

# Nathan A. Hawk, Ph.D. | Clinical Assistant Professor

Texas A&M University, *Department of Teaching, Learning and Culture*

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**P:** (979) 845-8384 (TLAC Office) **E:** [nathanahawk@tamu.edu](mailto:nathanahawk@tamu.edu) **W:** [www.nathanahawk.com](http://www.nathanahawk.com)

**A:** 352 Harrington Office Tower • 4232 TAMU • College Station, TX 77843-4232

## Education and Credentials

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### Doctor of Philosophy in Educational Studies

August 2021

Specialization in Educational Technology  
The Ohio State University, Columbus, OH

**Dissertation title:** The Impact of Student Self-beliefs and Learning Behaviors on Mathematics Achievement for Nontraditional Students in an Online Charter High School

**Advisor:** Kui Xie

### Master of Arts in Education and Human Development

May 2013

Concentration in Educational Technology Leadership  
The George Washington University, Washington D.C

### Bachelor of Arts in Mathematics

May 2005

Minors: Secondary Education and Spanish  
Carthage College, Kenosha, WI

### Ohio Professional Teacher License (5 year)

July 2022-June 2027

7th-12th grade Integrated Mathematics

### Association of College and University Educators

May 2022

Microcredential in Inclusive Teaching for Equitable Learning

### Association of College and University Educators

May 2023

Microcredential in Designing Learner-Centered and Equitable Courses

### International Society for Technology in Education

May 2024-May 2027

ISTE Certified Educator

## Professional Highlights

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- o Interest in both teaching and researching diverse groups of young learners such as nontraditional online learners
- o Experience in both K-12 and college teaching
- o High-quality school-based research and connections with community and school partnerships

## Research and Teaching Interests

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- **Teacher Education:** as a former student in a teacher education program as well as conducting research on preservice teachers, I am interested in exploring pre-service teachers' technology usage and technology beliefs about technology in education as a current faculty member for pre-service and in-service teachers
- **Design-based research:** interest in the use of design-based research methodologies to examine an iterative approach to course design, reflection, and development of new innovative ways to conduct courses at the postsecondary level
- **Online and Traditional Charter School Contexts:** former K-12 teacher, both in online and analogue/traditional teaching modes. Current research interests focus on the impact of prior academic and family history on mathematics achievement, noting the impact of student self-efficacy; my focus is on at-risk and nontraditional learners

## Awards and Nominations

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- 2023-2024: SEHD Student Impact Grant
- 2022-2023: IDEATE Faculty Fellow (Center of Teaching Excellence at Texas A&M University)
- 2021: AERA Division C Graduate Student Seminar: Mentee (Mentor: Stephen Aguillar)
- 2020: AERA Division C Graduate Student Seminar: Mentee (Conference and Seminar Canceled)
- 2020: Recipient of the College of Education and Human Ecology: James J. Buffer Award
- 2020: Recipient of the College of Education and Human Ecology: Rogers Scholarship Fund
- 2019 AERA Best Paper Award Winner and Nominee in SIG-Technology as an Agent of Change in Teaching and Learning

Nelson, M.J., & **Hawk, N.A.** (2019, April). *The Impact of Field Experiences on Prospective Preservice Teachers' Technology Integration Beliefs and Intentions*. Paper presented at the meeting of the American Educational Research Association, Toronto, CA.

- 2018 National Consortium for Instruction and Cognition: Richard C. Anderson Graduate Student Research Award: finalist

**Hawk, N.A.**, Vongkulluksn, V.W., & Xie, K. (2018, April). *Value Beliefs Profiles and Teachers' Technology Integration Practices*. Paper presented at the meeting of the National Consortium of Instruction and Cognition, New York, NY.

- 2019: Recipient of the College of Education and Human Ecology: Ramseyer Memorial Fund
- 2018: Recipient of the College of Education and Human Ecology: Birchfield Scholarship
- 2017 AERA SIG Design and Technology Early Career Mentoring Program: Mentee (Mentor: Xun Ge)
- 2017: Recipient of the College of Education and Human Ecology: Donald Lux Scholarship
- 2016: Recipient of the College of Education and Human Ecology: Birchfield Scholarship
- 2015: Recipient of the College of Education and Human Ecology: Donald Lux Scholarship
- 2013 Jere Trout Memorial Award for Excellence in Educational Technology Leadership

## Research

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### Research Experience

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- **IDEATE** (Center of Teaching Excellence at Texas A&M University): researcher and member of the IDEATE Community within the Center for Teaching Excellence at Texas A&M University. IDEATE is

an interdisciplinary community of faculty, postdoctoral researchers, and graduate students with interest in design-based research for refining teaching practices at the postsecondary level.

- o **The Research Laboratory for Digital Learning** (College of Education and Human Ecology at The Ohio State University): Graduate Research Affiliate Member and past member
- o **College Ready Ohio (CRO)**: Member of Research and Evaluation Team: CRO was a long-term technology teacher professional development program, funded by the Ohio Department of Education as a grant totaling 13.5 million dollars. The focus of the program was to emphasize students' achievement, increase technology resources, help with technology spending reductions, increase classroom resources and share services between university and K-12 schools to build technology leaders. The research and evaluation team was responsible for conducting and disseminating original research through collection of multiple data sources.
- o **Evaluating Digital Content for Instructional and Teaching Excellence (EDCITE)**: Member of Research and Evaluation Team. EDCITE was a long-term professional development experience for K-12 teachers that focused on aligning and curating digital content in specific content areas to Ohio's Learner Standards. Member, Research and Evaluation Team. EDCITE was funded by the Ohio Department of Education for 8.4 million dollars. The research and evaluation team was responsible for conducting and disseminating original research through collection of multiple data sources.

## Scholarly Works (\*denotes work with student)

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### Publications

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Kipp, A, **Hawk, N.A.**, Perez, G. (2024). Generating opportunities: Strategies to elevate science and engineering practices using ChatGPT. *The Science Teacher*.

**Hawk, N.A.**, & Nelson, M.J (2024). Field observations' impact on preservice teachers' perceptions of effective teaching with technology: A person-centered investigation, *Technology, Pedagogy and Education*.

Index: Social Science Citation Index                      Impact Factor: 4.8  
Ranking: 27/269

\*Ali, S. & **Hawk, N.A.** (2023). Examining cultural background as context and in-service teachers' perception of TPACK: A mixed-method study. *Education and Information Technologies*.

Index: Social Science Citation Index                      Impact Factor: 4.800  
Ranking: 19/269

Bowman, M.A., Xie, K, & **Hawk, N.A.** (2023). The motivational features of digital math curricula: A framework for supporting pre-service teachers. In A. Zimmerman (Ed). *Handbook of Research on Advancing Teaching and Teacher Education in the Context of a Virtual Age*. IGI Global.

**Hawk, N.A.**, He, J, & Xie, K. (2023). Communities of support: Development of a comprehensive framework of student engagement in K-12 virtual learning. In A. Zimmerman (Ed). *Research, Practice, and Innovations in Teacher Education During a Virtual Age*. IGI Global.

**Hawk, N.A.**, Bowman, M.A., Xie, K. (2021). Theory-based intervention framework to improve mathematics teachers' motivation to engage in online professional development. In K. Hollebrands, R. Anderson & K. Oliver (Eds), *Online learning in mathematics teacher education*. Springer. [https://doi.org/10.1007/978-3-030-80230-1\\_11](https://doi.org/10.1007/978-3-030-80230-1_11)

**Hawk, N.A.**, Vongkulluksn, V.W., Xie, K., & Bowman, M.A. (2021). Cognitive tasks in the core content areas: Factors that influence students' technology use in high-school classrooms. *Journal of Computer Assisted Learning*, 37(4).

Index: Social Science Citation Index                      Impact Factor: 2.126  
Ranking: 79/263

Vongkulluksn, V.W., Xie, K., & **Hawk, N.A.** (2020). Investing time in technology: Teachers' value beliefs and time cost profiles for classroom technology integration. *Teachers College Record*, 122(12).

Index: Social Science Citation Index                      Impact Factor: 0.97  
Ranking: 205/263                                              Acceptance Rate: 8%

Nelson, M. J., & **Hawk, N. A.** (2020). The impact of field experiences on prospective preservice teachers' technology integration beliefs and intentions. *Teaching and Teacher Education*, 89, 103006.

Index: Social Science Citation Index                      Impact Factor: 2.69  
Ranking: 38/263                                              Acceptance Rate: 15%

Duan, J., Xie, K., **Hawk, N. A.**, Yu, S., & Wang, M. (2019). Exploring a Personal Social Knowledge Network (PSKN) to aid the observation of connectivist interaction for high- and low-performing learners in connectivist massive open online courses: Aid the observation of connectivist interaction in cMOOCs. *British Journal of Educational Technology*, 50(1), 199–217.

Index: Social Science Citation Index                      Impact Factor: 2.95  
Ranking: 31/263                                              Acceptance Rate: 20%

Xie, K., & **Hawk, N.A.** (2017). Technology's role and place in student learning: What we have learned from research and theories. In J.G., Cibulka, & B.S. Cooper (Eds.), *Technology in school classrooms: How it can transform teaching and student learning today* (pp 1-17). Lanham, MD, USA: Rowman & Littlefield.

Dueker, S., **Hawk, N.A.**, Nelson, J. L., Nelson, M. J., Walterbusch, T., & Wargelin, L. A. (Eds.). Aras, A., Ayoub, S. S., Bhaktha, N., Brady, A. C., Bussell, K., Dueker, S., Hall, S., Ham, M., **Hawk, N.**, Jenkins, B. R., Kearney, R. C., Kim, Y., Kulesza, A. E., Kuznetcova, I., Lo, M., Mayo, J. W., Mulyadin, T., Nelson, J. L., Nelson, M. J., Paulson, J. L., Rivera, M. D., Robinson, S., Shi, Y., Tiba, E., Tornwall, J., Van Jura, M. J., Walterbusch, T., Wargelin, L. A., & Zhao, K. (2017). *Educational inequality in Ohio, 2016-17* (Research Methodology Center White Paper No. 1). Retrieved from [https://rmc.ehe.osu.edu/files/2015/10/EHE-RMC-White-Paper-001\\_Educational-inequality-in-Ohio\\_March17.pdf](https://rmc.ehe.osu.edu/files/2015/10/EHE-RMC-White-Paper-001_Educational-inequality-in-Ohio_March17.pdf)

**Hawk, N.A.**, Bartle, G., & Romine, M. (2012). The living labs: Innovation in real life settings. *Quarterly Review of Distance Education*, 13(4), 225-231.

### **Manuscripts in Review**

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**Hawk, N.A.**, Xie, K., & Manouchehri, A. At-Risk Student Self-Beliefs, Learning Behaviors and Mathematics Achievement in an Online Charter High School. *Journal of Urban Mathematics Education*.

### **Presentations at State, National and International Conferences**

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- Kipp, A., **Hawk, N.A.**, & Perez, G. (2024, March). Algorithm alleys: Strategies to elevate Science and Engineering Practices using ChatGPT. Presentation presented at the National Conference of the National Science Teaching Association. Denver, CO.
- \*Ali, S., & **Hawk, N.A.**. (2023, March). Examining In-service Teachers' Perception of TPACK in Culturally Diverse Classrooms: A Mixed-Method Study Introduction. Presentation presented at the annual conference of the Society for Information Technology & Teacher Education. New Orleans, LA.
- Hawk, N.A.**, & Shaffner, S. (2023, February). Digital curation: Creating collaboration and classroom community with Wakelet. Presentation presented at the annual convention of the Texas Computer Education Association. San Antonio, TX
- Hawk, N.A.**, He, J., Xie, K. (2022, October). *Communities of Support: Development of a Comprehensive Framework of Student Engagement in K-12 Virtual Learning*. Paper presented at the convention of the Association for Educational Communications and Technology, Las Vegas, NV.
- Bowman, M.A., Xie, K., **Hawk, N.A.** (2022, October). *Digital Curriculum in the Mathematics Classroom: A Framework for Supporting Pre-Service Teachers*. Paper presented at the convention of the Association for Educational Communications and Technology, Las Vegas, NV.
- Hawk, N.A.**, & Xie, K. (2022, April). *At-Risk Student Self-Beliefs, Learning Behaviors and Mathematics Achievement in an Online Charter High School*. Paper presented at the meeting of the American Educational Research Association, San Diego, CA.
- Hawk, N.A.**, Bowman, M.A., & Xie, K. (2021, November). *Theory-based intervention framework to improve mathematics teachers' motivation to engage in online professional development*. Paper presented at the convention of the Association for Educational Communications and Technology, Chicago, IL.
- Xie, K., Cheng, S., Bowman, M., Vongkulluksn, V., Nelson, M.J., Jiang, Z., Lu, L., & **Hawk, N.A.** (2021, November). *Teacher value beliefs in technology integration: What do we learn from research and where do we go from here?* Panel session presented at the convention of the Association for Educational Communications and Technology, Chicago, IL.
- Hawk, N.A.**, & Nelson, M.J. (2021, April). *Field Observations' Impact on Preservice Teachers' Perceptions of Effective Teaching with Technology: A Person-Centered Investigation*. Paper presented at the meeting of the American Educational Research Association, Orlando, FL.
- Shaffner, S., & **Hawk, N.A.** (2021, February). *Student progress monitoring: "Closing the gap" with dynamic digital assessments*. Paper presented at the Ohio Educational Technology Conference, Columbus, OH.
- Hawk, N.A.**, Shortt, M, & Xie, K (2020, April). *The Influence of School Safety Perceptions on Psychosocial Factors and Belongingness*. Paper presented at the meeting of the American Educational Research Association, San Francisco, CA (Conference Cancelled).
- Nelson, M.J., & **Hawk, N.A.** (2019, October). *The Role of Observations of Technology Integration in Future Teachers' Perceptions of What Makes a Good Teacher*. Paper presented at the convention of the Association for Educational Communications and Technology, Las Vegas, NV.
- Nelson, M.J., & **Hawk, N.A.** (2019, April). *The Impact of Field Experiences on Prospective Preservice Teachers' Technology Integration Beliefs and Intentions*. Paper presented at the meeting of the American Educational Research Association, Toronto, CA. (Best Paper Award Winner)

- Hawk, N.A.**, Vongkulluksn, V.W., & Xie, K. (2019, April). *Individual and Contextual Factors Influence on Technology Use for Cognitive Tasks Across Content Areas*. Paper presented at the meeting of the American Educational Research Association, Toronto, CA.
- Vongkulluksn, V.W., Xie, K., & **Hawk, N.A.** (2019, April). *Teachers' Value Beliefs Profiles: Antecedents and Associations with Technology Integration Practices*. Paper presented at the meeting of the American Educational Research Association, Toronto, CA.
- Hawk, N.A.** (2019, February). *Individual and Contextual Factors Influence on Technology Use for Cognitive Tasks Across Content Area*. Oral Presentation presented at The Ohio State University College of Education and Human Ecology Research Forum
- Vongkulluksn, V.W., Xie, K., & **Hawk, N.A.** (2018, November). *Middle School Students' Technology Use and Its Relationship with Math Value Beliefs and Achievement*. Paper accepted at the conference of the North American Chapter of the International Group for the Psychology of Mathematics Education Greenville, SC.
- Hawk, N.A.**, Vongkulluksn, V.W., & Xie, K. (2018, April). *Value Beliefs Profiles and Teachers' Technology Integration Practices*. Paper presented at the meeting of the National Consortium of Instruction and Cognition, New York, NY.
- Hawk, N.A.** (2018, February). *Studying at risk students' achievement in nontraditional school settings and the role of self regulation, engagement, and technology*. Proposed Study Paper presented at The Ohio State University College of Education and Human Ecology Research Forum
- Hawk, N.A.**, Lu, L., Kim, M., & Xie, K. (2017, April). *Evaluating Technology Professional Development on Teachers' TPACK, Technology Beliefs and Leadership*. Paper presented at the meeting of the American Educational Research Association, San Antonio, TX.

### **Grant Awards (accepted and in review)**

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2020: Recipient (co-investigator): Alumni Grants for Graduate Research and Scholarship from The Ohio State University Graduate School: Dissertation Research Grant: \$2000.00

## **Teaching**

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### **College Teaching Experience**

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**Texas A&M University**, College Station, TX

*Clinical Assistant Professor in Technology and Teacher Education*, July 2021-present

- Lead Faculty for EDCI 365 Technology in Classrooms
- Lead Faculty for EDCI 644 Curriculum Development
- Courses taught
  - EDCI 365: Technology in Classrooms: Fall 2021, Spring 2022, Fall 2022, Spring 2023, Fall 2023
  - TEED 682: Seminar: Spring 2022, Fall 2022
  - EDCI 644: Curriculum Development: Spring 2023, Fall 2023
  - EDCI 645: Society and Education in World Perspective: Spring 2023
  - EDCI 673: Analysis of Teaching Behavior: Summer 2023

- o FYEX 101 (Hullabaloo U): Fall 2022, Fall 2023

**The Ohio State University**, Columbus, OH

*Lecturer, Keys to Success for Online Learners*, Spring 2017 Semester Session 2; Spring 2018 Semester Session 2

## **K-12 Teaching Experience**

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**Career Prep High Schools-Central High School**, Columbus, OH

*Mathematics Teacher*, July 2020-June 2021

- o Delivered standards-based individualized instruction for high school non-traditional, credit recovery students
- o Procured and curated digital-based learning tools across the school site to assist in delivering remote learning during temporary distance learning conducted at the school
- o Maintained and tracked student curriculum progress, communicating and helping to advise students on their goals and progress
- o As a teacher academic and instructional technology leader, facilitated teacher-based teams monthly professional development regarding effective use of technology in teaching
- o Coached district teachers on the effective integration of digital technology tools in classroom

**Townsend Community School**, Castalia, OH

*High School Math Instructor*, July 2013 to June 2020

- o Provide individualized tutoring to students in all subject areas, primarily in mathematics
- o Communicate weekly with all students regarding their academic progress and goals
- o Maintain accurate and up to date attendance records, using FileMaker Pro and Microsoft Excel programs
- o Coordinate remotely to design and operate the school's procedures and attendance lists for the semiannual state standardized testing
- o Integrate relevant educational technologies to assist students, both remotely and in person with their courses

**London Academy**, London, OH

*High School Math Teacher/ Coach*, July 2009 to July 2013

- o Provide individualized tutoring to students in all subject areas, primarily in mathematics
- o Communicate weekly with all students regarding their academic progress and goals
- o Support colleagues to increase their math aptitude as they assist their students in math curriculum
- o Maintain accurate and up to date attendance records, using FileMaker Pro and Microsoft Excel programs
- o Designed and operated the school's procedures and lists for the semiannual state standardized testing

**Columbus Bilingual Academy**, Columbus, OH

*Middle School Teacher*, August 2008 to June 2009

- o Facilitated instruction to middle school students of English and Hispanic family backgrounds as a math teacher
- o Developed math curriculum that provided challenging and differentiated learning, allowed students to think critically, and engaged them in the learning process
- o Designed and maintained the school's website

**Capitol City Academy**, Columbus, OH

*High School Math and Title One Instructor*, November 2005 to June 2008

- o Aided at-risk high school students (age 16-21) as a mathematics/Spanish teacher and basketball program faculty assistant
- o Implemented and tracked an individual academic plan for each student, based on their specific abilities
- o Designed and maintained a relevant, rigorous and flexible math curriculum aligned to the state standards
- o Supported student academic and social well being, as a student advisor, continuously addressing each advisee's goals and academic plan for graduation

## **Service**

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### **Professional Membership**

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- o Pi Mu Epsilon, College Mathematics Honor Society
- o Alpha Chi, National College Honor Society
- o American Educational Research Association: Division C; Instructional Technology SIG; Technology as an Agent of Change for Teaching and Learning SIG
- o National Consortium for Instruction and Cognition (NCIC)
- o Association for Educational Communications and Technology
- o Texas Computer Educators Association
- o International Society for Technology in Education

### **Professional Service**

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#### **University, School and Departmental Service:**

- o Program Coordinator, TLAC Undergraduate Peer Mentors in Technology (2021-present)
- o Interdepartmental Curriculum Enhancement Committee: Raise Your Hand Texas WestEd Subcommittee (Technology and Teacher Education program Representative): 2021-2022
- o Member: Learning, Design and Technology group (School level informal working committee: 2022-present)
- o Member: Ad hoc committee-Review and Promotion Guidelines for Lecturers (department service): 2022
- o Nonvoting participant: TLAC Undergraduate Committee (2021-2022)
- o Department of Teaching, Learning and Culture Clinical A1 Evaluation Committee (2023-2024 Academic Year)

#### **Student Committee:**

#### **External Service:**

- o AECT Treasurer (November 2023-present)

#### **Peer Reviewer:**

- o College of Education and Human Ecology, The Ohio State University, undergraduate scholarship reviewer



- o American Educational Research Association: 2018, 2019, 2020, 2021, 2022, 2023, 2024 Annual Meeting  
Proposal Peer Reviewer
  - o Instructional Technology SIG
  - o Technology as an Agent of Change in Teaching and Learning SIG
  - o Charters and School Choice SIG
- o Association for Educational Communications and Technology, 2022, 2023 Annual Convention  
Proposal Peer Reviewer
- o Journals:
  - o *Education and Information Technologies*
  - o *Internet and Higher Education*
  - o *Journal of Computer Assisted Learning*
  - o *Journal of Educational Computing and Research*
  - o *Journal of Teacher Education*
  - o *Teaching and Teacher Education*
  - o *Technology, Pedagogy, and Education*

### **Review Editor**

- o *Frontiers in Education*

### **Session Chair**

- o 2018 AERA Annual Meeting: Session Chair: Title: Professional Learning Experiences for Mathematics Teaching, Division K
- o 2019 AERA Annual Meeting Session Chair: Title: Designing for Learning in Multimedia and Virtual Environments, Technology, Instruction, Cognition & Learning SIG
- o 2021 AERA Annual Meeting Session Chair: Title: Identifying and Assessing Teachers' Technology Integration Beliefs, Knowledge, and Competence, Technology as an Agent in Teaching and Learning SIG

### **Other Service**

- o Former Treasurer, Educational Technology Graduate Student Council
- o Ohio Educational Technology Conference: volunteer (multiple years)
- o Nominee/Candidate, AERA Graduate Student Council Web Secretary (2019)

### **Community Service**

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**Saint Thomas Early Learning Center**, College Station, TX

*Board Trustee*, September 2023-current

**Franklin County Board of Elections**, Columbus, OH

*2020 General Election Precinct Election Official: Voting Location Deputy*, November 2020

**Westerville Community Bands**, Westerville, OH

*Executive Board Member and Volunteer Treasurer*, April 2007 to August 2015

- o Forecast annual operating expenses and contributions to the 501(c)3 organization
- o Developed new operating policies, including monthly reports, contribution letters, and new technology

- o Designed and developed screencast to instruct members and community at large regarding contribution process
- o Administer all invoice payments, report annually to IRS and catalog each new contribution
- o Plan, along with the organization's financial advisor, the health of our portfolio annually

**Westerville Community Concert Band, Westerville, OH**

*Member, July 2006-July 2015*

**Scioto Valley Brass and Percussion Company, Dublin, OH**

*Member, January 2007-July 2015*

**Carthage College, Kenosha, WI**

*Tutor, September 2003 to May 2005*

- o Tutored a graduate student of foreign citizenship in English written and oral skills
- o Fostered improvement in clarity of overall written and oral presentation, preparing constructive comments for each written assignment
- o Reflected on each session in a written statement discussing the session and its accomplishments

**Indian Trail Academy, Kenosha, WI**

*Volunteer Tutor, September 2001 to May 2002*

- o Assisted an English as a Second Language (ESL) student in communicating appropriately and effectively in English
- o Delegated clear instructions and provided constructive criticism on the student's projects and homework to improve clarity and quality of work

**International Service**

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**Carthage College, Ometepe, Nicaragua**

*Volunteer Service, Language Interpreter, January 2003*

- o Facilitated language interpretation for other peers and conducted two interviews (in Spanish) with local citizens of the island
- o Assisted local workers with the construction of sustainable water project by completing a cistern
- o Maintained and improved transportation access by maintaining and improving the local roads on Ometepe
- o Provided basic medical supplies to three or more local medical clinics on the remote island of Ometepe

**Other Skills**

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**Technology Integration Skills**

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Microsoft Office	Geometer's Sketchpad	Graphing Calculators	Google Apps
SPSS	Mobile Devices	HLM	Mplus
Zoom	Google Classroom	Canvas	STATA

**Skills and Certifications**

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Computer: Microsoft Word, Excel

Languages: Spanish-Limited Working Proficiency  
Certified OSU Campus Suicide Prevention Gatekeeper  
Google Certified Educator: Level 1  
Wakelet Community Leader