

CURRICULUM VITAE

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EDUCATION

| | | |
|-------|--|---------------------------|
| Ed.D. | Boise State University Major: Educational Technology (14 hours – complete) | Currently Enrolled |
| Ed.S. | Arkansas State University Major: Ed. Leadership, District Level (21 hours – complete; no degree) | 2020 |
| MSE | Arkansas State University Major: Educational Leadership | 2016 |
| BA | University of Mississippi Major: Classics Minor: Psychology | 2009 |

Areas of License:

- Building Level Admin. P-12—Arkansas
- Life/Earth Science 7-12—Arkansas

PROFESSIONAL WORK EXPERIENCE

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|--------------|---|
| 2017-Present | Arkansas State University Director: Delta STEM Education Center Instructor: Teacher Education |
| 2022-2023 | Arkansas STEM Coalition <ul style="list-style-type: none">• After School Program Site Director, Site Coordinator,• Summer Camp Program Site Director, Site Coordinator |
| 2021-2022 | Arkansas STEM Coalition <ul style="list-style-type: none">• After School Program Site Director, Site Coordinator,• Summer Camp Program Site Director, Site Coordinator |
| 2011-2017 | Marion School District Teacher, Curriculum Leadership Team, Personnel Policies Committee |

PROFESSIONAL RESPONSIBILITIES

Undergraduate Courses Taught (2017-Present)

- Introduction to Secondary Education

- Methods of STEM Mathematics K-6
- Methods of STEM Mathematics 4-8
- Methods of STEM Science K-6
- Methods of STEM Science 4-8
- Elementary Ed. Intern Supervisor
- Mid-level Ed. Intern Supervisor
- Masters in Art of Teaching Intern Supervisor Elementary-Level
- Masters in Art of Teaching Intern Supervisor Mid-Level
- Masters in Art of Teaching Intern Supervisor Secondary-Level
- Special Topics: Exploring STEM in Elementary Schools
- Special Topics: Exploring STEM in Mid-Level Schools
- STEM Science for Teachers Mid-Level

STEM Center Responsibilities (2017-Present)

- Grant Writing
- Program Budgeting
- Curriculum Development
- Design Professional Development
- STEM Equipment Training
- Maintain Teacher Access Center
- School and Community Outreach
- Educational Consulting
- Collaborated with the Department of Elementary and Secondary Education in developing grade 4-8 Science Competencies.
- Collaboration with Local Businesses
- Research
- Lesson Plan Development
- STEM Activity Development

Contracted Projects

- Created a complete curriculum, planned, coordinated, and implemented an after-school program for the Arkansas STEM Coalition.
- Created online educational technology courses for Arkansas State University College of Educational Leadership and Special Education's Instruction Technology Specialists program.
 - ELTI 6013 Introduction to Digital Media and Design
 - ELTI 6023 Principles of Distance Learning
- Collaborated with ETS Praxis Multistate Standard Setting for the General Science Praxis test.
- Participated in the Arkansas Middle School Science Competencies Panel for creating new state teaching competencies.

PUBLICATIONS

- **Proceedings**

Shaw, A., Hux, A., Williams, R., McBride, J., Davis, K. & Hays, A. (2022). You want me to do what, by when? The positive and negative aspects of designing, building, and implementing a new online degree program. In E. Langran (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 667-670). San Diego, CA, United States: Association for the Advancement of Computing in Education (AACE). Retrieved July 14, 2023 from <https://www.learntechlib.org/primary/p/220796/>

Gilbert, B., Stubblefield, J., Qualls, J., Huang, X., Pait, A., Yanowitz, K., Hays, A., Richmond, E., Parker, L. & Washington, T. (2023). Dyslexia and AI: The Use of Artificial Intelligence to Identify and Create Font to Improve Reading Ability of Individuals With Dyslexia. In E. Langran, P. Christensen & J. Sanson (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 856-865). New Orleans, LA, United States: Association for the Advancement of Computing in Education (AACE). Retrieved July 14, 2023 from <https://www.learntechlib.org/primary/p/221937/>

- **Book Chapter**

Johnson-Leslie, N. A., Hays, A., & Marsh, R. S. (2023). Science Instruction for Students Identified as Gifted and Talented: The Efficacy of Makerspace in This Digital Age. In J. Trumble, S. Asim, J. Ellis, & D. Slykhuus (Eds.), *Theoretical and Practical Teaching Strategies for K-12 Science Education in the Digital Age* (pp. 19-48). IGI Global. <https://doi.org/10.4018/978-1-6684-5585-2.ch002>

FUNDED GRANTS

- AState Arkansas Biosciences Institute (ABI) Research Grant; \$75,000. 2021.
- AR STEM Coalition. Commitment to Excellence in STEM; \$6000. 2021
- AR STEM Coalition. Commitment to Excellence in STEM; \$6000. 2020
- AR STEM Coalition. Commitment to Excellence in STEM; \$6000. 2019
- AR STEM Coalition. Commitment to Excellence in STEM; \$3000. 2018
- Arkansas Department of Education STEM Specialist Grant; 2018. \$186,000
- AR STEM Coalition. State-Level STEM Girls Leadership Conference, Grant; 2018. \$4750
- AR STEM Coalition. Targeted STEM Girls Leadership Conference, Grant; 2018. \$4750
- AR STEM Coalition. State Health Sciences Leadership Career Tech Day; 2018. \$6000
- AR STEM Coalition. State-Level STEM Girls Leadership Conference, Grant; 2017. \$4750

RESEARCH

- Using artificial intelligence as an intervention for dyslexia.
 - My original idea that started this project was to manipulate font size, color, and spacing and measure possible changes in how a dyslexic person reads. This idea led to the first step in the project where we developed a DIBELs based website for testing fonts. Participants are K-6 students that are in reading intervention classes. Once our sample size is large enough, we will use machine learning systems to find trends in the data to guide our next step in the process.
- Using artificial intelligence to diagnose dysgraphia.

- We are looking at how artificial intelligence can be used to diagnose dysgraphia through handwriting analysis. We have found that there is a high probability that AI can create heat maps to recognize dysgraphia. The issue is that most of the sample pools we have found are generated by AI. We want to create a data base created by participants and use that database as a way to test for dysgraphia.

PRESENTATIONS AT LEARNED FORUMS

National Presentations

- NAGC (National Assoc. for Gifted Children) 2023:
 - Makers on the Move
- SITE Conference 2023:
 - Dyslexia and AI :The Use of Artificial Intelligence to Identify and Create Fonts to Improve Reading Ability of Individuals with Dyslexia
- SITE Conference 2022:
 - You want me to do what, by when? The positive and negative aspects of designing, building, and implementing a new online degree program

State Presentations

- AGATE 2024
 - Makerspace Marvels
 - 6-hour preconference workshop: How to use makerspace and PBL in their classrooms
 - AGATE Beyond the Classroom: Amazing Mazes
 - 6-hour student workshop: Creating mazes and coding Spheros to traverse mazes
 - Hands-On Creativity: Using task cards to create in a makerspace. (2 sessions)
- AGATE 2023
 - Strawbees an Introduction
- AGATE 2022
 - Makers on the Move: How to create and implement mobile makerspaces in the classroom.
 - Coding with Strawbees
 - Micro:Bits and Chibi Chips Oh My!
 - Print Making 101
- AGATE 2021
 - Fun with Greenscreens: Creating Greenscreen media with DoInk.
- AGATE 2020
 - Micro:Bits and Chibi Chips Oh My!
 - Fun with Greenscreens
- AAE 2020
 - Makerspace Expo area

PROFESSIONAL AWARDS

Awards

- 2023 – Educators Recognition Award, AGATE (Arkansas Gifted and Talented Educators)
- 2014 – Teacher of the Year, Marion High School; Marion AR

CONTRACTED WORKS

2023

- Great Rivers Educational Cooperative
 - Performed science tutoring for teachers preparing for their PRAXIS
- Arkansas STEM Coalition After School (20 sessions)/Summer Camp (5 day) program
 - Recruited school partners
 - After School Program Site Director, Site Coordinator
 - Summer Camp Program Site Director, Site Coordinator
 - Performed hiring and training of all teachers and assistants for summer camp and after-school
 - Developed curriculum, lessons, inquiries, assessments, and any forms required for the program
 - Assisted in student recruitment

2022

- Great Rivers Educational Cooperative
 - Professional Development: Makerspace and Project Based Learning (6 hour)
- ETS: PRAXIS General Science Standards Setting
- Arkansas STEM Coalition After School (20 sessions)/Summer Camp (5 day) program
 - Recruited school partners
 - After School Program Site Director, Site Coordinator
 - Summer Camp Program Site Director, Site Coordinator
 - Performed hiring and training of all teachers and assistants for summer camp and after-school
 - Developed curriculum, lessons, inquiries, assessments, and any forms required for the program
 - Assisted in student recruitment
 - Instructed and facilitated after-school and summer camp sessions
- Wilbur-Mills Educational Cooperative
 - Planned and performed professional development: How to create and utilize makerspace in your classroom

2021

- KIPP Camp (5-day overnight camp for grades 9-12)
 - Developed lessons/curriculum, facilitated and instructed STEM activities
- Digikidz Camp 2 (5-day camp grades 6-8)
 - Developed lessons/curriculum, facilitated, and instructed STEM activities (built on activities from the first camp)
- Digikidz Camp (5-day camp for grades 6-8)
 - Developed lessons/curriculum, facilitated, and instructed STEM activities
- Nasa Camp (5 day camp grades 3-6)
 - Instructed STEM activities
- Great Rivers Educational Cooperative

- Planned and performed professional development: How to create STEM lessons (6 hour)
- Bethel African Church After School
 - Created a makerspace
 - Performed professional development
 - PBL and Makerspace Curriculum/Lesson Development
 - Coding
 - 3d Design and Printing
 - Circuitry and Robotics
 - Performed student outreach

COMMUNITY AND SCHOOL OUTREACH

- 2024
 - Nettleton Jr. High LEADs Academy Outreach
 - Planned and Created a Makerspace
 - Program Coordinator
 - Arkansas Gifted and Talented Education
 - Hosted a makerspace
 - Six-hour workshop on Makerspace, PBL, and STEAM
 - Two on hour sessions on using task card and makerspace.
- 2023
 - Art Educators Conference
 - 3-day Makerspace activity hosted in the expo area of the conference.
 - STEM Think Tank
 - Member of a regional discussion panel that discussed and answered topics about today's education and STEM focus in K-12 schools within the Eastern Arkansas Region.
 - Tinkerfest: AState Museum STEM Day
 - Hosted green screen activities
 - STEM Day: Forrest City Junior High (Forrest City School District)
 - Hosted drone, robotics, and 3d pen activities
 - Arkansas Gifted and Talented Educators Camp Ignite:
 - Facilitated makerspace activities
 - STEM Day: Faulk Elementary (West Memphis School District)
 - Designed, facilitated, and instructed an inquiry-based STEM lesson for the entire 6th grade utilizing makerspace
 - Great Rivers Educational Cooperative Beyond the Classroom (4th grade)
 - Facilitated Sphero Mini Golf activity
 - Great Rivers Educational Cooperative Beyond the Classroom (5th grade)
 - Designed and facilitated Sphero Maze Activity
 - Great Rivers Educational Cooperative Beyond the Classroom (6th grade)
 - Designed and facilitated Sphero Maze Activity
 - School of Math, Science, and Technology Magnet (Marion School District)
 - Provided training for the implementation of STEM in the classroom.
 - Arkansas Gifted and Talented Educators
 - Facilitated a 2-day Makerspace activity hosted in the expo area of the conference
- 2022
 - Tinkerfest: AState Museum STEM Day

- Designed and facilitated green screen activities
 - Designed and facilitated Sphero robotics activity
 - Herbert Carter Global Community Magnet (Marion School District)
 - Performed training in operation and lesson development of Spheros
 - Weaver Elementary (West Memphis School District)
 - Planned and performed professional development: creating and implementing makerspace into the classroom
 - Arkansas Gifted and Talented Educators
 - Facilitated a 2-day Makerspace activity hosted in the expo area of the conference
 - Arkansas Gifted and Talented Educators' Family Day
 - Developed and facilitated screen printing activity
 - Wilbur-Mills Educational Cooperative Maker Day (grades 5-6)
 - Designed and Facilitated multiple activities
- 2021
 - G/T Outreach: Blytheville Elementary (Blytheville School District)
 - Designed, instructed, and facilitated classes for Blytheville G/T
 - Classes were one day a week for two hours (from September to December)
 - Student Activity 7th-8th grade: Paragould Junior High (Paragould School District)
 - Developed and facilitated student activity using Spheros
 - Arkansas Art Educators Conference
 - Facilitated a 3-day Makerspace activity hosted in the expo area of the conference
 - Wilbur-Mills Educational Cooperative Maker Day (grades 5-6)
 - Designed and Facilitated multiple activities
 - Faulk Elementary/Jackson-Wonder Elementary (West Memphis School District)
 - Designed and facilitated professional development: STEM and inquiry-based learning
 - Student outreach Gifted and Talented 6th grade (West Memphis School District)
 - Planned and facilitated Sphero Maze activity with G/T students from six elementary schools
 - Palestine Wheatley Elementary (Palestine Wheatley Elementary)
 - Designed and facilitated professional development: STEM and inquiry-based learning (3 hours)
 - Blytheville Elementary (Blytheville School District)
 - Designed and facilitated professional development: STEM, inquiry-based learning, and makerspace (6 hours)
 - Student outreach Gifted and Talented 6th grade (West Memphis School District)
 - Facilitated tin man activity for 5th grade
- 2020
 - Tyronza Elementary (East Poinsett County School District)
 - Designed and facilitated professional development: STEM and inquiry-based learning (3 hours)
 - Great Rivers Educational Cooperative Beyond the Classroom (5th grade)
 - Designed and facilitated Sphero Maze Activity
 - Great Rivers Educational Cooperative Beyond the Classroom (6th grade)
 - Designed and facilitated Sphero Maze Activity
 - STEM night Stuart Elementary (Forrest City School District)
 - Planned and facilitated multiple activities

