

SUZANNE M. NESMITH

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Academic Degrees

Ph.D.	Texas Tech University	2007	Curriculum & Instruction
M.Ed.	Wayland Baptist University	2003	Educational Administration
B.S.	Texas A&M University	1982	Curriculum & Instruction

Professional Experience

2016 – present	Associate Dean, Undergraduate Education, School of Education, Baylor University
2015 – present	Associate Professor, Science Education, School of Education, Baylor University
2009 - 2014	Assistant Professor, Science Education, School of Education, Baylor University
2008 - 2009	Associate Dean/Assistant Professor, School of Education, Wayland Baptist University
2003 - 2008	Assistant Professor, School of Education, Wayland Baptist University
1995 - 2003	Elementary Teacher, Plainview, Texas, Plainview ISD
1991 - 1995	Middle School Mathematics Teacher, Plainview, Texas, Plainview ISD
1987 - 1991	Early Childhood Teacher, Plainview, Texas

Certifications and Specialized Training

Principal	All Level Certification	Effective 05/10/2003 - present
Elementary Chemistry	Grades 1 – 8 Certification	Effective 05/07/1982 - present
Elementary Self-Contained	Grades 1 – 8 Certification	Effective 05/07/1982 - present
Kindergarten	Grades PK – KG Certification	Effective 05/07/1982 - present
Professional Development and Appraisal System		2002
Instructional Leadership Development		2002

Leadership in Professional Organizations

President Elect, School Science and Mathematics Association, 2017
President, Southwest Region Association for Science Teacher Education, 2017 - 2018
Program Co-Chair, Southwest Regional Conference of the Association for Science Teacher Education, 2017
Membership Committee, Association for Science Teacher Education, 2014 – 2017
Education Organization Representative, American Association for the Advancement of Science, 2014 - present
Board of Directors Member, Membership Committee Chair, School Science and Mathematics Association, 2011 – 2014
College and Career Readiness Initiative Science Faculty Collaborative Regional Workshop presenter, 2012 - 2013
Program Co-Chair, 112th Convention in San Antonio, Texas, School Science and Mathematics Association, 2013
Phi Delta Kappa Professional Education Organization, Baylor Chapter Treasurer, 2010 - present
STEM Collaboration/Science Education Advisory Council Co-Chair, Baylor University, 2009 - present
Program Chair, Association of Mathematics Teacher Educators in Texas, 2009 - 2010, 2010 - 2011
Board Member, Association of Mathematics Teacher Educators in Texas, Member-at-Large, 2008 - 2011
Policy Committee, School Science and Mathematics Association, 2008 - 2011

Scholarship and Creative Activities

Journal Publications (Refereed)

Rogers, R., Cooper, S., Purdum-Cassidy, B., & Nesmith, S. M. (in press). Selecting quality pictures books for mathematics instruction: What do preservice teachers look for? *Children's Literature in Education*.

Journal information: The journal is a key source of articles on all aspects of children's literature for more than 40 years. It covers classic and contemporary material, textual analysis and interpretation from differing theoretical perspectives; historical approaches to the area and ideas for teaching children's literature. *Children's Literature in Education* is a peer-reviewed journal covering children's literature worldwide, suitable for professionals in the field (academics, librarians, teachers) and any other interested adults, and is

ranked as Outstanding Recognition in Field, Highly Prestigious, Refereed by the Department of Curriculum and Instruction.

Contributions of Dr. Nesmith to this manuscript: Dr. Nesmith participated in the development of the concept, data generation, review, and analysis as well as the final interpretation and write-up. Collaborative contribution of Nesmith (20%), Purdum-Cassidy (20%), Cooper (30%), and Rogers (30%).

About the research: This research highlights the ways that elementary preservice teachers select pieces of children's literature to integrate within mathematics during a concurrent mathematics methods course and mathematics field-based practicum course. The essential teacher education research component of field-immersion was utilized, and the research contributes to the field of variances in preservice teachers' perspectives and the connections between preservice teachers' selections and abilities to link course theories to classroom utilization of said theories.

Mellor, K. E., Coish, P. T., Brooks, B. W., Gallagher, E. P., Mills, M., Kavanagh, T. J., Simcox, N., Lasker, G. A., Botta, D., Schmuck, S. C., Voutchkova-Kostal, A., Kostal, J., Mullins, M. L., **Nesmith, S. M.**, Corrales, J., Kristofco, L., Saari G., Steele, W. B., Melnikov, F., Zimmerman, J. B., & Anastas, P. T. (in press). The safer chemical design game: Gamification of green chemistry and safer chemical design concepts for high school and undergraduate students. *Green Chemical Letters and Reviews*.

Journal information: Green Chemistry Letters and Reviews is a peer-reviewed journal focused on publication of innovative new syntheses and procedures that reduce or eliminate the use and generation of hazardous materials. The journal publishes articles in three overlapping topic areas: research, education, and industrial implementation.

Contributions of Dr. Nesmith to this manuscript: Dr. Nesmith participated in developing the concept for the publication as part of the MoDRN Outreach and Education cohort as well as the final write-up and review. Collaborative contribution of Nesmith (10%)

About this research: This research highlights the use of educational simulations in facilitating exploration of different scenarios, guiding students through decision-making processes, and presenting opportunities to enhance conventional student curriculum. Specific focus is centered on the creation of an educational game for undergraduate and advanced high school students designed to educate students in safer chemical design and to further their interest in green chemistry.

Coish, P., Brooks, B. W., Gallagher, E. P., Kavanagh, T. J., Simcox, N., Lasker, G. A., Voutchkova-Kostal, A., Kostal, J., Mullins, M., **Nesmith, S. M.**, Mellor, K. E., Corrales, J., Kristofco, L., Saari, G., Steele, W. B., Shen, L. Q., Melnikov, F., Zimmermann, J. B., Anastas, P. T. (2017). The molecular design research network: An overview. *Toxicological Sciences*. doi.org/10.1093/toxsci/kfx175

Journal information: The official journal of the Society of Toxicology, the primary focus is on original and hypothesis-driven research articles. The journal also provides expert insight via contemporary reviews, as well as forum articles and editorials that address important topics in the field. The scope of the journal is inclusive to attract significant contributions to toxicological research (from molecular mechanisms of toxic effects to safety evaluation and risk assessment), encompassing all technologies used in toxicology (from mass spectrometry and molecular biology to tissue culture, histopathology, and whole-animal studies). The journal's impact factor is 4.44 and the journal utilizes a single-blind review with 2-3 referees.

Contributions of Dr. Nesmith to this manuscript: Dr. Nesmith participated in developing the concept for the publication as part of the MoDRN Outreach and Education cohort as well as the final write-up and review. Collaborative contribution of Nesmith (10%)

About this research: This research provides an overview of a research collaborative (MoDRN) aimed at fostering interdisciplinary collaboration between chemists and toxicologists with the aim of rationally designing safer commercial chemicals and the overarching goal of enabling and empowering the design of safer chemicals based on the fourth Principle of Green Chemistry that states, "chemical products should be designed to preserve efficacy of function while minimizing toxicity."

Lasker, G., Mellor, K., Mullins, M., **Nesmith, S.**, & Simcox, N. (2017). Social and environmental justice in the chemistry classroom. *Journal of Chemical Education*, 94 (8), 983–987. doi: 10.1021/acs.jchemed.6b00968

Journal information: The *Journal of Chemical Education* is the official journal of the Division of Chemical Education of the American Chemical Society. The *Journal* publishes peer-reviewed articles and related information as a resource to those in the field of chemical education and to those institutions that serve them. *JCE* typically addresses chemical content, activities, laboratory experiments, instructional methods, and pedagogies.

Contributions of Dr. Nesmith to this manuscript: Dr. Nesmith participated in developing the concept for the publication as part of the MoDRN Outreach and Education cohort as well as the final write-up and review. Collaborative contribution of Nesmith (20%)

About this research: This research highlights the disconnect between typical high school chemistry curricula and the need to guide students in recognizing their roles as change agents and global citizens. The potential role of green chemistry curricula, such as that developed by the Molecular Design Research Network, in addressing this disconnect is described as is the manner in which faculty could utilize such curricula and associated instructional strategies to integrate topics of social, health, and environmental justice problem-solving into their classes.

Nesmith, S., Ditmore, E., Scott, L., & Zhu, T. (2017). “This is more about a book than about science!” Preservice teachers’ perceptions toward using literacy strategies in inquiry-based science lessons. *Electronic Journal of Science Education*.

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.

Contributions of Dr. Nesmith to this manuscript: Dr. Nesmith led the development of the concept, data generation, review, and analysis as well as the final interpretation and write-up. Collaborative contribution of Nesmith (40%), Ditmore (30%), Scott (20%), and Zhu (10%).

About this research: This qualitative research highlights the perceptions of elementary preservice teachers toward the utilization of literacy strategies in inquiry-based science lessons. Based on prior studies indicating that elementary preservice teachers should be exposed to and provided opportunities to incorporate literacy strategies within inquiry science lessons, the research contributes to the field of cross-curricular approaches and the challenges expressed by preservice teachers in understanding and implementing these approaches.

Nesmith, S., Purdum-Cassidy, B., Cooper, S., & Meyer, R. (2017). Like it, love it, or leave it – Exploring elementary preservice teachers’ field-based perspectives toward the integration of literature in mathematics. *Action in Teacher Education*, 39(3), 321-339.

Journal information: The journal is the flagship of the Association of Teacher Educators and serves as a forum for the exchange of information and ideas related to the improvement of teacher education at all levels. Articles focus upon concepts, practices and research that have implication and applicability for practitioners involved with teacher education. All research articles in the journal undergo rigorous peer review, based on initial editor screening, and anonymous refereeing by three editorial consultants; 15-20% acceptance rate; and ranked as *Outstanding Recognition in Field, Highly Prestigious, Refereed* by the Department of Curriculum and Instruction.

Contributions of Dr. Nesmith to this manuscript: Dr. Nesmith led the development of the concept, data generation, review, and analysis as well as the final interpretation and write-up. Collaborative contribution of Nesmith (30%), Purdum-Cassidy (30%), Cooper (20%), and Meyer (20%).

About the research: This research highlights the ways that elementary preservice teachers perceived of the reform-oriented strategy of integrating literature in mathematics during a concurrent mathematics methods course and mathematics field-based practicum course. The essential teacher education research component of field-immersion was utilized, and the research contributes to the field of variances in preservice teachers’ perspectives and the connections between preservice teachers’ perspectives and abilities to link course theories to classroom utilization of said theories.

Nesmith, S., Schwarz, G., Cooper, S., & Atkinson, A. (2016). Are graphic novels always cool? Student and parent perspectives on elementary mathematics and science graphic novels: The need for action research by school leaders. *Planning and Changing*, 47(3/4), 228-245.

Journal information: An educational leadership and policy journal designed to provide a forum for the presentation of issues and studies that inform current educational policy and practice. The journal has served as a critical, intellectual resource for educational leaders, practitioners, and policy makers since 1970. journal with a long history that publishes articles on all aspects of children's literature by offering timely information on a variety of reading-related topics for teachers and teachers-in-training, librarians, writers, and interested parents. Manuscripts undergo blind reviews; 30 - 40% acceptance rate.

Contributions of Dr. Nesmith to this manuscript: Dr. Nesmith led the development of the concept, data

generation, review, and analysis as well as the final interpretation and write-up. Collaborative contribution of Nesmith (25%), Schwarz (25%), Cooper (25%), and Atkinson (25%).

About the research: This qualitative research highlights the insights and perspectives of elementary students and their parents toward the use of graphic novels in mathematics and science curricula. Also highlighted is the importance of utilizing action research in schools and classrooms to promote change. The essential role of action research in addressing stakeholders' perspectives relative to novel curricula, such as graphic novels, is addressed, and the research contributes to these fields.

Nesmith, S. M., Wynveen, C. J., Dixon, E. M., Brooks, B. W., Matson, C. W., Hockaday, W. C., Schaum, M. A., & DeFillipo, J. E. (2016). Exploring educators' environmental education attitudes and efficacy: Insights gleaned from a Texas wetland academy. *International Journal of Science Education, 6*(3). doi: 10.1080/21548455.2015.1078519

Journal information: An international journal that is firmly established as an authoritative voice in the world of science education. All research articles in this journal undergo rigorous peer review, based on initial editor screening and anonymized refereeing by at least two anonymous referees; 30% acceptance rate; and ranked as *Outstanding Recognition in Field, High Prestigious, Refereed* by the Department of Curriculum and Instruction.

Contributions of Dr. Nesmith to this manuscript: Dr. Nesmith led the development of the concept, data generation, review, and analysis as well as the final interpretation and write-up. Collaborative contribution of Nesmith (50%), Wynveen (30%), Schaum*, Brooks, Matson and Hockaday (20%) *graduate student

About the research: This research highlights the ways that participation in an on-site, inquiry-based professional development experience at a wetlands facility impacted the educator participants' attitudes and efficacy specific to environmental education. The essential teacher education and science education components of inquiry, context, and real-life issues were utilized, and the research contributes to these fields.

Rogers, R. M., Cooper, S., **Nesmith, S. M.,** & Purdum-Cassidy, B. (2015). Ways that preservice teachers integrate children's literature into mathematics lessons. *The Teacher Educator, 50*(3), 170-186. doi: 10.1080/08878730.2015.1038493

Journal information: This national journal is focused on current issues, research, and program innovations that augment teacher preparation and continued professional development for educators. The journal serves as an international forum for stimulating discussion among educators who seek to challenge existing boundaries in the field. All research articles in the journal undergo rigorous peer review based on initial editor screening and anonymous referring by three anonymous referees; 20 – 30% acceptance rate; rated as *Outstanding Recognition in Field, Refereed* by the Department of Curriculum and Instruction.

Contributions of Dr. Nesmith to this article: Dr. Nesmith participated in developing the concept for the publication, data generation, review, and analysis as well as the final interpretation and write-up. Collaborative contribution of Cooper (30%), Meyer (30%), Nesmith (20%), and Purdum-Cassidy (20%).

About the research: This research highlights the ways that elementary preservice teachers utilized the reform-oriented strategy of integrating literature in mathematics during a concurrent mathematics methods course and mathematics field-based practicum course. The essential teacher education research component of field-immersion was utilized, and the research contributes to the field of preservice teachers' understandings and abilities to connect course theory to classroom application.

Purdum-Cassidy, B., **Nesmith, S.,** Meyer, R., & Cooper, S. (2015). What are they asking? An analysis of the questions planned by prospective teachers when integrating literature in mathematics. *Journal of Mathematics Teacher Education, 18*(1), 79-99. doi: 10.1007/s10857-014-9274-7

Journal information: The journal is devoted to research that seeks to improve the education of mathematics teachers and develop teaching methods that better enable mathematics students to learn. The journal covers all stages of the professional development of mathematics teachers and teacher-educators. It serves as a forum for examining institutional, societal, and cultural influences that impact on teachers' learning and ultimately their students' learning. Research articles undergo a blind review by 3+ external reviewers and review by the Associate Editor; 18% acceptance rate; and ranked as *Outstanding Recognition in Field, Highly Prestigious, Refereed* by the Department of Curriculum and Instruction.

Contributions of Dr. Nesmith to this article: Dr. Nesmith participated in developing the concept for the publication, data generation, review, and analysis as well as the final interpretation and write-up. Collaborative contribution of Purdum-Cassidy (30%), Nesmith (30%), Meyer (20%), and Cooper (20%).

About the research: This qualitative, classroom-based research highlights the influence of a specific instructional approach on preservice teachers' abilities to develop reform-oriented, mathematics-focused

questions and experiences for elementary students. The essential teacher education research component of field-immersion was employed, and the research contributes to the field of preservice teachers' understandings and abilities to mediate students' knowledge construction and conceptual understanding through questioning techniques.

Nesmith, S., Trumble, J. F., Villareal-Haugh, S. J., Porter, K. S., Schaum, M. A., Spencer, E. M., & Stephens, J. N. (2014). Envisioning equitable classrooms that enhance all students' wonderful ideas: A Duckworth perspective. *Journal of Latinos and Education, 13*(3), 238-239. doi: 10.1080/15348431.2013.849604

Journal information: The journal provides a cross-, multi-, and interdisciplinary forum for scholars and writers from diverse disciplines who share a common interest in the analysis, discussion, critique, and dissemination of educational issues that impact Latinos. The journal supports dialogical exchange--for researchers, practitioners, authors, and other stakeholders who are working to advance understanding at all levels and aspects. All research articles in this journal undergo rigorous peer review, based on initial editor screening and anonymous refereeing by two anonymous peer referees; 11 – 20% acceptance rate; and ranked as *Outstanding Recognition in Field, Highly Prestigious, Refereed* by the Department of Curriculum and Instruction.

Contributions of Dr. Nesmith to this article: Dr. Nesmith developed the concept for the publication as the professor of a graduate curriculum course and fully participated in guiding the graduate students in data generation, review, and analysis as well as the final interpretation and write-up. Collaborative contribution of Nesmith (70%) and all other authors (30%).

About the research: This article represents the product of a successful endeavor involving graduate students in synthesizing course theory, course activities, reflection, and scholarly writing. It contributes to the field of enhancing equity through the development and incorporation of curriculum.

Cooper, S., & **Nesmith, S.** (2013). Exploring the role of field experience context in pre-service teachers' development as mathematics educators. *Action in Teacher Education, 35*(3), 165-185. doi: 10.1080/01626620.2013.770376

Journal information: The journal is the flagship of the Association of Teacher Educators and serves as a forum for the exchange of information and ideas related to the improvement of teacher education at all levels. Articles focus upon concepts, practices and research which have implication and applicability for practitioners involved with teacher education. All research articles in the journal undergo rigorous peer review, based on initial editor screening, and anonymous refereeing by three editorial consultants; 15-20% acceptance rate; and ranked as *Outstanding Recognition in Field, Highly Prestigious, Refereed* by the Department of Curriculum and Instruction.

Contributions of Dr. Nesmith to this article: Dr. Nesmith participated in developing the concept for the publication, data generation, review, and analysis as well as the final interpretation and write-up. Collaborative contribution of Cooper (50%) and Nesmith (50%).

About the research: This research underscores the influence of contextual variances in field-based experiences on preservice teachers' understanding and application of mathematics pedagogy. The research contributes to the field of quality field experiences and represents a response to national reports and research findings that have stressed the need for major improvements in the preparation of teachers with an emphasis on more authentic experiences.

Nesmith, S. (2011*). Powerful questions result from quality questions: The influence of posed question on elementary preservice teachers' field-based reflections. *Research in the Schools, 18*(2), 26-39.

**published in 2012, yet listed as a 2011 publication due to a delay in the publication of this issue*

Journal information: The flagship journal of the southern educational research association, the journal features articles in the areas of research in practice, scholarly reviews of research findings, applications of innovative practices, empirical studies of assessment tools, and empirical studies focusing on education policy, accountability, politics, or educational responses to reform mandates. Articles undergo a blind review by 3+ external reviewers and 2 in-house reviewers; 20-30% acceptance rate; and ranked as *Outstanding Recognition in Field, Highly Prestigious, Refereed* by the Department of Curriculum and Instruction.

Contributions of Dr. Nesmith to this article: Dr. Nesmith singularly served in developing the concept for the publication, data generation, review, and analysis as well as the final interpretation and write-up. Contribution of Nesmith (100%).

About the research: Reflection is a vital tool in shaping and informing preservice teachers' understanding of the complexities of teaching and learning, and this research underscores the connection between posed

questions and reflective responses. The research contributes to the field of field-based experiences and underscores the essential role of teacher educators in guiding preservice teachers' field-based reflections. Cited by 1 publication (update retrieved October 14, 2014 from Google Scholar).

Cooper, S., Nesmith, S., & Schwarz, G. (2011). Exploring graphic novels for elementary science and mathematics. *School Library Media Research*, 14, 3-19.

Journal information: The research journal of the American Association of School Librarians. The journal features articles that emphasize research on instructional theory, teaching methods, and critical issues relevant to school library media. Articles undergo a blind review by 3-5 reviewers from the academic ranks of library education and established professionals in library media services; 21-30% acceptance rate; and ranked as *Outstanding Recognition in Field, Highly Prestigious, Refereed* by the Department of Curriculum and Instruction.

Contributions of Dr. Nesmith to this article: Dr. Nesmith participated in developing the concept for the publication, data generation, review, and analysis as well as the final interpretation and write-up. Collaborative contributions of Cooper (33%), Nesmith (33%), and Schwarz (33%).

About the research: This research builds on my publication success of integrating literature within content areas. The research reported educators' perspectives toward the medium of graphic novels and addressed the issue of quality of graphic novels with science or mathematics content. Due to the recent surge in attention and popularity of graphic novels across the curriculum, there exists a void in the research relative to the particular benefits and disadvantages of the medium. By addressing this void, this research contributes to the field of instructional approaches and curriculum resources. Cited by 2 publications (update retrieved October 14, 2014 from Google Scholar).

Nesmith, S. & Cooper, S. (2010). Trade books in the mathematics classroom: The impact of many, varied perspectives on determinations of quality. *Journal of Research in Childhood Education*, 24(4). doi:10.1080/02568543.2010.510086

Journal information: This is the flagship journal of the Association for Childhood Education International. The journal features articles that advance knowledge and theory of the education of children, infancy through early adolescence. Articles undergo a blind review by 2 external and 2 in-house reviewers; 28% acceptance; and ranked as *Outstanding Recognition in Field, Highly Prestigious, Refereed* by the Department of Curriculum and Instruction.

Contributions of Dr. Nesmith to this article: Dr. Nesmith led the development of the concept, data generation, review, and analysis as well as the final interpretation and write-up. Collaborative contributions of Nesmith (50%) and Cooper (50%).

About the research: This research highlights the importance of literature quality specific to the strategy of literature integration within content areas and reveals the impact of reviewers' backgrounds on determinations of quality. The research introduces the rarely researched component of individual bias and predispositions to the field of instructional resources in general and literature integration in mathematics in particular. Cited by 7 publications (update retrieved October 14, 2014 from Google Scholar).

Simpson, D. J., Garrett, H. B., Bucy, B. L., Burke, A., Doue, W. L., Faber S. L., Fehr, M. C., Fryer, W. A., Gonzales, G. D., Harp-Woods, C. J., McMahan, S., Nesmith, S. M., Reynolds, S. A., Riegler, S. E., Romano, J. E., Willey, R. J., Wimberley, S., & Won, M. (2006). Teacher's indispensable qualities: A Freirean perspective. *Journal of Latinos and Education*, 5(2), 163-165. doi: 10.1207/s1532771xjle0502_8

Journal information: The journal provides a cross-, multi-, and interdisciplinary forum for scholars and writers from diverse disciplines who share a common interest in the analysis, discussion, critique, and dissemination of educational issues that impact Latinos. The journal supports dialogical exchange--for researchers, practitioners, authors, and other stakeholders who are working to advance understanding at all levels and aspects. All research articles in this journal undergo rigorous peer review, based on initial editor screening and anonymous refereeing by two anonymous peer referees; 11 – 20% acceptance rate; and ranked as *Outstanding Recognition in Field, Highly Prestigious, Refereed* by the Department of Curriculum and Instruction.

Contributions of Dr. Nesmith to this article: Dr. Nesmith participated in data interpretation and the final write-up while involved in a graduate course as a doctoral student. Collaborative contributions of Simpson (70%) and all other authors, including Nesmith (30%). Cited by 1 publication (update retrieved October 14, 2014 from Google Scholar).

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.

Publication 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.

Contributions of Dr. Nesmith to this article: Dr. Nesmith led the development of the concept, data generation, review, and analysis as well as the final interpretation and write-up. Collaborative contributions of Nesmith (40%), Park (30%), and McCall (30%).

About the research: 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 and teaching outcome expectancy) through content-focused professional development experiences.

Publications (Refereed Conference Proceedings)

Wynveen, C. J., **Nesmith, S. M.**, Hockaday, W. C., Matson, C. W., & Brooks, B. W. (2014). Constructed wetlands as an education tool to encourage water reuse. *Abstracts of papers of The American Chemical Society*. Book of Abstracts, 247.

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/>

Nesmith, S., & Purdum-Cassidy, B. (2011). What are they asking? Pre-service teachers' use of questioning within high stakes PDS classrooms [Abstract]. *Proceedings of the 2011 Professional Development Schools National Conference*, Book of Abstracts, 26.

Purdum-Cassidy, B., Meyer, R., & **Nesmith, S.** (2010). From theory to practice: Examining pre-service teachers' use of children's literature in the PDS mathematics classroom [Abstract]. *Proceedings of the 2010 Professional Development Schools National Conference*. Book of Abstracts, 25.

Invited Publications

Nesmith, S. (2008). Mathematics and literature: Educators' perspectives on utilizing a reformative approach to bridge the two cultures. *The Forum on Public Policy: A Journal of the Oxford Round Table*.

Publication information: The journal seeks to disseminate knowledge with regard to salient issues in public affairs and includes research and policy advancement in both the public and private sectors that address government issues at state, national and international levels of discourse. Articles undergo a blind review by 2+ peer external reviewers.

Contributions of Dr. Nesmith to this article: Dr. Nesmith singularly served in developing the concept for the publication, data generation, review, and analysis as well as the final interpretation and write-up. Contribution of Nesmith (100%). Cited by 4 publications (update retrieved October 14, 2014 from Google Scholar).

Manuscripts Under Review

Lasker, G. A., Mellor, K. E., Mullins, M. L., **Nesmith, S. M.**, van Bergen, S., Simcox, N. J. Anastas, P. T., (revise and resubmit) Bridging curriculum: Green chemistry and toxicology in the laboratory via multiple session SDS and sunscreen Activities. Manuscript submitted to *Journal of Chemical Education*.

Journal information: The *Journal of Chemical Education* is the official journal of the Division of Chemical Education of the American Chemical Society. The *Journal* publishes peer-reviewed articles and related information as a resource to those in the field of chemical education and to those institutions that serve them. *JCE* typically addresses chemical content, activities, laboratory experiments, instructional methods, and pedagogies.

Contributions of Dr. Nesmith to this manuscript: Dr. Nesmith participated in developing the concept for the publication as part of the MoDRN Outreach and Education cohort as well as the final write-up and review. Collaborative contribution of Nesmith (20%)

Cooper, S., Rogers, R., Purdum-Cassidy, B., & Nesmith, S. (revise and resubmit). Selecting quality children's literature for mathematics instruction: What do preservice teachers look for? Manuscript submitted to *Children's Literature in Education*.

Journal information: *Children's Literature in Education* has been a key source of articles on all aspects of children's literature for more than 40 years. CLE is a peer-reviewed journal covering children's literature worldwide, suitable for professionals in the field (academics, librarians, teachers) and any other interested adults. The current journal impact factor is 0.30.

Contributions of Dr. Nesmith to this manuscript: Dr. Nesmith participated in developing the concept for the publication, data generation, review, and analysis as well as the final interpretation and write-up. Collaborative contribution of Cooper (30%), Meyer (30%), Purdum-Cassidy (20%), and Nesmith (20%).

Nesmith, S., Dixon-Balk, E., Wynveen, C., Matson, C., Brooks, B., Hockaday, W., *Slechta, M., & DeFellipo, J. (under review) *Science professional development: Exploring its impact on teachers' design and implementation of environmental education curricula*. Manuscript submitted to *Research in Science Education*. *graduate students

Journal information: The journal has been in continuous publication since 1971. It is an international journal publishing and promoting scholarly science education research of interest to a wide group of people. The journal examines early childhood, primary, secondary, tertiary, workplace, and informal learning as they relate to science education. Research articles undergo rigorous peer review; blind review by three peers; 0.895 impact factor; and ranked as *Outstanding Recognition in Field, High Prestigious, Refereed* by the Department of Curriculum and Instruction.

Contributions of Dr. Nesmith to this manuscript: Dr. Nesmith led the development of the concept, data generation, review, and analysis as well as the final interpretation and write-up. Collaborative contribution of Nesmith (40%), Dixon (20%), Wynveen (20%), Matson (5%), Brooks (5%), Hockaday (5%), Slechta (5%), and DeFellipo (2%).

Nesmith, S., Park, J., & McCall, M. (under revision). *Change in elementary teachers' science efficacy: The influence of personal factors within the context of a long-term professional development experience*. Manuscript to be submitted to *Electronic Journal of Science Education*.

Journal information: The journal has been in continuous publication since 1950. It provides a vital forum for considering practice, policy, and research in teacher education and examines some of the most timely and important topics in the field. Research articles undergo rigorous peer review; blind review by three peers; 5% acceptance rate; and ranked as *Outstanding Recognition in Field, High Prestigious, Refereed* by the Department of Curriculum and Instruction.

Contributions of Dr. Nesmith to this manuscript: Dr. Nesmith led the development of the concept, data generation, review, and analysis as well as the final interpretation and write-up. Collaborative contribution of Nesmith (40%), Park (30%), and McCall (30%).

Nesmith, S., & Dixon-Balk, E. (under revision). *Why do we fall down? An examination of elementary teachers' conceptions of gravity*. Manuscript submitted for publication to *Electronic Journal of Science Education*.

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.

Contributions of Dr. Nesmith to this manuscript: Dr. Nesmith singularly served in developing the concept and gathering data for the manuscript and led the data review and analysis as well as the final interpretation and write-up. Collaborative contribution of Nesmith (60%) and Dixon*(40%). *graduate student

Manuscripts in Progress

Scott, L., Zhu, T., Nesmith, S., & Ditmore, E. (in progress). *Integrating literature in science lessons using the 5E inquiry model*. Manuscript to be submitted to *Action in Teacher Education*.

Nesmith, S., Ditmore, E., Brooks, B. W., Mullins, M., Corrales, J., Krisofco, L., Steele, W. B., Coish, P., Gallagher, E. P., Mills, M., Kavanagh, T. J., Simcox, N., Lasker, G. A., Voutchkova-Kostal, A., Kostal, J., Mellor, K. E., Saari, G., Shen, L. Q., Melnikov, F., Zimmerman, J. B., & Anastas, P. T. (in progress). Strengthening high

school science teachers' inquiry instruction through an authentic research experience in rational molecular design. Manuscript to be submitted to *School Science and Mathematics Journal*.

Nesmith, S., *Turney, H., *Cole, C., *Sandager, A., & Nesmith, D. (in progress). *Growing science in the garden: Exploring the intersection of formal and informal science learning experiences*. Manuscript to be submitted to *Connected Science Learning*.

Nesmith, S., & Howell, L. (in progress). *Specialized professional development schools: Creating clinically rich experiences for teacher candidates*. Manuscript to be submitted to *PDS Partners*.

External and University Grants

Funded Projects

- \$139,179** **Nesmith, S.,** Wynveen, C., Brooks, B., Matson, C., Hockaday, W., Mullins, M. (2017). *Immersed in the wetlands: An environmental academy for educators*. Research supported through Environmental Protection Agency. Funded grant. **Principal Investigator.**
- \$100,000** **Nesmith, S.,** Martin, T. (2017). *Converting the LRC/Media Center into a Makerspace*. Proposal supported through Violet M. Johnson Foundation.
- \$ 91,000** Brooks, B., & **Nesmith, S.** (2016). *Improving material safety through the minimization of oxidative stress potential: A mechanistic understanding of ROS generation in in vitro and in vivo systems*. Research supported through NSF. Supplemental award for NSF-CHE 1339637. **Co-Principal Investigator.**
- \$ 71,582** Brooks, B., & **Nesmith, S.** (2014). *Educational materials and infrastructure for teaching concepts in rational molecular design*. Research supported through NSF. Supplemental award for NSF-CHE 1339637 (Lead PI: Anastas at Yale University) Funded grant. **Co-Principal Investigator.**
- \$ 6,000** **Nesmith, S.,** Matson, C., Hockaday, B., Wynveen, C., & Brooks, B. (2012). *Pedagogy and paludology: Creating a wetlands environmental academy for K-12 educators*. Research supported by University Research Committee at Baylor University. Funded grant. **Principal Investigator.**
- \$ 6,000** Meyer, R., & **Nesmith, S.** (2011). *Teachers teaching with technology: Hosting a T³ regional conference*. Research supported by Texas Instruments. Funded grant. **Co-Principal Investigator.**

Pending/Unfunded Projects

- \$139,179** **Nesmith, S.,** Wynveen, C., Brooks, B., Matson, C., Hockaday, W., Mullins, M. (2016). *Immersed in the wetlands: An environmental academy for educators*. Research supported through Environmental Protection Agency. Unfunded grant. **Principal Investigator.**
- \$137,426** **Nesmith, S.,** Wynveen, C., Brooks, B., Matson, C., Hockaday, W., Mullins, M. (2015). *A wetland environmental academy for classroom teachers*. Research supported through Environmental Protection Agency. Unfunded grant. **Principal Investigator.**
- \$149,547** **Nesmith, S.,** Wynveen, C., Brooks, B., Matson, C., Hockaday, W. (2013). *A wetland environmental education academy for P-12 educators*. Research supported through Dixon Water Foundation. Unfunded grant. **Principal Investigator.**
- \$ 9,750** **Nesmith, S.,** Wynveen, C., Brooks, B., Matson, C., Hockaday, W. (2013). *The role of constructed wetlands in water quality, water conservation, habitat mitigation, and wildlife management: Enhancing environmental understanding an instruction through an on-site research experience*. Research supported by Texas Parks and Wildlife Department – The Wildlife Diversity Program. Unfunded grant. **Principal Investigator.**
- \$216,000** **Nesmith, S.,** Wynveen, C., Brooks, B., Matson, C., Hockaday, W., Mullins, M., & Doyle, R. (2012). *Water, wetlands, and reuse: Enhancing environmental understanding and instruction through on-site research experiences*. Research supported by Environmental Protection Agency; Environmental Education Regional Grants. Unfunded grant. **Principal Investigator.**
- \$ 10,000** **Nesmith, S., & Park, J.** (2011). *Utilizing Vernier probeware to build Baylor's STEM goals*. Research supported by Vernier Company 30th Anniversary Grants Program. Unfunded grant. **Co-Principal Investigator.**
- \$ 10,000** **Nesmith, S., & LeCompte, K.** (2010). *Developing elementary pre-service teachers' understanding of CCRS in Science through an integrated Science/Social Studies unit*. Research supported by College and Career Readiness Initiative. Unfunded grant. **Co-Principal Investigator.**

National and International Presentations

Nesmith, S. (2018). *Strengthening high school science teachers' inquiry instruction through an authentic green chemistry research experience*. Paper presented at the International Association for Science Teacher Education Conference in Baltimore, MD.

Nesmith, S., & McCall, M. (2017). *Elementary science teacher preparation: Exploring attitudes, self-efficacy and content pedagogical needs and impacts*. Paper presented at the Annual School Science and Mathematics Association Convention in Lexington, KY.

- Cooper, S., **Nesmith, S.**, & Dixon-Balk, E. (2017). *STEM PD for STEM PDSs*. Paper presented at the Annual School Science and Mathematics Association Convention in Lexington, KY.
- Nesmith, S.**, Sissell, R., Weaver, P., & Bailey, S., (2017). *Exploring chemicals from a green perspective*. Paper presented at the National Science Teachers Association Conference in Los Angeles, CA.
- Nesmith, S.** (2017). *Fostering educators' design and implementation of environmental education curricula through professional development*. Paper presented at the International Association for Science Teacher Education Conference in Des Moines, IA.
- Nesmith, S.**, & Cooper, S. (2016). *Using the value of integratedness rubric to explore elementary preservice teachers' lesson plans*. Paper presented at the Annual School Science and Mathematics Association Convention in Phoenix, AZ.
- Nesmith, S.**, *Turney, H., & *Cole, C. (2016). *Linking formal and informal science within an undergraduate gardening experience*. Paper presented at the Annual School Science and Mathematics Association Convention in Phoenix, AZ.
- Strot, R., Ward, V., Cohn, B., Baker, B., **Nesmith, S.**, & Cooper, S. (2016). *Becoming a STEM campus: Bell's Hill Elementary PDS and Baylor University*. Paper presented at the National Association of Professional Development Schools Conference in Washington, D.C.
- Purdum-Cassidy, B., Howell, L. Strot, R., Cooper, S., **Nesmith, S.**, Scott, L., LeCompte, K., & Goree, K. (2016). *There's something special about specialized PDS campuses*. Paper presented at the National Association of Professional Development Schools Conference in Washington, D.C.
- Trumble, J., & **Nesmith, S.** (February, 2016). *Assessing the internship and its contribution to teaching in the 21st century: A case study of a successful intern*. Paper presented at Annual Conference of the Association of Teacher Educators in Chicago, IL.
- Nesmith, S.**, Baker, B. R., & Heenan, D. (January, 2016). *Exploring preservice teachers' understanding of science pedagogy through an international research experience*. Paper presented at Hawaii International Conference on Education.
- Cooper, S., & **Nesmith, S.** (October, 2015). *Elementary teachers' perceptions of mathematics/science integration as revealed through a summer academy*. Paper presented at the Annual School Science and Mathematics Association Convention in Oklahoma City, Oklahoma.
- McCall, M., & **Nesmith, S.** (October, 2015). *Elementary science teacher preparation: The importance of breadth and depth of content*. Paper presented at the Annual School Science and Mathematics Association Convention in Oklahoma City, Oklahoma.
- Dixon, E., & **Nesmith, S.** (October, 2015). *Addressing student misconceptions about diffusion and osmosis through direct and inquiry instruction*. Paper presented at the Annual School Science and Mathematics Association Convention in Oklahoma City, Oklahoma.
- Nesmith, S.** (January, 2015). *Effects of a multi-phase conceptual change instructional approach on elementary preservice teachers*. Paper presented at the International Association for Science Teacher Education Conference in Portland, Oregon.
- Nesmith, S.**, & Baker, B. R. (November, 2014). *Exploring preservice teachers' understanding of science instruction through an international research experience*. Paper presented at the Annual School Science and Mathematics Association Convention in Jacksonville, Florida.
- Dixon, E., & **Nesmith, S.** (November, 2014). *Addressing elementary teachers' misconceptions related to gravity using a conceptual change process*. Paper presented at the Annual School Science and Mathematics Association Convention in Jacksonville, Florida.
- McCall, M., Park, J., & **Nesmith, S.** (November, 2014). *Meeting their needs – science content courses for elementary preservice teachers*. Paper presented at the Annual School Science and Mathematics Association Convention in Jacksonville, Florida.
- Wynveen, C., **Nesmith, S.**, Hockaday, W., Matson, C., & Brooks, B. (March, 2014). *Constructed wetlands as an educational tool to encourage water reuse*. Paper presented at the American Chemical Society National Meeting in Dallas, Texas.
- Park, J., & **Nesmith, S.** (March, 2014). *An integrated STEM lab activity using feature film as a platform for inquiry*. Paper presented at the National Science Teachers Association Conference in Boston, Massachusetts.
- Nesmith, S.**, McCall, M., & Park, J. (January, 2014). *Effects of a science content academy on science self-efficacy of elementary teachers*. Paper presented at the International Association for Science Teacher Education Conference in San Antonio, Texas.
- Nesmith, S.**, & Dixon, E. (November, 2013). *Using student-created videos to enhance preservice elementary teachers' science content knowledge*. Paper presented at the Annual School Science and Mathematics Association Conference in San Antonio, Texas.
- Dixon, E., Stephens, J. & **Nesmith, S.** (November, 2013). *Science and literacy: A natural fit*. Paper presented at the Annual School Science and Mathematics Association Convention in San Antonio, Texas.

- Park, J., **Nesmith, S.**, & McCall, M. (November, 2013). *Science content academy for elementary teachers: A rumination of events*. Paper presented at the Annual School Science and Mathematics Association Convention in San Antonio, Texas.
- Park, J., **Nesmith, S.**, & McCall, M. (March, 2013). *Change in science content knowledge and self-efficacy of elementary teachers*. Paper presented at the International Consortium for Research in Science and Mathematics Education in Granada, Nicaragua.
- Nesmith, S.**, & Cooper, S. (November, 2012). *Exploring conceptual change through the lens of an elementary mathematics/science teachers' academy*. Paper presented at the Annual School Science and Mathematics Association Convention in Birmingham, Alabama.
- McCall, M., & **Nesmith, S.** (November, 2012). *Grappling with teachers' unnatural understanding of the nature of science*. Paper presented at the Annual School Science and Mathematics Convention in Birmingham, Alabama.
- Nesmith, S.** (April, 2012). *Real life-real time science with literature and sensor technology*. Paper presented at the National Science Teachers Association Conference in Indianapolis, IN.
- Nesmith, S.**, & Cooper, S. (February, 2012). *Who thinks math + science = integration?* Paper presented at the Annual Association of Teacher Educators Conference in San Antonio, Texas.
- Nesmith, S.**, & Cooper, S. (November, 2011). *Summer fun! The design and impact of a summer math/science teacher academy*. Paper presented at the Annual School Science and Mathematics Association Convention in Colorado Spring, Colorado.
- Cooper, S., & **Nesmith, S.** (November, 2011). *Learning to integrate math and science: An assignment for elementary preservice teachers*. Paper presented at the Annual School Science and Mathematics Association Convention in Colorado Springs, Colorado.
- Nesmith, S.** (June, 2011). *Exploring the utilization of technology, literature, and simulations within inquiry-based science*. Paper presented at St. Anothony's School Science Conference in Tibas, Costa Rica.
- Nesmith, S.**, Purdum-Cassidy, B., Meyer, R., & Cooper, S. (February, 2011). *Now I get it – Utilizing children's literature to build preservice teachers' mathematics efficacy*. Paper presented at the Annual Association of Teacher Educators Conference in Orlando, Florida.
- Cassidy-Purdum, B., & **Nesmith, S.** (February, 2011). *Spin it, roll it, pick a card – Using simulations to promote and build cultural competence*. Paper presented at the Annual Association of Teacher Educators Conference in Orlando, Florida.
- Nesmith, S.**, & Cooper, S. (November, 2010). *Creating a math/science integrated experience*. Paper presented at the Annual School Science and Mathematics Association Convention in Ft. Meyers, Florida.
- Cooper, S., **Nesmith, S.**, Oates, C., & Tucker, J. (November, 2010). *Using Vernier technology to promote the integration of mathematics and science*. Paper presented at the Annual School Science and Mathematics Association Convention in Ft. Meyers, Florida.
- Cassidy, B., Cooper, S., Meyer, R., & **Nesmith, S.** (March, 2010). *From theory to practice – Examining pre-service teachers' use of children's literature in the PDS mathematics classroom*. Paper presented at the National Association for Professional Development Schools in Daytona Beach, Florida.
- Nesmith, S.** (November, 2009). *Comparing Impacts and Results of Varied Mathematics and Science Elementary Field Experiences*. Paper presented at the Annual School Science and Mathematics Association Convention in Reno, Nevada.
- Nesmith, S.** (November, 2008). *Utilizing contextual problems to determine pre-service educators' understanding of operation problem structures*. Paper presented at the Annual School Science and Mathematics Association Convention in Raleigh-Durham, North Carolina.
- Nesmith, S. J.** (July, 2008). *Mathematics and literature: Educators' perspectives on utilizing a reformative approach to bridge two cultures*. Paper presented at the Oxford Round Table in Oxford, England.
- Nesmith, S. J.**, & Cooper, S. (February, 2008). *Educators multiple perspectives toward mathematics trade books*. Paper presented at the Annual Association of Teacher Educators Conference in New Orleans, Louisiana.
- Nesmith, S. J.** (November, 2007). *Bridging and breaking barriers to mathematics reform*. Paper presented at the Annual School Science and Mathematics Association Convention in Indianapolis, Indiana.
- Nesmith, S.**, & Cooper, S. (February, 2006). *Methods of integrating field experiences within math methodology courses for EC-4 pre-service teachers*. Paper presented at the Annual Association of Teacher Educators Conference in Atlanta, Georgia.
- Nesmith, S.**, & Cooper, S. (February, 2006). *Math camp: A varied field experience for a mathematics methods course*. Paper presented at the Annual Association of Mathematics Teacher Educators Conference in Tampa, Florida.

Regional Presentations

- Nesmith, S.,** Mullins, M., Nesmith, D. (2017). Paper presented at the Annual Southwest Regional Association for Science Teacher Education Conference in Waco, TX.
- Nesmith, S.,** *Ditmore, E., & *Zhu, T. (2016). *Elementary pre-service teachers' perspectives toward integrating literature and literacy strategy instruction in inquiry-based science lessons*. Paper presented at the Annual Southwest Regional Association of Science Teacher Educators Conference in Tyler, TX.
- Dixon, E., & **Nesmith, S.** (2016). *STEM for young learners: Professional development for STEM PDS campuses*. Paper presented at the Annual Southwest Regional Association of Science Teacher Educators Conference in Tyler, TX.
- McCall, M., & **Nesmith, S.,** (October, 2015). *Using required targeted content courses to prepare elementary education majors to teach science*. Paper presented at the Annual Southwest Regional Association for Science Teacher Education Conference in Denton, TX.
- Park, J., **Nesmith, S.,** & McCall, M. (October, 2013). *Elementary teachers' ideas of density from an atomic viewpoint*. Paper presented at the Annual Southwest Regional Association for Science Teacher Education Conference in San Antonio, Texas.
- Nesmith, S.,** & Schaum, M. (October, 2012). *Pedagogical applications for environmental education: A wetland environmental academy for P-12 educators*. Paper presented at the Annual Southwest Regional Association for Science Teacher Education Conference in Houston, Texas.
- Nesmith, S.,** & Dixon, E. (October, 2012). *An exploring of instructional practices and learning progression on pre-service and in-service teachers' understanding of the seasons*. Paper presented at the Annual Southwest Regional Association for Science Teacher Education Conference in Houston, Texas.
- Nesmith, S.** (October, 2011). *Introducing preservice teachers to real-life, real-time science with literature and sensor technology*. Paper presented at the Annual Southwest Regional Association for Science Teacher Education Conference in Lubbock, Texas.
- Nesmith, S.** (October, 2008). *Mathematical authorships through children's literature*. Paper presented at the Annual National Council of Teachers of Mathematics Regional Conference and Exposition in Oklahoma City, Oklahoma.
- Cooper, S., & **Nesmith, S.** (October, 2006). *Mathematical problem-posing in the context of children's literature*. Paper presented at the Annual Western Regional Conference of the National Council of Teachers of Mathematics in Phoenix, Arizona.

State and Local Presentations

- Nesmith, S.,** *Turney, H., & *Cole, C. (2016). *Recharging teachers with electrifying ideas for exploring circuits and batteries*. Paper presented at the Annual Council for the Advancement of Science Teaching Conference in San Antonio, TX.
- deMesa, M., McCall, M., & **Nesmith, S.** (May, 2013). *The hows and whys of creating a CCRS continuum in the university science classroom*. Paper presented at the College and Career Readiness Initiative Culminating Conference in Houston, Texas.
- Nesmith, S.** (March, 2012). *Get real! Using literature and sensors to design real-life, real-time science activities*. Paper presented at the Annual Texas Association of Baptist Schools Convention in Waco, Texas.
- Nesmith, S.** (November, 2011). *Using literature and sensors to get physical with physical science*. Paper presented at the Annual Council for the Advancement of Science Teaching Conference in Dallas, Texas.
- Nesmith, S.** (October, 2011). *The earth revolves on its axle? Recognizing and confronting students' science misconceptions*. Paper presented at the Annual Regional Conference of the Texas Association for the Improvement of Reading in Waco, Texas.
- Nesmith, S.** (October, 2010). *Science content + literature + technology = science understanding*. Paper presented at the Annual Regional Conference of the Texas Association for the Improvement of Reading in Waco, Texas.
- Nesmith, S.,** & Turner, M. (November, 2010). *How on earth can we build understanding of earth science?* Paper presented at the Annual Council for the Advancement of Science Teaching Conference in Houston, Texas.
- Nesmith, S.,** Cooper, S., Oates, C., & Tucker, J. (April, 2010). *Using Vernier technology, in preschool to university classrooms, to promote the integration of mathematics and science*. Paper presented at the Annual Educational Technology Showcase in Waco, Texas.
- Nesmith, S.** (March, 2010). *Lunar looking: Activities for understanding the phases of the moon*. Paper presented at the Annual Texas Association of Baptist Schools Convention in Waco, Texas.
- Nesmith, S.** (July, 2009). *The 3 R's Today: Reading + 'Riting = 'Rithmetic*. Paper presented at the Council for the Advancement of Mathematics Teaching Conference in Houston, Texas.
- Nesmith, S.** (September, 2008). *Stymied by science? Look to a book!* Paper presented at the Fifteenth Annual Panhandle Area Math and Science Conference in Canyon, Texas.
- Cooper, S., & **Nesmith, S.** (July, 2008). *Who wants to be a problem solver? Using trivia and fun facts for problem solving*. Paper presented at the Council for the Advancement of Mathematics Teaching Conference in

Dallas, Texas.

- Nesmith, S. J.** (October, 2007). *Problems with problem solving? Look to a book!* Paper presented at the Annual Regional Conference of the Texas Association for the Improvement of Reading in Waco, Texas.
- Nesmith, S. J.** (2006). *Foundations of math.* Workshop presented at Frenship ISD in Wolforth, Texas.
- Nesmith, S. J.** (April, 2006). *Impacts and perceptions of varied field experiences on elementary pre-service educators.* Paper presented at the Annual College of Education Research Conference at Texas Tech University in Lubbock, Texas.
- Nesmith, S. J.** (2006). *The structure of nonfiction texts – Use it or lose it.* Workshop presented at the 2nd Annual College of Education Literature Festival at Texas Tech University in Lubbock, Texas.
- Nesmith, S.** (September, 2005). *Science trade books – more than just good stories.* Workshop presented at the student chapter of the National Science Teachers Association at Texas Tech University in Lubbock, Texas.
- Nesmith, S., & Murphree, L.** (1999). *Reading math.* Workshop presented at Region 17 Education Service Center in Lubbock, Texas.
- Nesmith, S.** (1998). *Math mall.* Workshop presented at the Fifth Annual Panhandle Area Math and Science Conference in Canyon, Texas.
- Murphree, L. & **Nesmith, S.** (1998). *Adding depth and complexity to TEKS.* Workshop presented at Region 17 Education Service Center in Lubbock, Texas.
- Nesmith, S.** (1998). *Math mall: Preparing for TAAS.* Workshop presented at the Fourth Annual National Conference of Texas in Austin, Texas.
- Nesmith, S., & Johnson, T.** (1997). *Reading restaurant.* Workshop presented at the Lubbock Area Reading Conference sponsored by the Texas Association for the Improvement of Reading (TAIR) in Lubbock, Texas.
- Nesmith, S.** (1997). *Math mall.* Workshop presented at the Council for the Advancement of Mathematics Teaching Conference in Houston, Texas.
- Nesmith, S., & Murphree, L.** (1997). *Reading math.* Workshop presented at the Fourth Annual Panhandle Area Math and Science Conference in Canyon, Texas.
- Bristo, K., Ehlert, T., & **Nesmith, S.** (1996). *TEKS for grades 3-5.* Workshop presented at the Third Annual Panhandle Area Math and Science Conference in Canyon, Texas.

Invited Presentations and Professional Development Events

- Nesmith, S.** (2016). *Third grade scientists.* Workshop presented at Bell's Hill Professional Development School in Waco, Texas.
- Nesmith, S.** (2015). *Early childhood literacy strategies.* Workshop presented at Little Lions Learning Center Professional Development Day in Waco, Texas.
- Nesmith, S.** (2015). *Integrating literature in science and mathematics.* Workshop presented at Little Lions Learning Center Professional Development Day in Waco, Texas.
- Nesmith, S.** (2015). *Using Vernier probes in K-12 classrooms.* Workshop presented at the Baylor University Technology Professional Development Event in Waco, Texas.
- Nesmith, S.** (2014). *How to use books other than textbooks in the science classroom.* Paper presented at Bell's Hill PDS Professional Development Back to School Workshop in Waco, Texas.
- Nesmith, S., & Talbert, T.** (April, 2014). *Top ten things you should know before writing your dissertation.* Paper presented at the Department of Curriculum and Instruction Doctoral Student Professional Seminar in Waco.
- Nesmith, S.** (March, 2013). *Just how big is the solar system?* Paper presented at the Mathematics of Planet Earth Professional Development Event for Educators at All Levels in Waco, Texas.
- Nesmith, S.** (February, 2013). *Avoiding the most common editing mistakes in publication.* Paper presented at the Department of Curriculum and Instruction Graduate Student Writing Workshop in Waco, Texas.
- McCall, M., **Nesmith, S., & Park, J.** (August, 2012). *The essence of science.* Paper presented at Midway ISD Professional Development Back to School Summit in Waco, Texas.
- Nesmith, S., & Cooper, S.** (2011). *Math/science integration with Vernier technology.* Paper presented at Hillcrest Professional Development School in Waco, Texas.
- Nesmith, S.** (2011). *Motion, math, and videos – Investigating functions.* Paper presented at GEAR UP Math Initiative, Waco, Texas.
- Nesmith, S., & Purdum-Cassidy, B.** (2011). *Cultural Clashes.* Paper presented at Phi Delta Kappa International, Baylor chapter meeting, Waco, Texas.
- Nesmith, S.** (August, 2010). *Integrating literature within the CSCOPE Science curriculum.* Paper presented at Bell's Hill Professional Development School, Waco, Texas.
- Nesmith, S. & Cooper, S.** (February, 2010). *Using Vernier technology in the elementary classroom.* Paper presented at Baylor EC-6 preservice teacher professional development event.
- Nesmith, S.** (2008). *The perfect teacher.* Keynote address for Wayland Baptist University Kappa Delta Pi International Education Honor Society, Omega Upsilon Chapter Induction ceremony, Plainview, Texas.
- Nesmith, S.** (2007). *We knew you could!* Keynote address for Wayland Baptist University Torch and Mantle ceremony, Plainview, Texas.

- Nesmith, S. J. (1996). *Hands on learning*. Keynote address for Wayland Baptist University Classroom Teachers Association, Plainview, Texas.
- Nesmith, S. (1992). *Students with number sense*. Program speaker for Plainview Rotary Club, Plainview, Texas.

Other Scholarly Activities and Creative Products

- Cooper, S., & Nesmith, S. (2017). What is STEM and why does it matter for young children? In S. Cooper & S. Nesmith (Eds.), *Baylor Aviation Sciences Activity Booklet* (Foreword). Baylor University: Baylor University Institute for Air Science.
- Nesmith, S., & Cooper, S. (2011). What did you do this summer? Elementary math and science summer teacher academy. *The Baylor impact*, 5(1).
- Nesmith, S. J. (2003). *I CAN*. TAKS tutorial program, Plainview ISD.
- Nesmith, S. J. (1999 - 2003). *SOAR – TAAS/TAKS math and reading strategies*. Duncanville ISD and Frisco ISD.
- Lewis, B., & Nesmith, S. J. (1998). *Hand in hand – Helping students write now*. TAKS writing program, Plainview ISD and West Texas Elementary, Stinnett, Texas.
- Nesmith, S. (1996). *TOOTSIE*. Math problem solving strategy, Plainview ISD.

Teaching Activities

Undergraduate and Graduate Courses Taught

Baylor University (2009-Present)

TED 4307- Science in Elementary School; Science Seminars for Undergraduate Interns; EDC 5321 – Contemporary Design and Curriculum Implementation; EDC 5340 – Advanced Elementary Curriculum Development; EDC 5391 - Social Foundations of Education; EDC 5320 – Elementary Science and Social Studies; various graduate level science ed courses

Course Evaluation: Average course evaluation score of 5.83 on a 6-point Likert scale with 1 representing “strongly disagree” and 6 representing “strongly agree”

Wayland Baptist University (2003-2009)

Introduction to Teaching (undergraduate); Teaching Social Studies in the Elementary and Middle School (undergraduate); Teaching Mathematics in the Elementary and Middle School (undergraduate); Content Area Literacy in Elementary Education (undergraduate); Teaching Language Arts in the Elementary School (undergraduate); Mathematics for the Elementary School Teacher (undergraduate); Supervision of Elementary/Middle School/Secondary Student Teachers (undergraduate); Research Methods in Education (graduate); Multicultural Education (graduate); Classroom Management and Effective Teaching (graduate); Science in the Elementary School (graduate); Mathematics in the Elementary School (graduate); Internship (graduate)

Course Evaluation: Average course evaluation score of 1.12 on a 4 point Likert scale with 1 representing “totally agree” and 4 representing “totally disagree”

New Courses Developed

BAY-SIC (Baylor Social Innovation Collaborative) Healthy River, Healthy Community

Baylor University: graduate and undergraduate; lab science course option; museum studies option: 2017

Nesmith, S., Cooper, S., Walter, C., Mullins, M., Emerson, T., Matson, C., Martens, P., Daniel, J.

STEM for Early Grades

Baylor University: graduate; science and mathematics cognate option: 2017

Nesmith, S., & Cooper, S.

Science in Informal Environments

Baylor University: graduate; science cognate option: 2017

Research in Science Education

Baylor University: graduate; science cognate option: 2017

Advanced Elementary Curriculum Development

Baylor University: graduate: 2013

New Courses Developed for Professional Development

STEM Specialized Professional Development Schools: Bell’s Hill PDS and Mountainview PDS (Baylor University): 2016-2017, 2017-2018

STEM for Young Learners

Wetland Environmental Academy for P-12 Educators (Baylor University and John Bunker Sands Wetlands Center): 2012-2014

An On-Site Wetland Immersion Experience for P-12 Environmental Educators
Baylor Waco Partnership for Excellence in Science (Waco ISD and Baylor University): 2012 - 2013
J. H. Hines Elementary – A Science Specialty School
Elementary Math and Science Teacher Academy (Baylor University): 2010 - 2011
Integrating Earth Science Concepts with Measurement, for teachers grades 3-5

Online Courses Developed

Wayland Baptist University (2003 - 2009)

Multicultural Education (graduate); Research Methods in Education (graduate); Classroom Management and Effective Teaching (graduate)

Graduate Research Direction

Doctoral Degree Student Committees

Baylor University

Evan Ditmore. Committee Chair. Anticipated December 2018 graduate.

Ryann Shelton. Committee Member. Anticipated December 2018 graduate.

Amanda Gardner. Committee Member. Anticipated May 2018 graduate.

Toby Zhu. Committee Member. Anticipated May 2018 graduate.

Erin Dixon. *Ninth grade students' understanding of diffusion and osmosis after participation in direct or inquiry-based lessons: A mixed methods case study.* Committee Chair. August 2015 graduate.

Jason Trumble. *The impact of the internship experience on intern's perceptions of their preparedness to teach in a technology rich society: A mixed methods multiple case study.* Committee Chair. August 2015 graduate.

Brandi Ray. *More than tools: Can media literacy emerge from teacher development in technology?: A narrative study.* Committee Member. August 2015 graduate.

Amy Corp. *How African American children respond to culturally relevant stories in mathematics: An ethnographic case study.* Committee Member. August 2014 graduate.

Dittika Gupta. *Early elementary students' fractional understanding: Examination of cases from a multi-year longitudinal study.* Committee Member. August 2014 graduate.

Amanda Atkinson Walker. *Using graphic novels to improve literacy.* Committee Member. August 2013 graduate.

Anne Zandstra. *The impact of an informal science program on students' science knowledge and interest.* Committee Member. May 2012 graduate.

Honors and Awards

STEM Teacher Education Colloquium Invited Participant, October 2014

Quest for Quality Exemplary Faculty Practice Award Winner – CREATE (Center for Research, Evaluation and Advancement of Teacher Education), 2013-2014

New Horizons in STEM Education: College and Career Readiness Initiative Invited Participant, March 2014

Texas Examination of Educator Standards (TEXES) EC-6 Generalist Test Redesign Invited Committee Member, 2013

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

University Research Committee Grant Recipient, *Teacher Learning in the Context of a Wetlands Environmental Academy*, 2012

Texas Instruments T³ (Teachers Teaching with Technology) Grant Recipient, Regional Conference Co-Chair, 2012

Science Faculty Collaborative of the College and Career Readiness Initiative, Regional Workshop Presenter, 2012 - 2013

Nature of Science College and Career Readiness Standards Symposium Invited Participant, 2012

Scientific Applications of Mathematics College and Career Readiness Standards Symposium Invited Participant, 2011

College and Career Readiness Initiative: Supporting Success in College Science: CCRS and Scientific Applications of Mathematics Invited Participant, 2011

Biology College and Career Readiness Standards Symposium Invited Participant, 2010

Baylor University Teaching Development Grant Recipient, 2010

The College Readiness Initiative Faculty Collaborative Project; Mathematics Symposia Invited Participant, 2008

Oxford Round Table Invited Participant, *The Two Choices: Balancing Choices and Effects*, 2008

Mathematics TEKS Connection Conference Invited Participant, College Station, Texas, 2007

Phi Kappa Phi All Discipline Honor Society, Chapter 74, Texas Tech University, 2007

Kappa Delta Pi International Education Honor Society, Omega Upsilon Chapter, 2004

Wal Mart Teacher of the Year Award, 2002

Who's Who Among Students in American Universities and Colleges, Wayland Baptist University Graduate School, 2002

Excel Energy Classroom Connection Award, 1998 - 2003

Plainview Chamber of Commerce Classroom Grant Award, 1998 - 2000

Region 17 Elementary Teacher of the Year Award, 1998
Teacher of the Year, Highland Elementary School, 1997
Association of Texas Professional Educators Outstanding Leadership Award, 1996
Teacher of the Year, Ash Sixth Grade Learning Center, 1995
Superior Rating, Texas Professional Development and Appraisal System, 1991 - 2003

Service Activities

Baylor University Service

University Undergraduate Curriculum Committee Member, 2014 – present (Chair 2015-2016)
University Teaching Grant Committee Member, 2014 - present
School of Education Faculty Search Committee Chair (Assistant/Associate Librarian and Director of Learning Resources Center), 2017-2018
School of Education Staff Search Committee Chair (Learning Resources Center, Office Manager), 2017
School of Education Staff Search Committee (Web Programmer/Analyst), 2017
School of Education Staff Search Committee (Senior Academic Advisor), 2017
Invitation to Excellence Program (HHPR, Nursing, Social Work, Education), 2017 - 2018
Curriculum and Instruction Faculty Search Committee Chair (Associate/Full Professor of Science Education), 2015 - 2016
Educational Psychology Faculty Search Committee Member (Assistant Professor of Special Education), 2015 - 2016
Baylor University School of Education Professional Development Committee Member, 2014 - 2015
School of Education, Department of Curriculum and Instruction, Distinguished Scholars Day Organizing and Implementation Committee, 2014 - 2015
School of Education, Department of Curriculum and Instruction, Outstanding Dissertation Award Committee, 2014
Spring Premiere Participant, 2013
Invitation to Excellence Participant, 2013
Graduate Student Instructor Award (Social Sciences) Committee Member, 2013
Faculty Search Committee (Elementary Reading/Literacy), 2012 - 2013
Department of Curriculum and Instruction Graduate Program Review Committee, 2011 - 2013
Faculty Search Committee (Secondary Science Education), 2011
Committee Member/Committee Chair for Doctoral Student Committees, 2011 - present
STEM Collaboration/Science Education Advisory Council Co-Chair, 2009 - present
Phi Delta Kappa Professional Education Organization, Baylor Chapter Treasurer, 2010 - present
Baylor University sponsored TAIR Conference presenter, 2007, 2010, and 2011
Baylor University sponsored TABS Conference presenter, 2010, and 2012
School of Education, Professional Education Faculty member, 2009 - present
Curriculum & Instruction Graduate Faculty member, 2010 - present
Elementary EC-6 Program member, 2009 - present
Middle School Program member, 2010 - 2012
Texas Education Agency Science Education Monitoring Report Team Member, 2010
Texas Education Agency EC-6 Certification Application Team Member, 2009
Graduation Marshall, 2009 - present

International Service

American-Thai Foundation Board Member, 2013 – present

National Service

External Reviewer for University Tenure
Proposal Reviewer for Association of Science Teacher Educators National Conference
Reviewer for *Electronic Journal of Science Education*
Reviewer for *International Journal of Science Education*
Reviewer for *Journal of Science Education and Technology*
Reviewer for *Journal of Research in Childhood Education*
Reviewer for *School Science and Mathematics*
Reviewer for *Journal of Rural Social Sciences*
Reviewer for *Journal of Latinos and Education*
Reviewer for *Association of Science Teacher Educators Conference Proposals*, 2016
Reviewer for Louisiana Board of Regents' *Pilot Funding for New Research Program*, 2014
Praxis Teacher Licensure Exam (Praxis 5017 – Elementary Education: Curriculum, Instruction, and Assessment, Science Content and Pedagogy) Item Writer and Reviewer, 2013

National Council for Accreditation of Teacher Education – National Science Teachers Association Specialized Professional Association Report Reviewer, 2012
Pearson Education Middle Level Life Science Textbook Content Reviewer, 2012 - 2013
Board of Directors Member, School Science and Mathematics Association, 2011 - 2014
Membership Committee Chair, School Science and Mathematics Association, 2011 - 2014
Program Co-Chair, 112th Convention in San Antonio, TX; School Science and Mathematics Association, 2013
Policy Committee, School Science and Mathematics Association, 2008 – 2011
Science Education SIG, Association of Teacher Educators, 2010 - present
PDS Partners Expansion Committee, National Association of Professional Development Schools, 2010 - present

Regional and State Service

Praxis Elementary Education: Curriculum, Instruction, and Assessment (Science 5017) Item Writer, 2017
Texas Examination of Educator Standards (TEXES 114 Math-Science 4-8) Item Review Committee, 2014
Texas Examination of Educator Standards (TEXES 191 Generalist EC-6, Science Standards) Item Review Committee, 2014
Texas Examination of Educator Standards (TEXES 191 – Generalist EC-6, Science Standards) Item Writer and Reviewer, 2013
Science Faculty Collaborative of the College and Career Readiness Initiative, College/University Faculty Workshop Presenter, 2012 - 2013
College and Career Readiness Initiative Mathematics/Science Product Reviewer, 2013
Program Chair, Association of Mathematics Teacher Educators in Texas, 2009 - 2010, 2010 - 2011
Board Member, Association of Mathematics Teacher Educators in Texas, Member-at-Large, 2008 - 2011
South Plains Teacher Education Preparation Collaborative, 2008
Region 17 Education Service Center Mentor Teacher Trainer, 2000 - 2001
Texas Education Agency TAAS Item Analysis Team, 1998 - 2000
Region 17 Education Service Center Teacher Leadership Team, 1996 - 1999
Region 17 Education Service Center Math Curriculum Alignment Team, 1996 - 1997

Local Community Service

Little Lions Learning Center (St. Jerome's Pre-K and K School), Educator Specialist, 2015 - present
St. Paul's Episcopal Day School, Science Collaborator, 2012 - present
St. Jerome Catholic Church, member and volunteer, 2009 - present
St. Peter's Catholic Student Center, volunteer, 2012 - present
Association of Texas Professional Educators Member and Officer, 1991 - 2005
Plainview ISD PTA Life Member and Officer, 1989 - 2004

Wayland Baptist University Service (2003 - 2009)

Chemistry/Physical Science Degree Committee Member, Wayland Baptist University, 2008
Faculty Senate Executive Committee Member, Wayland Baptist University, 2007 - 2009
Committee on Committees Committee Member, Wayland Baptist University, 2007 - 2009
Faculty Senate Member, Wayland Baptist University, 2007 - 2009
Academic Council, Wayland Baptist University, 2005-2006, 2008 - 2009
Search Committee for Chemistry Professor, Wayland Baptist University, 2006
Faculty/Staff Professional Development Presenter, Wayland Baptist University, 2006
Scholarship/Financial Aid Committee, Wayland Baptist University, 2005 - 2007
Honors Council, Wayland Baptist University, 2003-2007 (Chair, 2005 - 2006)
Core Curriculum Committee, Wayland Baptist University, 2005 - 2006
Texas Education Agency EC-6 Certification Application Leader, Wayland Baptist University, 2009
Teacher Education Advisory Committee, Wayland Baptist University, 2003 - 2005; 2008 - 2009
BSIS Middle School Generalist Degree Creator and Administrator, Wayland Baptist University, 2007 - 2009
Creator and Administrator of Basic Skills Tutorial program, Wayland Baptist University, 2005 - 2009
Creator/Administrator of Katie Mansdoerfer Memorial Children's Library, Wayland Baptist University, 2005-2007

Professional and Academic Association Memberships

American Association for the Advancement of Science
National Science Teachers Association
Association for Science Teacher Education
Southwest Association for Science Teacher Education
Science Teachers Association of Texas
School Science and Mathematics Association

International Consortium for Research in Science and Mathematics Education
National Association for Professional Development Schools
Phi Delta Kappa, Baylor University Chapter
Association of Teacher Educators
Association of Teacher Educators - Texas
Kappa Delta Pi Honor Society