

Last updated July 2021

## **Jennifer Miller-Ray, Ph.D.**

### **Professional Preparation**

Sam Houston State University	Education Reading Specialist	2018-2020
University of North Texas	Cognitive Science & Learning Technologies	Ph.D. 2016
	UNT Innovative Research Award	2016
Tarleton State University	Education Leadership Principalship	2012
	Master of Science, Information Systems	2008
	Bachelor of Science and Student Teaching	2000

### **Peer Reviewed Publications and Peer Reviewed Presentations**

- Miller-Ray, J. (2021). Supporting Early Literacy and English Learners in Makerspace Programs. In T. Bastiaens (Ed.), *Proceedings of Innovate Learning Summit 2021* (pp. 294-301). Online, United States: Association for the Advancement of Computing in Education (AACE).
- Miller-Ray, J. (2021) Effective blogging to improve academic, communication, and reflective practices at 10<sup>th</sup> Annual Digital Education Summit; Online, United States: Sam Houston State University.
- Miller, J. & Tomas, T. (2021). Designing culturally responsive makerspace pop-up activities for middle school students at NSTA (National Science Teacher Association) Engage Conference.
- Miller, J. & Tomas, T. (2021). Designing culturally responsive makerspace pop-up activities for elementary students at (National Science Teacher Association) NSTA Engage Conference.
- Ray, B.J., Miller-Ray, J., and Peak, K. (2020). A Brave New World - The Science Behind Teaching Kinesiology Via On-line Format. 97th Annual TAHPERD Conference; Corpus Christi, Texas.
- Miller-Ray, J. (2020). Improving reading comprehension across disciplines through STREAM: a makerspace project-based literacy processes at the Texas Association for Literacy Education Conference.
- Miller-Ray, J. (2020). Building community presence, cognitive presence, and teaching presence in virtual learning spaces at the Learning Revolution online conference.
- Miller-Ray, J. (2019). Investigating the Impact of a Community Makers' Guild Training Program on Elementary and Middle School Educator Perceptions of STEM (Science, Technology, Engineering, and Mathematics). In Khine, M. & Areepattamannil (2019) *STEAM Education* (pp. 79-100). Springer.
- Miller, J. (2019) STEAM Approaches and Diverse Literacy Learners at the Texas Computer Education Conference.
- Miller, J. (2019). Incorporating the makerspace project-based learning process at the Innovative Learning Strategies Conference.
- Miller, J., Tomas, T., Maryboy, N., & Begay, D. (2018). A Rural Navajo Reservation Makerspace. *Dimensions*, (September/October), 50–52.

- Miller, J., Christensen, R., & Knezek, G. (2017). Effect of a Makerspace Training Series on Elementary and Middle School Educator Confidence Levels Toward Integrating Technology. In Society for Information Technology & Teacher Education International Conference (pp. 1015-1020). Association for the Advancement of Computing in Education (AACE).
- Miller, J., & Cline, T. (2017). Effect of Makerspace Professional Development Activities on Elementary and Middle School Educator Perceptions of Integrating Technologies with STEM. In Society for Information Technology & Teacher Education International Conference (pp. 103-111). Association for the Advancement of Computing in Education (AACE).
- Miller, J. (2016). Effect of Makerspace Professional Development Activities on Elementary and Middle School Educator Perceptions of Integrating Technologies with STEM (Science, Technology, Engineering, Mathematics), dissertation; Denton, Texas. (digital.library.unt.edu/ark:/67531/metadc955091/: accessed May 11, 2017), University of North Texas Libraries, Digital Library, digital.library.unt.edu.
- Miller, J (2014), STEM K12 Research Initiatives and Teacher Preparation Programs, University of North Texas College of Information 20c13 Research Exchange Conference. Retrieved from [http://ci.unt.edu/events/2014\\_04\\_07\\_REC](http://ci.unt.edu/events/2014_04_07_REC)
- Miller, J., & Cline, T. (2012) Exploring STEM through a NASA MMS TransMedia Book, International Society for Technology Education Poster conducted from San Diego, CA. Miller, J., & Phillips, A. (2014, March). Middle School STEAM Camp Perspectives and Attitudes Towards STEM. In Society for Information Technology & Teacher Education International Conference (Vol. 2014, No. 1, pp. 1940-1944).
- Phillips, A., & Miller, J. (2014, March). Career Interests of Students in a STEAM Camp. International Society for Information Technology & Teacher Education Conference (Vol. 2014, No. 1, pp. 2277-2282)
- Miller, J. & Phillips, A. (2014, June). Exploring a rural robotic after-school program's impact toward stem attitudes. International society of technology education, Atlanta. Retrieved from [https://www.isteconference.org/2014/program/search\\_all.php](https://www.isteconference.org/2014/program/search_all.php)
- Miller, J., & Knezek, G. (2013, March). STEAM for Student Engagement. In Society for Information Technology & Teacher Education International Conference (Vol. 2013, No. 1, pp. 3288-3298).
- Kilgore, W., Mangrum, L.B., & Miller, J. (2014). Using VoiceThread in ARCS Instructional Design Approaches. *Journal of Media Education* 5(1), 16-22.
- Miller, J. NASA Wavelength, (2012). Take the MMS Challenge. Retrieved from NASA Wavelength website: <http://nasawavelength.org/resource/nw-000-000-003-949> .
- Miller, J. & Kilgore, W. (2014). STEM Professional Development MOOC Environments, University of North Texas College of Information 2013 Research Exchange Conference. Retrieved from [http://ci.unt.edu/events/2014\\_04\\_07\\_REC](http://ci.unt.edu/events/2014_04_07_REC) .
- Miller, J (2014), STEM K12 Research Initiatives and Teacher Preparation Programs, University of North Texas College of Information 20c13 Research Exchange Conference. Retrieved from [http://ci.unt.edu/events/2014\\_04\\_07\\_REC](http://ci.unt.edu/events/2014_04_07_REC) .
- Miller, J.& Wozniak, S. & Cline, T. (2013) STEAM After School Programs: Thinking with Hands- On Experiences for 6-8 Grade Students, International Society for Technology Education Poster conducted from, San Antonio, TX.

**Peer Reviewer**

Miller, J. (2019), Society of Information Technology and Teacher Education 31<sup>st</sup> Annual Conference, New Orleans 2020.

Elayary, A. (2020) The Impact of Designing Transdisciplinary STEAM Curriculum Using Authentic Assessment on Transforming Students Learning, International Journal of STEM Education.

### **Non-Peer Reviewed Publications**

Miller, J. (2021). Community makerspace programs: enhancing creativity, innovation and STEM literacies to improve STEM self-efficacy of Hispanic and Indigenous communities. In HSI STEM Hub March 2021 Newsletter, <https://hsistemhub.org/portfolio-item/march-2021-newsletter> .

Miller, J. (2020). Master of educational instructional technology online program handbook, Alpine, TX: Sul Ross State University.

Miller, J. (2020). Master of education reading specialist online program handbook, Alpine, TX: Sul Ross State University.

Miller, J. (2019). Master of education reading specialist online program handbook, Alpine, TX: Sul Ross State University.

### **Current Grant Research Projects**

Noyce Scholars en la Frontera (Noyce Scholars on the Border) for NSF Robert Noyce Scholarship Pgm, (2021), \$1,333,429.00,

[https://www.nsf.gov/awardsearch/showAward?AWD\\_ID=2050173&HistoricalAwards=false&fbclid=IwAR3WJjdaGTb4\\_GmW61fpVAn8In0zk1cwgLkcBl3gWyNbkUQ9GY3iTKb94x8](https://www.nsf.gov/awardsearch/showAward?AWD_ID=2050173&HistoricalAwards=false&fbclid=IwAR3WJjdaGTb4_GmW61fpVAn8In0zk1cwgLkcBl3gWyNbkUQ9GY3iTKb94x8).

### **Completed Grant Research Projects**

NASA's Student And Teacher Computational Thinking Resources For NASA Multiscale Magnetosphere Mission - \$25,000

NASA MMS Makerspace Outreach and Training Program, \$25,000

NASA Multiscale Magnetosphere STEAM Student Launch Party and Art Car Program-\$16,000 NASA Mobile Makerspace Grant Birdville ISD-\$20,000

Raise Your Hand Texas Blended Learning Grant Contributor \$500,000

STEAM Camp and Robotics Texas Education Agency Connections Grant Summer 2012-90,000 NASA

MMS Fabrication Middle School STEM Camp Grant 2013-10,000

TEA Connection Dublin Grant Coordinator 2010-2013 -600,000

NSF ITEST Middle Schoolers Save The World Graduate Research Assistant

### **Additional Grant Projects (Non-Research)**

HSI STEM Hub Mini-Grant Semillas Grantmanship for NSF HSI Proposal, (2020), \$12,500

Miller, J., Stocks, G. (2019), Innovation Grant for Reading Specialists, \$1,000.

STEAM Launch Party Grant via Carroll ISD and EIS PTO -4,500

### **University Teaching**

Graduate Courses:

Reading Specialist Program:

ED 6318

Literacy Through Literature

ED 6313	Teaching Reading in Content Area
ED 7312	Practicum in Reading
ED 6317	Organization and Supervision of Reading Programs
ED 5308	Foundations of Literacy
ED 6311	Emergent Literacy and Language Development
ED 6314	Diagnosis and Correction of Reading Disabilities

#### Leadership Program

ED 7304	Ed Leadership Principalship
ED 6315	Design & Implementation of Instructional; Programs
ED 5332	Educational Research

#### General Education Master Program

ED 5316	Diversity in Public Education
ED 5312	Advanced Survey of Exceptional Children
ED 5321	Foundations of Special Education Law
ED 5320	Advanced Methodology for Exceptional Students

#### Educational Instructional Technology

ED 6376	Inquiry Based Research Methods
ED 6377	Instructional Design
ED 6381	Critical Issues in Education Technology
ED 6375	Foundations of Educational Technology
ED 6378	Integration of Technology into Curriculum
ED 6379	Implementation of EdTech in Education
ED 6383	Educational Technology Capstone & Portfolio Development
ED 7300	Advanced Media Applications

#### Undergraduate Courses

ED 3314	Language Arts & Social Studies Methodologies
ED 3308	Language Acquisition and Emergent Literacy
ED 4315	Reading Diagnosis & Remediation
ED 4308	Foundations of Reading
ED 4313	Reading Comprehension and Enrichment

#### **Educator Certifications**

- Legacy Master Teacher Life
- Principal
- Reading Specialist
- Technology Applications K-12

#### **University Committees and Service**

Curriculum Council, Chair  
 Online Distance Education Committee, Chair

2018-Fall 2021  
 2018-present

Online Learning Strategic Plan, Chair	2020-2021
Instructional Technology Committee	2021-present
Marketable Skills Committee	2019-present
Quality Enhancement Plan Guide and Navigator	2019-present
Research Symposium	2019-present
Academic Assessment Committee	2018-present
Principal Texas Examination Materials Review	2019
Science of Teaching Reading Texas Examination Review	2020-Present
Equity Assurance Panel Texas Education Agency	2019
Summer STEM Library Program and Presidio Library	2019
Texas State Teacher Education Aspiring Educators Advisor	2018-present
Science of Literacy and Learning Conference Chair	2018-present
Baptist Student Ministry Faculty Advisor	2019-present
Academic Survey Committee	2020-Present
QEP Faculty Guide	2019-Present
Facilitated Effective Online Teaching SRSU Book Study	2020
Science of Teaching Reading Texas Examination Materials Review	Oct. 2020
Instructional Technology Team	2020-Present
University Survey Committee	2020-Present
Academic and Administrative Advisory Committee	2020-Present
La Vida Community Program with Alpine Public Library	2020-Present
Presidio Library STEM Makerspace Summer Reading Program	Summer 2021
Online Learning Strategic Planning Subcommittee Chair	2020-2021
Science of Teaching Reading Texas Examination Materials Review	Summer 2021

### **Professional Memberships and Community Service**

Frontier CASA, Board of Directors  
 Texas Association for Literacy Education  
 Texas Computer Education Association  
 International Society for Technology in Education  
 Association for Supervision and Curriculum Development  
 Society for Information Technology Education  
 Association for Advancement of Computer in Education  
 Delta Kappa Gama Beta Iowa Chapter  
 American Legion Auxiliary Post 79, Chaplain  
 National Science Teacher Association  
 NSF HSI STEM Hub Member  
 American Education Research Association

### **Awards**

Robert Elliott Memorial Award for Outstanding Practicum 2000  
 Texas Governor's STEM Coalition STEM Leadership Award for STEAM Camp Curriculum 2014  
 University of North Texas Innovative Research Project Award, 2016  
 Academic Program Director Award, 2020

M.Ed. Reading Program Model SACSCOC Report, 2021

M.Ed. Educational Instructional Technology, SACSCOC Report, 2021

LaVida Lobo Award Recipient, 2021