

# Emily Baumgartner, Ph.D.

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## Professional Preparation

Ph.D., Kent State University, Kent, OH. (2020)

Major: Educational Psychology with a Concentration in Instructional Technology

Dissertation Topic: *The Impact of Virtual Reality and 360-Degree Video on Spatial Reasoning Skills in Elementary Students*

M.S., University of Cincinnati, Cincinnati, OH. (2024)

Major: Information Technology

M.S., Muskingum University, New Concord, OH. (2014)

Major: Information Strategy Systems and Technology

B.S., Ohio Northern University, Ada, OH. (2012)

Major: Manufacturing Technology

## Peer-Reviewed Publications

Ferdig, R.E., Soyturk, I., **Baumgartner, E.**, & Gandolfi, E. (2024). Computer Science in PK-12: Attitudes, beliefs, and self-efficacy of inservice teachers. *Journal of Technology and Teacher Education*, 32(4), 495–519. <https://doi.org/10.70725/388695oftfai>

**Baumgartner, E.** (2024). Animal Crossing: New Horizons. In K. Schrier, R. Kowert, D. Leonard, & T. Porkka-Kontturi (Eds.) *Learning, Education, & Games Volume 4: 50 Games to Use for Inclusion, Equity, and Justice*. Pittsburgh, PA: ETC Press.

**Baumgartner, E.** (2023). Exploring Student Creation of Virtual Reality Utilizing 360 Video. In R.E. Ferdig, R. Hartshorne, E. Baumgartner, R. Kaplan-Rakowski, & C. Mouza (Eds.) *What PreK-12 Teachers Should Know about Educational Technology in 2023: A Research-to-Practice Anthology*. Association for the Advancement of Computing in Education (AACE).

**Baumgartner, E.** (2022). Combining Simulations and Hands-On Learning in Robotic Programming Courses. In E. Baumgartner, R. Kaplan-Rakowski, R. E. Ferdig, R. Hartshorne, & C. Mouza (Eds.) *A Retrospective of Teaching, Technology, and Teacher Education During the COVID-19 Pandemic*. (pp. 203-207). Association for the Advancement of Computing in Education (AACE).

**Baumgartner, E.**, Ferdig, R.E. & Gandolfi, E. (2022). Exploring the Impact of Extended Reality (XR) on Spatial Reasoning of Elementary Students. *TechTrends*. <https://doi.org/10.1007/s11528-022-00753-6>

Ferdig, R.E., Gandolfi, E. & **Baumgartner, E.** (2021). Games and Simulations in Education. In R.E. Ferdig, E. Baumgartner, & E. Gandolfi (Eds.) *Teaching the Game: A collection of syllabi for game design, development, and implementation* (Vol. 2) (pp. 314-363). Pittsburgh, PA: ETC Press.

**Baumgartner, E.** (2020). Integrating simulations as a tool for developing robotics skills in technology education. In R.E. Ferdig, E. Baumgartner, R. Hartshorne, R. Kaplan-Rakowski & C. Mouza (Eds.), *Teaching, Technology, and Teacher Education during the COVID-19 Pandemic: Stories from the Field* (pp. 725-728). Association for the Advancement of Computing in Education (ACE).

**Baumgartner, E.** (2020). Virtual Reality and 360-Degree Video Use by Teachers: Implications for Teacher Professional Development. In Gary H. Marks & Denise Schmidt-Crawford (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 1391-1394). Online: Association for the Advancement of Computing in Education (ACE). Retrieved from <https://www.learntechlib.org/primary/p/215937/>.

**Baumgartner, E.,** Gandolfi, E. & Ferdig, R. (2019). Collaborative Gaming as an Agent of Motivation to Increase Retention in Online Learning. In S. Carliner (Ed.), *Proceedings of E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education* (pp. 941-945). New Orleans, Louisiana, United States: Association for the Advancement of Computing in Education (ACE). Retrieved from <https://www.learntechlib.org/primary/p/211189/>.

### Publications of Editorials in Peer-Reviewed Journals

**Baumgartner, E.** & Ferdig, R.E. (2024). Editorial: Emerging technologies and their impact on online and blended learning: Part II. *International Journal on E-Learning*, 23(4), 369-374.  
<https://doi.org/10.70725/884325vfpmpi>

**Baumgartner, E.** & Ferdig, R.E. (2024). Editorial: Emerging technologies and their impact on online and blended learning: Part I. *International Journal on E-Learning*, 23(3), 217-222.  
<https://doi.org/10.70725/196610mwlqkh>

Ferdig, R.E., **Baumgartner, E.**, Gandolfi, E., Ferdig, E., Ferdig, O., & Gandolfi, S. (2023). Editorial – The Importance of Having K-12 Students Explore Artificial Intelligence: A Working Conversation About AI-Based Image Generation. *Journal of Interactive Learning Research*, 34(2), 185-212.

Ferdig, R.E., Gandolfi, E., & **Baumgartner, E.** (2023). Editorial: Identifying and Exploring the Relationships Between Interactive Technologies and Learning. *Journal of Interactive Learning Research*, 34(1), 5-8.

Hartshorne, R., Mouza, C., **Baumgartner, E.**, & Kaplan-Rakowski, R. (2022). Editorial: A 2025 Vision for Technology and Teacher Education. *Journal of Technology and Teacher Education*, 30(2), 107-115.

Ferdig, R.E., **Baumgartner, E.**, Mouza, C., Kaplan-Rakowski, R., & Hartshorne, R. (2021). Rapid publishing in a time of COVID-19: How a pandemic might change our academic writing practices. *Contemporary Issues in Technology and Teacher Education*, 21(1).

Hartshorne, R. & **Baumgartner, E.** (2020). Editorial: What we learned about technology and teacher education in 2020. *Journal of Technology and Teacher Education*, 28(4), 599-611.

Hartshorne, R., **Baumgartner, E.**, Kaplan-Rakowski, R., Mouza, C. & Ferdig, R.E. (2020). Special Issue Editorial: Preservice and Inservice Professional Development During the COVID-19 Pandemic. *Journal of Technology and Teacher Education*, 28(2), 137–147.

**Baumgartner, E.** & Ferdig, R.E. (2019). Editorial: What we learned about technology and teacher education in 2019. *Journal of Technology and Teacher Education*, 27(4), 421–427.

Ferdig, R.E. & **Baumgartner, E.** (2019). Editorial: Submissions and Publication Data from the 2018 Volume of the *Journal of Technology and Teacher Education*. *Journal of Technology and Teacher Education*, 27(2), 121–128.

**Baumgartner, E.** & Ferdig, R.E. (2018). Editorial: What we learned about technology and teacher education in 2018. *Journal of Technology and Teacher Education*, 26(4), 509–517.

### Edited Books

Ferdig, R.E., Hartshorne, R., **Baumgartner, E.**, Kaplan-Rakowski, R., & Mouza, C. (2023) *What prek–12 teachers should know about educational technology in 2023: A research-to-practice anthology*. Association for the Advancement of Computing in Education (AACE).

**Baumgartner, E.**, Ferdig, R.E., Hartshorne, R., Kaplan-Rakowski, R. & Mouza, C. (Eds.) (2022). *A Retrospective of Teaching, Technology, and Teacher Education during the COVID-19 Pandemic*. Association for the Advancement of Computing in Education (AACE).

Ferdig, R.E., **Baumgartner, E.**, & Gandolfi, E. (Eds.) (2021). *Teaching the Game: A collection of syllabi for game design, development, and implementation* (Vols. 1-2). Pittsburgh, PA: ETC Press.

Ferdig, R.E., **Baumgartner, E.**, Hartshorne, R., Kaplan-Rakowski, R. & Mouza, C. (2020). *Teaching, Technology, and Teacher Education during the COVID-19 Pandemic: Stories from the Field*. Association for the Advancement of Computing in Education (AACE).

### Workshops

**Baumgartner, E.** (2023, February). Pedagogical Lessons Learned from COVID-19 and Beyond. CAFE Workshops. Ohio Northern University. Ada, OH.

### Academic Conference Presentations

Ariyarante, T., **Baumgartner, E.**, Leonardi, B., Sebastian, L. & Foote, L. (Forthcoming: 2025, April). *Improving Science Outcomes for learners with disabilities: the intersectionality of national, state standards, and frameworks*, American Educational Research Association Conference, Denver, CO.

**Baumgartner, E.** (2025, February). *Computer Science in pK-12*. Ohio Celebration of Women in Computing Conference, Huron, OH.

Ferdig, R.E., Soyturk, I., **Baumgartner, E.**, & Gandolfi, E. (2024, September). *Attitudes and Beliefs of Inservice Teachers interested in K-12 Computer Science Integration and Instruction*, SITE interactive, Online.

Ariyarante, T., **Baumgartner, E.**, & Ottley, J. (2024, April). *Addressing national, state, and special education requirements for grade 8 science teaching*, Badar-Kauffman Conference, Kent, OH

**Baumgartner, E.**, Ariyaratne, T., Leonardi, B., Ottley, J., & Sebastian, L. (2024, March). *BRICK Project: Building Robust Content Knowledge of Intervention Specialists in the Areas of Math and Science*, Society for Information Technology and Teacher Education (SITE) Conference, Las Vegas, NV.

**Baumgartner, E.**, Collins, T., & Sullivan, M., (2024, February). *EarlyIT: High School Linkages to Increase Talent Pools in IT*, Ohio Educational Technology Conference, Columbus, OH.

Ferdig, R.E., **Baumgartner, E.**, Harkins-Brown, A., Hartshorne, R., Hodges, C., Kilickaya, F., Morris, G., & Powers, J. (2023, August). *How Educational Technologists and Teacher Educators can help Bridge the Research to Practice Gap*. SITE Interactive, Online.

Cruea, M., Tilton, S. & **Baumgartner, E.** (2022, October). *Developing a game curriculum*. Meaningful Games, East Lansing, MI.

**Baumgartner, E.** (2020, April). *The Impact of Virtual Reality and 360-Degree Video on Spatial Reasoning Skills in Elementary Students*. Kent State EHHS Gallery of Research, Kent, OH. (Conference canceled)

**Baumgartner, E.** (2020, April). *Virtual Reality and 360-Degree Video Use by Teachers: Implications for Teacher Professional Development*. Society for Information Technology and Teacher Education (SITE) Conference, New Orleans, LA.

**Baumgartner, E.**, Gandolfi, E., & Ferdig, R. (2019, November). *Collaborative Gaming as an Agent of Motivation to Increase Retention in Online Learning*. eLearn World Conference on E-Learning, New Orleans, LA.

## Grants

**Baumgartner, E.** (2022). PI for funded grant proposal (\$2000) titled “Spatial Reasoning Skills and 360-degree Video.” Ohio Northern University.

## Professional Appointments

**Assistant Professor of Emerging Media and Technology** August 2024-Present  
Kent State University Kent, OH

- Teach various courses (listed below) in the School of Emerging Media and Technology and the School of Lifespan Development and Educational Services.
- Assist in writing and procuring grants to better education in the surrounding areas.
- Develop and update existing coursework for courses assigned.
- Mentor master’s and PhD students by meeting, serving on their committees, and participating in their research.
- Serve on various PhD and master’s committees.

**Research Associate** June 2023-July 2024  
University of Cincinnati Systems Development & Improvement Center Dublin, OH

- Create online content for Intervention Specialists in the fields of math and science.
- Expand and grow the Early IT program, within the School of Information Technology.

- Assist in writing and procuring grants to continue growing existing projects in the Center.
- Manage and update the PeakOhio.org website with professional development modules and project news.
- Present and share work for projects at state, national, and international conferences.

**Adjunct Faculty**

Aug.2017-July 2024

Kent State University

Kent, OH

- Teach various courses (listed below) in the School of Emerging Media and Technology, the School of Lifespan Development and Educational Sciences, and the Department of Management Information Systems.
- Developed a Microcredential in Computer Science Education for K-12 educators.
- Develop and update existing coursework for courses assigned.

**Assistant Professor of Manufacturing Technology**

Jan.2020-July 2023

Ohio Northern University

Ada, OH

- Serve as the Program Lead of Technology Studies program area, managing budgets, 5 faculty and 2 staff, workloads, retention, and recruitment.
- Work closely with the Dean's office, registrar, financial aid, and academic affairs as liaison of the program.
- Assist in reviewing student transfer courses with registrar's office and matching to program courses.
- Advise 20-30 students per semester in the fields of manufacturing technology, construction management, and technology education.
- Serve on university committees such as Committee on Curriculum, Athletics Committee, Workload Committee, Teacher Licensure Committee, and Academic Conduct Committee.
- Participate heavily in student recruitment by providing tours, Saturday visit day experiences, and meetings with potential students.
- Serve as advisor for several student groups, such as Phi Kappa Phi, Society of Manufacturing Engineers, and Robotics Team.
- Act as search chair for two faculty searches and two staff searches.

**Research Work Experience**

Managing Editor of AI-Enhanced Learning (AIEL)	2025-Present
Managing Editor of Journal of Computers in Mathematics & Science Teaching	2025-Present
Managing Editor of International Journal on E-Learning (IJEL)	2024-Present
Managing Editor of Journal of Interactive Learning Research (IJRL)	2023-2024
Managing Editor of Journal of Technology and Teacher Education (JTATE)	2018-2020

**Coursework Experience**

*Kent State University School of Lifespan Development and Educational Sciences*

ETEC67425 Managing Technological Change	2026-Present
ETEC67426 Managing School Technologies	2025-Present
ETEC57400 Trends in Educational Technology (3 Sem. Hours)	2024
ETEC67434 Emerging Technologies (3 Sem. Hours)	2023-2025
ETEC39525 Educational Technology (3 Sem. Hours)	2018-2019

<i>Kent State University School of Emerging Media and Technology</i>	
EMAT59991 Embedded Robotics and Web Control (3 Sem. Hours)	2025-Present
EMAT60310 Creative Coding Fundamentals (3 Sem. Hours)	2024-Present
EMAT33310 Human Computer Interaction (3 Sem. Hours)	2022-Present
EMAT25310 Creative Coding (3 Sem. Hours)	2023-2024

<i>Ohio Northern University Department of Technological Studies</i>	
TECH4621 Programming in Embedded Systems (4 Sem. Hours)	2022-2023
TREX1001 Mythbusters Experience (3 Sem. Hours)	2022-2023
TECH1621 Visual Basic (3 Sem. Hours)	2017-2022
TECH3111 Product Manufacturing (3 Sem. Hours)	2020-2023
TECH4323 Advanced Robotics 1 (2 Sem. Hours)	2020-2023
TECH4324 Advanced Robotics 2 (2 Sem. Hours)	2020-2023
TECH3621 Programmable Logic Controllers (4 Sem. Hours)	2020-2023
TECH3631 Manufacturing Automation Systems (3 Sem. Hours)	2020-2023
TECH3121 Manufacturing Management (3 Sem. Hours)	2020-2023
TECH1421 Web Design and Development (3 Sem. Hours)	2016-2018
TECH3421 Database Management and Applications (3 Sem. Hours)	2016-2017
TECH2421 Computer Networking (3 Sem. Hours)	2016

<i>Kent State University Department of Management Information Systems</i>	
BUS30062 Advanced Professional Development (3 Sem. Hours)	2018-2019
BUS10123 Exploring Business (4 Sem. Hours)	Fall 2017-2019
BUS30061 Business Professional Practices (3 Sem. Hours)	Spring 2018

### **Other Skills**

- Web design/development (CSS, HTML, JavaScript, Bootstrap, React Native)
- Educational Technologies (Virtual Realities, Mobile Technologies, Smart Board)
- Learning Management System Experience (Moodle, Blackboard, Canvas)
- Robotics Programming (KUKA, Fanuc)
- Programming (C++, C, C#, JavaScript, and VB)
- Database Management (SQL, MySQL and Access)
- Game Development (Unity, Unreal Engine)
- Adobe Products (Dreamweaver, Photoshop, Illustrator)
- Microsoft Office Applications

### **Professional Organizations**

- Association for Educational Communications and Technology (AECT)
- Phi Kappa Phi (PKP)
- Society for Information Technology and Teacher Education (SITE)
- Association for the Advancement of Computing in Education (AACE)
- Epsilon Pi Tau (EPT)
- The Association of Technology, Management, and Applied Engineering (ATMAE)

### **Professional Development and Leadership**

- Ohio Celebration of Women in Computing (2025)

- Deans Compact Quarterly Meeting (2023, 2024)
- Ohio Educational Technology Conference Attendee (2023, 2024)
- SITE Conference Attendee (2019, 2020, 2024)
- Mississippi Valley Technology Teacher Education Conference attendee (2022)
- Meaningful Games Conference attendee (2022)
- Designing Quality Online Course (DQOC) Workshop 2020
- KUKA Robotics Training (2020)
- ATMAE Conference Attendee (2016)
- FeneTech User Conference 2012-2019
  - 2013 Presentation: Shower Designer Use and Implementation
  - 2014 Presentation: Shower Designer and Other Wizards
  - 2016 Presentation: Shower Designer Advanced Track
  - 2017 Presentation: Shower Designer Basics
  - 2018 Presentation: Capacity Planning
  - 2019 Presentation: CRM (Customer Resource Module)

### **Awards and Certifications**

- AI-Ready Educator Certification (2025)
- Quality-Matters Certification (2022)
- ONU Arts and Sciences Nominee for Rookie of the Year (2021)
- Domestic Travel Award (Kent State University, Fall 2019, Spring 2020)
- ONU Arts and Sciences Nominee for Teaching Excellence (Spring 2020)

### **Service**

- Committee on College Curriculum (2025 – Present)
- Graduate Student Symposium judge (2025, 2026)
- Kent State Combat Robotics Advisor (2026 – Present)
- Kent State VEXU Advisor (2024–Present)
- MRCA Robotics Volunteer (social media) (2023-Present)
- Epsilon Pi Tau Kent State Co-Advisor (2024-Present)
- Journal of Technology and Teacher Education peer-reviewer (2020-Present)
- Program Lead of Technological Studies Program (2022 – 2023)
- ONU Workload Committee (2022 – 2023)
- ONU Teacher Licensure Committee (2022 – 2023)
- ONU Arts and Sciences Capstone Taskforce (2022 – 2023)
- ONU Search Committee Chair (2021 – 2023)
- ONU Athletics Committee (2021- 2023)
- ONU Committee on Academic Conduct (2021-2023)
- ONU Committee on Curriculum at Ohio Northern University (2020-2022)
- ONU Phi Kappa Phi President (2020-2023)
- ONU Society of Manufacturing Engineers advisor (2020-2023)
- ONU Co-Trustee for Epsilon Pi Tau (2016-2017; 2020-2023)
- JTATE Special Issue peer-reviewer (2020, 2022)
- SITE Conference Reviewer (2020)
- eLearn Conference Reviewer (2019)

## Other Work Experience

- **Project Analyst** – FeneTech, Inc; Aurora, OH, May 2012-July 2020; Summers 2021-Present  
Provide training and customer assistance on FeneVision ERP software, configure and troubleshoot software issues, answer support calls and e-mails, write reports using Microsoft Visual Studio, write stored procedures using Microsoft SQL, creator of FeneVision University, an online customer and employee training program. Acted as Interim Support Group Manager in 2015.