsylvania.
- (9) 2008 ViSTA Videocase for Science Teaching Analysis. Lesson Lab Research Institute: NARST Pre-Conference Workshop, Baltimore, MD.
- (8) 2008 Invited Participant: Quality Education for Minority Institutions, Washington, DC.
- (7) 2007 Concept Mapping: A tool for science learning and assessment. Joe Novak. Pre-Conference Workshop, NARST, New Orleans, LA.
- (6) 2007 Enriching the Academic Performance of College Science Students Conference, Student Learning Center, University of Michigan, East Lansing (brought 2 undergraduate students to also participate).
- (5) 2003-2005 Participant in University of Texas Discovery Science seminars: The Discovery Learning Project promotes the development and use of discovery or inquiry-based methods of teaching and learning.
- (4) 2004 Modern Plant Research: Molecular Genetics and Genomics. NSF Funded Professional Development course (5 days), University of Texas at Austin and Dolan DNA Learning Center of Cold Spring Harbor Laboratory. Comprehensive set of laboratories using rapid and reproducible polymerase chain reaction (PCR) chemistry in illustrating gene and genome analysis. [www.dnlac.org](http://www.dnlac.org)
- (3) 2003 Training in VaNTH (NSF funded Engineering Research Consortium involving Vanderbilt, Northwestern, Texas at Austin, Harvard) Classroom Observation System, Peabody College at Vanderbilt University, Nashville, TN.
- (2) 2002 Training in VaNTH Observation System, Peabody College at Vanderbilt University, Nashville, TN
- (1) 2001 Training in Word Study for Students with Disabilities and English Language Learners, University of Texas at Austin, Texas

Center for Reading and the Arts, College of Education. NSF funded Project: Sharon Vaughn, PI.

#### **PARTICIPATION IN RESEARCH PROJECTS**

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- (8) 2016 Completed Communities of Practice (Center for Teaching Excellence) Engaging Diversity in Undergraduate Classrooms Seminar.
- (7) 2015 Completed Center for Teaching Excellence Course Redesign: Infusing intensive writing into course (SMTE 3316).
- (6) 2012 – 2013 Selected member TAMUCC Spring 2012 Communities of Practice (Course redesign)
- (5) 2007- 2009 Project Kaleidoscope: Funded by Keck Foundation and National Science Foundation. Selected participant.
- (4) 2006- 2008 PTEP: Preservice Teachers Engaged in Parental Education. Principal Investigator: Dr. Kit Price-Blount, funded by National Science Foundation.
- (3) 2002- 2005 Vanderbilt, Northwestern, Texas at Austin, Harvard/MIT Engineering Research Consortium (VANTH-ERC) Biomedical Engineering Education. ([www.vanth.org](http://www.vanth.org)) Principal Investigators: Dr. Ashley J. Welch, Dr. Anthony J. Petrosino, funded by The National Science Foundation
- (2) 2002 – 2004. VaNTH-PER (Partners in Education) Professional Development. Principal Investigators: Dr. Anthony J. Petrosino, Melissa Tothero, funded by National Science Foundation
- (1) 2001 – 2002. Texas State Reading and Literacy Program. Principal Investigator: Dr. Sharon Vaughn, Univ. Texas at Austin/ TEA

#### **OTHER PROJECTS OF INTEREST**

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**2017** – McGraw Hill Publishing company; Curriculum Evaluator; Digital Non-Majors Biology Course

**2011** – Member Expert Panel: **Typing Words to Images of Science Teaching (TWIST) Field Test** – National Science Foundation and Biological Sciences Curriculum Study Inc. – paid consultant: field tested coding lesson plans in earth science; video-taped classroom lessons analyzed using qualitative coding scheme for science content and student comprehension. <https://bscs.org/twist>

**2005-Texas Assessment of Knowledge and Skills (TAKS) Test Expert Reviewer.** External Expert Reviewer and item writer for Texas Assessment of Knowledge and Skills (TAKS) Exam. Paid to review, evaluate, and write questions for Texas administered science TAKS exam. Pearson Educational Measurement, (Verna Lee Wood, Lead Content Specialist), Austin, Texas.

**2004 - Science Education Consultant** State Energy Conservation Office's (SECO) lesson plans on renewable energy. Paid for review SECO

revisions for middle and high school lesson plans, edit, provide feedback regarding content and instructional strategies. Conservation Services Group (Jaya P. Jackson, Project Director), Austin, Texas.

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## **SERVICE**

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### **MEMBERSHIPS IN ORGANIZATIONS**

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#### **Honor Society Memberships**

Kappa Delta Pi (Education)  
Sigma Xi (Scientific Research)  
Golden Key National Honor Society

#### **Professional Society Memberships**

American Education Research Association  
American Association for the Advancement of Science  
National Science Teachers Association  
National Association of Biology Teachers  
National Association for Research in Science Teaching  
National Center for Science Education  
Science Teachers Association of Texas  
Society of the Advancement of Chicanos and Native Americans (SACNAS)

### **NATIONAL SERVICE: PROFESSIONAL ORGANIZATIONS**

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#### **Reviewing/Refereeing**

2019 Reviewer Association of Science Teacher Educators (ASTE)  
2010– Present Reviewer Journal of School Science and Mathematics  
2006- Present Member Editorial Review Board, Electronic Journal Science Education (peer reviewed)  
2006- Present Reviewer International Journal of Science, Education and Technology  
2004- Present Proposal reviewer: National Association of Research in Science Teaching  
2004 - Present Proposal reviewer: American Educational Research Association  
2007 Served as abstract reviewer, Society for Advancement of Chicanos and Native Americans

#### **Professional Service – Professional Organizations**

2008-2010 President, South Texas Chapter Sigma Xi  
2007-2008 President Elect – South Texas Chapter of Sigma Xi

### **SERVICE TO THE UNIVERSITY**

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#### **Service to the University: Committees**

2019- Provost Chair's Cabinet – COSE college representative  
2019 - Student Success Council – COSE college representative  
2018-2019 SACS Community of Education – COSE college representative

- 2017-2017 University search committee member Honors Program  
Director Appointed by Interim Provost Dr. Ted Guffy
- 2016-present Member of University Teacher Education Council (UTEC) –  
Appointed by Provost Dr. Kelly Quintanilla
- 2012- 2017 - Member Honors Council (Representative for COSE)
- 2014- 2017 - COSE representative Internal Review Board
- 2015 – 2016 COSE representative Undergraduate Council
- 2014 – present SMTE program representative Teacher Education Advisor  
Committee
- 2014 – COSE representative Retention and Student Success Council
- 2013 –Texas A&M University Corpus - Christi Momentum 2020  
Committee, **Chair** PK-20 Relationships

#### **Service to the University: Recruiting Efforts**

- 2018 Welcome address: MARB IDP annual meeting
- 2017- pres. Presented Academic Showcase Presentation Island Day; The  
Physiology of Learning: Study strategies that lead to student  
success and retention of knowledge.
- 2009-present Organized/Conducted Family Learning Institute at TAMUCC  
(CCISD School District)
- 2009 Recruiting Event – High School Science Careers TAMUCC
- 2007, 2008 Presenter: Touch of Class Islander Recruiting Event, Island Days
- 2007-2009 COSE representative, Graduate Student Open House, TAMUCC

#### **Service to the University: Advisory Boards – COSE/COEHD Representative**

- 2016 – present Teacher Education Advisory Board – TAMUCC
- 2016- present College of Education and Human Development Scope and  
Sequence advisory council
- 2010- 2013 Life Science content advisor – TAMUCC Region Two Science  
Collaborative Advisory Board
- 2010 External Advisory Board member English/Language Art  
College Career Readiness Standard Collaborative, Texas Higher  
Education Coordinating Board
- 2009- 2011 Alternate Certification Program (ACE) to Teach Grant,  
Texas A&M University-Corpus Christi, TX.
- 2009- 2011 GATE (Governor’s Academy Teaching Excellence) Grant  
Advisory Board Member, Texas A&M University-Corpus Christi.
- 2008-2011 South Texas Undergraduate Curriculum Consortium for  
Educating Biotechnical Science Students (SUCCESS) National  
Science Foundation project, Del Mar College, Corpus Christi, TX.

#### **SERVICE TO THE COLLEGE OF SCIENCE AND ENGINEERING**

- 2015-present Provide workshops for Teaching Assistants (SMTE 5004) during  
Fall and Spring semesters, no credit course with mandatory  
attendance requirement.
- 2016-2017 Life Science Department representative on COSE Teaching

	Assistant Committee
2014	LSCI Chair Search Committee Member –COSE
2014	Member Department of Teacher Education Search – College of Education and Human Development
2013	Math Education Search Committee member
2013	Member Science Education Search– College of Education 2011- present Program <b>Chair</b> , Science, Mathematics, Technology Education Program (SMTE)
2011- 2013	Life Science Representative, University Steering Committee – COSE
2010 – 2015	Honors Council COSE representative (including membership on three subcommittees)
2010 – 2012	Member, COSE representative Faculty Senate (including membership on three subcommittees)
2011	Member LSCI Department Chair Search Committee
2010 - 2012	Member, Life Science Department: Communities of Practice Committee (Quality Excellence Plan)
2009-2010	Advisor, Faculty Renaissance Committee
2009-2011	<b>Chair</b> , Academic Awards Committee, College of COSE
2007-2009	Member, College of Science and Engineering Undergraduate Curriculum committee, TAMUCC
2007-Present	Member Auxiliary Environmental Science Faculty
2008	Member, College of Education Dean Search Committee, TAMUCC
2009-2011	<b>Chair</b> , College of Science and Technology Awards Committee
2008-2010	Member Academic Grievance Committee, TAMUCC
2008- 2009	<b>Chair</b> , Faculty Renaissance Committee, TAMUCC
2009	<b>Chair</b> , Life Sciences Laboratory Coordinator Search Committee
2007 –2011	Member Introductory Biology Laboratory Curriculum Committee (contributing author Biology Laboratory Manual)
2006-2007	Member, Introductory Biology Course Curriculum Committee
2006, 2007	Member, Faculty Renaissance Committee, TAMUCC
2006-2008	Member – Women’s Council Advisory Board, TAMUCC
2006 - 2010	Judge, Coastal Bend Science Fair, TAMUCC
2006-Present	Member, SMTE Committee, TAMUCC

### **Teaching and Mentoring**

Faculty Teaching: Have conducted classroom observations to help approximately 40 different College of Science and Engineering faculty members improve teaching and learning. Pre/Post analysis reveals significant improvements in teaching with improved pedagogical practices using the Revised Teaching Observation Protocol (RTOP) for quantitative and qualitative analysis. Faculty members who participated in evaluation (some with follow-up visits to note improvement in teaching).

Provide teaching workshops for College of Science and Engineering Teaching



Assistants: (SMTE 5004) during Fall and Spring semesters, no credit course with mandatory attendance requirement. 2015- present

Provide Professional Development for College of Science and Engineering Faculty:

2017: Workshop presentation Hands-On Minds-On Teaching:

2015: Workshop Active strategies for Improving Student Learning Outcomes.

New Faculty Mentoring:

2009,2008,2011 Participated in new faculty orientation with presentation Regarding How People Learn theoretical framework for teaching and learning.

## **SERVICE TO THE DEPARTMENT OF LIFE SCIENCES**

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### **Teaching and Mentoring:**

Chair: Teaching Evaluation Committee: formed in Department of Life Science, COSE, 2016: College of Science and Engineering (COSE) is charged to evaluate all faculty/instructors in the College. I led this effort in the Department of Life Sciences (LSCI). As committee chair, I trained six other LSCI faculty members to use the Reformed Teaching Observation Protocol (RTOP) teaching evaluation instrument and with help from committee, revised that instrument to better suit college faculty instructional requirements and are continuing to evaluate all instructor's in our department to help improve their teaching and pedagogical practices. In addition, I invited Dr. David Bridges, Chair of the Department of Mechanical Engineering, to training meetings to evaluate the engineering faculty in the COSE. Further, I have continued to offer advice and assistance for many COSE faculty and adjunct employees as they approach me with particular problems and concerns regarding issues in teaching and instruction.

### **Committees Served Life Science Department:**

Chair: Non-Major Biology Curriculum Committee (redesign)	2017-present
Chair Faculty Classroom Observation Committee	2016-present
Leadership Council, LSCI Department member	2016-present
Search Committee Anatomy and Physiology PAP	2015
Life Sciences New Building Committee member	2014-2015
Search Committee, BIMS and Biology Laboratory Coordinators	2014
Ad hoc Life Science (LSCI) P&T Guidelines Subcommittee	2012
Science, Chair: Science, Math, Technology Education Program	2012-present
LSCI Promotion and Tenure Committee member	2011-present
Annual Sigma Xi Undergraduate Research Symposium, Texas A&M University-Corpus Christi. Judge	2011-2012
Life Science Curriculum Committee member	2011
Annual Sigma Xi Undergraduate Research Symposium, Texas A&M University-Corpus Christi. Judge	2008-2012

### **Administration in the Life Science Department**

2019-present Chair Department of the Life Sciences

2018-2019 Interim Chair Department of Life Sciences

2013-2015 Assistant to the Chair of Department of Life Sciences (Joe Fox)

2016-present Assistant to the Chair of Department of Life Sciences (Ed Proffitt)

## **GRADUATE COMMITTEES MEMBER/CHAIR**

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### Doctoral dissertation committee MEMBER/CHAIR/Co-CHAIR

Mesomah Mahzoon-Hagheghi – College of Education, C&I, Doctoral Candidate,  
CoChair

Katie Crysop – College of Education, C&I, doctoral candidate - CoChair

Stephanie Medina – College of Education, C&I, PhD, member, 2018

Bonnie Montoya – College of Education, C&I, member, graduated

PhD-2015 Connie Patchett – College of Education, C&I, member,  
graduated

PhD – 2015

Natalya Warner – Coastal and Marine System Science – PhD 2009

Christine Ward – College of Education - graduated PhD May 2009

Gabriella Ahmadi – Coastal and Marine System Science- PhD May 2012

Mark McNamara – College of Education – graduated EdD 2013

Natalya Warner – Coastal and Marine System Science – graduated PhD 2013

### Masters committee CHAIR/Co-chair

Katherine Dion – Biological Sciences (Chair) – in progress

Elia Gil (thesis) – Environmental Science 2015- 2017

Rachel Wordsworth (thesis) – Biological Science – 2016-2018

Tyler Macha (thesis) – Biological Sciences (Chair) 2014 -2017

Cynthia Kelly (non-thesis) – Biological Sciences (Chair) – MS May 2012

Sarah Bargmann (non-thesis)– Biological Sciences (Chair) – MS August 2010

LeAnn Kincaid (non-thesis) – Environmental Sciences (Chair) – MS 2009

### Advisees – Includes those students who received remediation to pass

**Texas Educator’s Certification Examination (TExES)** required to teach in K-12 Texas public classrooms– 90% passing rate for those students (many of whom initially failed) who followed my recommendations/remediation program.

- Exemplary Students Under My Advisement:
  - Tina Grohman – Received “Rookie of the Year” award from Fort Bend ISD following first year of teaching.
  - Robert Levensailor – Received Teacher of the Year Award from Gregory Portland ISD following second year of teaching.
- Sarah Bargmann – teaching and publishing research at Mentoring – Approximately 40 undergraduate students as assigned by the College of Science and Engineering

## **SERVICE TO THE COMMUNITY**

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- 2006 –Present ~80 family science learning events conducted at different K-8 schools that involved over 4000 students, 400 teachers, 80 administrators throughout the Coastal Bend.
- \*\* PDF Table of Family Science Learning Events appended at end of CV**
- 2007-2013 Judge, Sigma Xi Undergraduate Research Symposium TAMUCC
- 2011 Member, Marine Mammal Stranding Network
- 2004- 2016 Judge, School of Science and Engineering, Corpus Christi Science Fair.
- 2009- 2010 Member, Coastal Council Teachers of Mathematics Advisory Board
- 2009, 2010 Invited Presenter, Governor’s Academy of Teaching Excellence, Corpus Christi, Texas.
- 2009-2010 Director, NOAA/Texas Sea Grant funded informal science club, Tuloso-Midway High school.
- 2009-present Member Environmental Education and Outreach Implementation Team, Coastal Bays and Estuaries, Corpus Christi, TX.
- 2003 Judge, NSF funded Louis Stokes Alliances for Minority Participation (LSAMP) Pathways Research Symposium, Texas A&M University – Commerce, Texas.
- 2008 – 2012 Board Member (Secretary) Coastal Bend Audubon Society
- 2006 –Present ~50 family science learning events conducted at different schools that involved over 3000 students, ~300 teachers, ~50 school administrators throughout Coastal Bend.
- 2006- 2008 Judge, National Ocean Science Bowl, TAMUCC
- 2001 – 2005 Member and Group Chairperson: Selection Committee for George W. Mitchell Co-op Excellence in Undergraduate Research Awards- University of Texas at Austin
- 1995 – 2003. Judge, Central Texas Science and Engineering Fair, Inc., regional level of competition.

## **OTHER SERVICE ACTIVITIES**

- 2006-present Have written ~80 Letters of Recommendation for ~70 Students seeking teaching and other professional positions.
- 2006-present Have prepared 87 students for TExES Exam; remediating 67 students who have passed the exam following remediation (90% passing rate following individualized remediation program).
- 2009-2010 Have helped 3 faculty members by writing IRB for science teaching and evaluation, including obtaining permission from minors for data collection and synthesis (Bolick, Silliman, Smee)
- 2008-2009 Chair, Teaching Excellence Committee (Adhoc Faculty Renaissance Committee)
- 2007 Mentor, Islander Women Program, TAMUCC Women’s Center
- 2006-2016 Member Corpus Christi Cathedral Pontifical Chorale; also Served as cantor for televised Mass.
- 2016-2017 Member of Texas A&M University Community Chorale

2006-2008 Faculty Mentor to TAMUCC student chapter National Science Teacher Association

Numerous presentations at public and private schools including careers in biological sciences, field research methods and applications, the eastern screech owl and environmental science applications, geological specimen presentations, botanical specimen presentations. Venues have included (but are not limited to) Tuloso-Midway High School, Gregory Portland Middle School, Falfurrias Middle School, Falfurrias High School, Baker Middle School, Museum of Science and History (Corpus Christi), Coastal Bend Audubon Club, Audubon Outdoor Club, Garza-Gonzales Charter School.

**Cherie McCollough: FAMILY SCIENCE LEARNING EVENTS 2006-2018**

	A	B	C	D	E	F	G	H		I	J	K
		Date	Campus/ School District/City	# of Eve nts	Math &/ or Science	Co-PI(s)	Focus or Topic	Total # Preser vice Teache rs		Total # Family Member s and Student s	Total # of Teachers/ Adminstrato rs	
1												
2	1	19- Oct-06	JFK Elementary School, West Oso ISD, Corpus Christi, TX	1	Science and Mathema tics	McCollough/ Young	Elementa ry	30		53	83	
3	2	24- Oct-06	West Oso Elementary, WOISD, Corpus Christi, TX	1	Science	McCollough	5th grade	58		136	194	
4	3	8-Nov-06	West Oso M i d d l e School, WOISD, Corpus Christi, TX	1	Science	McCollough	7th grade	64		143	207	
5	4	Spring-0 7	Gregory- Portland Intermediate, GPISD, Portland, TX	1	Science	McCollough	5-6th grades	75		64	139	
6	5	Spring-0 7	Garza- Gonzales Charter School, Corpus Christi, TX	1	Science	McCollough	K-12 students and familes	75		172	247	
7	6	Spring-0 7	Coastal Bend Science Fair	1	Science	McCollough	K-12 students and familes	75		498	573	
8	7	June, 2007	Boys and Girls Club	1	Science	McCollough	Life Sciences	28		59	87	
9	8	July, 2007	Boys and Girls Club	1	Science	McCollough	Life Sciences	27		113	140	
10	9	11- Oct-07	West Oso Elementary, WOISD, Corpus Christi, TX	1	Math	Young	2-3rd grade	25		69	94	
11	10	Fall, 2007	Cullen Middle School, CCISD, Corpus Christi, TX	1	Science	McCollough	Life Sciences	61		60	121	
12	11	Fall, 2007	Garza- Gonzales Charter School, Corpus Christi, TX	1	Science	McCollough	Life Sciences	61		141	202	

13	12	Fall, 2007	Montclair Elementary, CCISD, Corpus Christi, TX	1	Mathematics and Science	Venzon (Math Lecturer)	Elementary	44	142	186
14	13	Fall, 2007	Family Learning Institute, Tx A&M Univ-Corpus Christi	1	Mathematics and Science	McCullough & Young	Professional Development	82	0	36
15	14	Spring 2008	Flour Bluff Intermediate, CCISD, Corpus Christi, TX	1	M & S	McCullough & Venzon	Middle School	115	227	7
16	15	Spring 2008	Ella Barnes Elementary, CCISD, Corpus Christi, TX	1	Science	McCullough	Elementary	90	130	7
17	16	Spring 2008	Baker Middle School, CCISD, Corpus Christi, TX	1	Science	McCullough	Middle School	90	54	1
18	17	Fall 2008	Barnes Elementary, CCISD, Corpus Christi, TX	1	Science	McCullough	Elementary	86	128	7
19	18	Fall 2008	Garza-Gonzales Charter School, Corpus Christi, TX	1	Science	McCullough	Elementary, Middle School, High School	99	32	131
20	19	Fall 2008	Family Learning Institute, Tx A&M Univ-Corpus Christi	1	Science	McCullough & Young	Professional Development	92	0	92

	A	B	C	D	E	F	G	H	I	J
21		<b>Date</b>	<b>Campus/School District/City</b>	<b># of Events</b>	<b>Math &amp;/or Science</b>	<b>Co-PI(s)</b>	<b>Focus or Topic</b>	<b>Total # Preservice Teachers</b>	<b>Total # Family Members and Students</b>	<b>Total # of Teachers/Administrators</b>
22	20	Spring 2009	Flour Bluff Intermediate, CCISD, Corpus Christi, TX	1	Science & Math	McCullough & Venzon	Middle School	107	133	56
23	21	Spring 2009	Baker Middle School, CCISD, Corpus Christi, TX	1	Science	McCullough	Middle School	85	20	2
24	22	Spring 2009	Falfurrias Elem, Middle and High School, Brooks County ISD, Falfurrias, TX	1	Science	McCullough	Elementary, Middle School, High School	85	239	12

25	23	Summer I 2009	Boys and Girls Club	1	Science	McCollough		33	85	2	
26	24	Summer II 2009	TAMUCC Summer GATE Program	1	Science	McCollough	High School	31	65	3	
27	25	Fall 2009	Gregory-Portland Intermediate, GPISD, Portland, TX	1	Science	McCollough & Sohn	Middle School	95	227	9	
28	26	Spring 2010	Carroll Lane Elementary, CCISD, Corpus Christi TX	1	Science	McCollough & Sohn	Elementary	95	242	10	
29	27	Fall 2010	Webb Elementary, Barnes Elementary, Gregory-Portland Intermediate	3	Science	McCollough	Elementary and Middle School	65	127	11	
30	28	Spring 2011	Webb Elementary, Gregory Portland Intermediate, Kaffee Intermediate	3	Science	McCollough	Elementary and Middle School	74	148	18	
31	29	Fall 2011	Webb Elementary, Baker Elementary, Family Learning Institute (counted as inservice hours for CCISD)	3	Science and Mathematics	McCollough and Young	Elementary, Middle School and CCISD inservice teachers and administrators	77	84	67	
32	30	Spring 2012	Barnes Elementary, Flour Bluff Intermediate, Hamlin Elementary	3	Science	McCollough and Dias	Elementary and Middle school inservice teachers and administrators	68	103	9	
33	31	Fall 2012	Webb Elementary, Barnes Elementary, Gregory-Portland Intermediate	3	Science	McCollough and Dias	Elementary and Middle school inservice teachers and administrators	65	243	17	
34	32	Spring 2013	St. Patrick elementary, Seashore Middle School, Kaffee Middle school		3	Science	McCollough and Sikes	Elementary and Middle school inservice teachers and administrators	75	294	22
35	33	Fall 2013	Fannin elementary, Cullen middle school, Webb elementary		3	Science	McCollough and Sikes	Elementary and Middle school inservice teachers and administrators	69	314	18
36	34	Spring 2014	Dawson elementary, Blanche Moore elementary, Haas middle school	3	Science	McCollough and Sikes	Elementary and Middle school inservice teachers and administrators	52	162	8	

	A	B	C	D	E	F	G	H	I	J
		Date	Campus/ School District/City	# of Event s	Math &/or Science	Co-PI(s)	Focus or Topic	Total # Preservi ce Teacher s	Total # Family Members and Students	Total # of Teachers/ Administra tors
37										
38	35	Fall 2014	Kostoryz elementary, S c h a n n a n M i d d l e S c h o o l, Travis Middle School	3	Science	McCough and Dias	Elementary and Middle school inservice teachers and administrators	57	327	21
39	36	Spring 2015	Seashore middle school, Fannin elementary, St. Plus elementary	3	Science	McCough and Dias	Elementary and Middle school inservice teachers and administrators	52	367	27
40	37	Fall 2015	TAMUCC Early Childhood Education Academy, Browne Middle School, Kaffee Intermediate	3	Science	McCough and Dias	Elementary and Middle school inservice teachers and administrators	41	411	62
41	38	Spring 2016	W e b b E l e m e n t a r y, Kaffee Middle school, St. Patrick elementary	3	Science	McCough and Dias	Elementary and Middle school inservice teachers and administrators	46	297	15
42	39	Fall 2016	Kaffee middle school, Brown middle School, Kostoryz elementary	3	Science	McCough and Dias	Elementary and Middle school inservice teachers and administrators	45	500	21
43	40	Spring 2017	Blanche Moore E l e m e n t a r y, Club Estates Elementary, " f i n d a classroom to do family science"	3	Science	McCough and Dias	Elementary and Middle school inservice teachers and administrators	32	237	17
	41	Fall 2017	Kaffee STEM night, Family Science at Mireles Elementary School	2	Science	McCough and Dias	Elementary and Middle school inservice teachers and administrators	42	702	11
	42	Spring 2018	Haas, Middle School family science, Blanche Moore elementary school family scie4nce, JFK Elementary Schools	3	Science	McCough and Dias	Elementary and Middle school inservice teachers and administrators	43	572	7
		Fall 2018	Kaffee Middle School, Zavala elementary School	2	Science	McCough	Elementary and Middle school inservice teachers and administrators	47	376	7
		Spring 2019	West Oso Elementary Gregory Portland Middle School	2	Science	McCough & Poulson	Elementary and Middle school inservice teachers and administrators	48	422	8



	Fall 2019	Zavala Elementary Los Encinos Elementary Kaffee Middle school	3	Science	McCollough and Poulson	Elementary and Middle school inservice teachers and administrators	42	542	9
44	41	<b>Totals</b> <b>Total # Events = 86</b> <b>Total # Preservice Teachers= 2,892</b> <b>Family</b> <b>Participants= 10,333</b> <b>Administrators = 469</b>							