

EDUCATION

PHD - LEARNING SCIENCES + INCLUSIVE DESIGN (MINOR) 2025

- Indiana University - Bloomington
Towards a Sociocritical Framework for Body-Inclusive Embodied Activity Design
↳ Dr. Joshua Danish (chair), Dr. Day Greenberg, Dr. Cindy Hmelo-Silver, Dr. Karen Wohlwend

MASTER OF SCIENCE - EDUCATION: LEARNING SCIENCES 2022

- Indiana University - Bloomington

BACHELOR OF ARTS - COMPUTER SCIENCE & EDUCATION 2019

- The University of North Carolina at Chapel Hill
-

PUBLICATIONS

ARTICLES & CHAPTERS

Vickery, M. (In Press). Integrating Critical Theories for More Just Embodied Pedagogies. In *Encyclopedia of Social Justice in Education: Vol. 8 (Bodies and Different Abilities)*. Bloomsbury Publishing.

Vickery, M., & Danish, J. (2025). Realizations & re-mediations: Enabling expression and interaction in collective embodied activities for children with disabilities. *Learning, Culture and Social Interaction*, 53, 100919.
<https://doi.org/10.1016/j.lcsi.2025.100919>

Zhou, M., Vickery, M., & Danish, J.A. (2025). Goals in Motion: How Emergent Embodied Goals Support Elementary Students' Mechanistic Reasoning in Collaborative Modeling Activities. *Cognition and Instruction*, 43(3), 233-284. <https://doi.org/10.1080/07370008.2025.2503194>

Danish, J. A., Anton, G., Mathayas, N., Jen, T., Vickery, M., Lee, S., Tu, X., Cosic, L., Zhou, M., Ayalon, E., Steinberg, S., Enyedy, N., & Ryan, Z. (2022). Designing for Shifting Learning Activities. *The Journal of Applied Instructional Design*, 11(4). https://edtechbooks.org/jaid_11_4/VMRrAXIY

UNDER REVIEW

Vickery, M., Bai, E., Beyersdorf, K., Sheng, J., Desai, A., & Chakraburty, S. (Under Review). "Where do I start?" A tool for interactive literature exploration in the learning sciences. *Submitted to the 20th Annual Meeting of the International Society of the Learning Sciences – ISLS 2026*

Malcolm, B.(co-chair), Vickery, M. (co-chair & discussant), Louis-Strakes Lopez, J.(co-chair), Siciliano, L., Simon, S., Xing, G. Y., Kim, J., Kim, C., Zhao, Y., Desai, A., Gadong, E. S., Mabadeje, Y., Mhungu, B., Haddadian, G. L., Eloy, A., Soodhani, N., Prasad, R., & Bae, Y. (Under Review). Fostering Educational Intimacy: ILSSA Intergenerational Partnerships for Purposeful Community Building. *Submitted to the 20th Annual Meeting of the International Society of the Learning Sciences – ISLS 2026*

Vickery, M. & The inBody Learning Collective (Under Review). Envisioning Embodiment: A Collective Re-Imagining for Multiplicity in Embodied Learning. *Submitted to the 20th Annual Meeting of the International Society of the Learning Sciences – ISLS 2026*

MANUSCRIPTS IN PROGRESS

Vickery, M. & Peabody, E. (In Progress). Addressing the Dinosaur in the Room: An Unexpected Evolution From Partnership to Participation. [target venue: *Journal of Participatory Research Methods*]

Vickery, M., & Danish, J.A. (In Progress). Cultivating Constructive Critique: How a Software-Scaffolded Gallery Walk Elevated Elementary Student's Scientific Modeling Practices. [target venue: *Educational Technology, Research, and Development*]

Vickery, M., Mathayas, N., & Danish, J.A. (In Progress). Embodiments of Choice: Infusing Trauma-Informed Pedagogies into Collective Embodied Science Modeling Activities.

Mathayas, N., Danish, J., Zhou, M., Steinberg, S., **Vickery, M.**, & Enyedy, N. (In Progress) Leveraging embodied, code-based, and diagrammatic models to foster fifth-grade students' comprehension of ecosystem models and metamodeling. [target venue: *Journal of the Learning Sciences*]

DISSERTATION

Vickery, M. A. (2025). *Towards a Sociocritical Framework for Body-Inclusive Embodied Activity Design* [Ph.D., Indiana University]. <https://www.proquest.com/pqdtglobal/docview/3241807544/CA5399A2E81F4326PQ>

4 ARTICLES (DEFENDED, UNDER PREP FOR JOURNAL SUBMISSION)

Vickery, M. (Passed by Committee, in preparation). Doing No Harm: Theoretical & Methodological Guidance for Honoring Youths Bodies as Multidimensional & Intersectional. Dissertation Article 0. [target venue: *Equity & Excellence*]

Vickery, M. (Passed by Committee, in preparation). "The Grey Area:" Youths' Everyday Resistance to Body-Normativity. Dissertation Article 1. [target venue: *International Journal of Qualitative Studies in Education*]

Vickery, M. (Under Review). More than Movement: A Critical Deconstruction of Embodied Activity Design. Dissertation Article 2. [target venue: *Mind, Culture, and Activity*]

Vickery, M. (Passed by Committee, in preparation). Imagining Otherwise: A Youth-Participatory Theorization Towards Body-Inclusive Embodied Learning. Dissertation Article 3. [target venue: *Journal of the Learning Sciences*]

PUBLISHED CONFERENCE PROCEEDINGS

2024

Danish, J.A., Mathayas, N., Zhou, M., Steinberg, S., & **Vickery, M.** (2024). Character Based Models and Computational and Embodied Action Tweaking for Sensemaking. *Proceedings of the 18th Annual Meeting of the International Society of the Learning Sciences – ISLS 2024*, Buffalo, New York, USA.

Tancredi, S.* **Vickery, M.* (co-chairs)**, Krause, C., Benally, J., Champion, D., Solomon, F., Hussain, F. N., Gholson, M. L., Y., J., Marin, A., Lindberg, L., Lopez, B. Y., Davé, S., Mathayas, N., Steinberg, S., Humburg, M., & Vossoughi, S. (discussant) (2024). Learning for Every Body: Intersectional Dimensions of Embodied Learning. In Lindgren, R., Asino, T. I., Kyza, E. A., Looi, C. K., Keifert, D. T., & Suárez, E. (Eds.), *Proceedings of the 18th International Conference of the Learning Sciences - ICLS 2024* (pp. 2037-2044). International Society of the Learning Sciences.

Tu., X, Danish, J.A., Ryan, Z., **Vickery, M.**, Park Rogers, M., Hmelo-Silver, & C., Philips, A. (2024). Teaching with Representations: How Teachers' Perception Shift Their Science Teaching. *Proceedings of the 18th Annual Meeting of the International Society of the Learning Sciences – ISLS 2024*, Buffalo, New York, USA.

Vickery, M., Mathayas, N., & Danish, J.A. (2024). Being Body-Conscious: A Trauma-Informed Inquiry into Elementary Students' Collective Embodied Learning Experiences. *Proceedings of the 18th Annual Meeting of the International Society of the Learning Sciences – ISLS 2024*, Buffalo, New York, USA.

Vickery, M., Mathayas, N., Steinberg, S., & Humburg, M. (2024). From reactive to proactive: Considering socio-affective experiences in inclusive embodied activity design. *Proceedings of the 18th Annual Meeting of the International Society of the Learning Sciences – ISLS 2024*, Buffalo, New York, USA.

2023

Steinberg, S., Zhou, M., **Vickery, M.**, Mathayas, N., & Danish, J. A. (2023). Making Sense of Modes in Collective Embodied Science Activities. Building Knowledge and Sustaining Our Community. *Proceedings of the 17th Annual Meeting of the International Society of the Learning Sciences – ISLS 2023*, Montreal, Canada.

- Vickery, M.** (2023). Re-mediating Collective Embodied Learning Activities to Overcome Barriers to Participation for Learners with Disabilities. Building Knowledge and Sustaining Our Community. *Proceedings of the 17th Annual Meeting of the International Society of the Learning Sciences*—ISLS 2023, Montreal, Canada.
- Vickery, M.** (2023). Who is Disabled? An Exploration of Production of Disabled Bodies in School Habitus. Building Knowledge and Sustaining Our Community. *Proceedings of the 17th Annual Meeting of the International Society of the Learning Sciences*—ISLS 2023, Montreal, Canada.

2022

- Mathayas, N., Danish, J., Tu, X., Zhou, M., & **Vickery, M.** (2022). Social positioning in collective embodied models in an elementary STEM classroom. *Proceedings of the 16th Annual Meeting of the International Society of the Learning Sciences*—ISLS 2022, Hiroshima, Japan.
- Mathayas, N., Vogelstein, L., Danish, J., Lindberg, L., Marin, A., Kern, A., Orellana, M., Meixi, Dorr, S., Keefe, D., Diaz, V., Zohar, R., Tu, X., Cosic, L., **Vickery, M.**, & Kelton, M. (2022). Moving toward dignity-affirming invitations to embodied participation design of learning environments. Proceedings of the 15th International Conference of the Learning Sciences - ICLS 2021. *Proceedings of the 16th Annual Meeting of the International Society of the Learning Sciences*—ISLS 2022, Hiroshima, Japan.
- Vickery, M.**, & Mithun, S. (2022). Novice versus Advanced Undergraduate Computing Students' Engagement in Collaboration in an Online Flipped Classroom. *Proceedings of the 16th Annual Meeting of the International Society of the Learning Sciences*—ISLS 2022, Hiroshima, Japan.
- Vickery, M.**, Zhou, M., & Danish, J. (2022). Mediated goal navigation in a mixed-reality embodied learning environment. *Proceedings of the 16th Annual Meeting of the International Society of the Learning Sciences*—ISLS 2022, Hiroshima, Japan.
- Zhou, M., **Vickery, M.**, & Danish, J. (2022). Mediating elementary students' mechanistic reasoning in collective embodied modeling activities. *Proceedings of the 16th Annual Meeting of the International Society of the Learning Sciences*—ISLS 2022, Hiroshima, Japan.

2021

- Danish, J., **Vickery, M.**, Duncan, R., Ryan, Z., Stiso, C., Zhou, J., Murphy, D., Hmelo-Silver, C., & Chinn, C. (2021). Scientific Model Evaluation during a Gallery Walk. In E. de Vries, Y. Hod, & J. Ahn (Eds.), *Proceedings of the 15th Annual Meeting of the International Society of the Learning Sciences*—ISLS 2021, Bochum, Germany.
- Mithun, S., **Vickery, M.**, & Luo, X. (2021). Evaluating Factors for Effective Flipped Classroom Instruction in an Advanced Data Management Course. Proceedings for the 2021 Frontiers in Education Conference, 9. <https://doi.org/10/gq8mwp>
- Murphy, D., Duncan, R. G., Chinn, C. A., Danish, J. A., Hmelo-Silver, C. E., Ryan, Z., **Vickery, M.**, & Stiso, C. (2021). Students' Justifications for Epistemic Criteria for Good Scientific Models. *Proceedings of the 15th Annual Meeting of the International Society of the Learning Sciences*—ISLS 2021, Bochum, Germany.
- Parr, E. D., Machaka, N., Dyer, E. B., Krist, C., Langer-Osuna, J., Chavez, R., Malamut, J., Kwon, F., Lange, K., Ramirez, J., Gargroetzi, E., Walkoe, J., Walton, M., Mathayas, N., Danish, J., Tu, X., Zhou, M., **Vickery, M.**, Kelly, S., ... Shim, S.-Y. (2021). Movement, Authority, and Knowledge: Examining the Relationships in Embodied and Social Positioning for STEM Learning (symposium). *Proceedings of the 15th Annual Meeting of the International Society of the Learning Sciences*—ISLS 2021, Bochum, Germany.
- Vickery, M.**, Danish, J., Tu, X., & Zhou, M. (2021). Scientific Modeling Practices Through Perspective Taking in a Mixed Reality Embodied Learning Environment. *Proceedings of the 15th Annual Meeting of the International Society of the Learning Sciences*—ISLS 2021, Bochum, Germany.

2020

- Moreland, M., **Vickery, M.**, Ryan, Z., Danish, J., Hmelo-Silver, C., Murphy, D., Av-Shalom, N., Duncan, R. G., & Chinn, C. (2020). Representing Modeling Relationships in Systems: Student Use of Arrows. *Proceedings of the 14th Annual Meeting of the International Conferences of the Learning Sciences*—ICLS 2020, Nashville, TN, USA..

CONFERENCE PRESENTATIONS

2024

- Vickery, M. (2024, October). "It makes me feel seen": Practical insights for constructing dignity-affirming classrooms in undergraduate teacher education [Presentation]. *2024 Celebration of Teaching by the Faculty Academy for Excellence in Teaching (FACET) and the Center for Innovative Teaching and Learning (CITL)*, Bloomington, IN.
- Mathayas, N., Zhou, M., Danish, J. A., Vickery, M., Steinberg, S., Ryan, Z., Tu, X., & Devine, I. (2024). The Role of Embodied Modeling on Fifth-Grade Students' Perspectives on Ecosystems Thinking and Metamodeling. *AERA Annual Meeting*.
- Tu, X., Danish, J. A., Ryan, Z., Vickery, M., Hmelo-Silver, C., & Park Rogers, M. (2024). Teaching With Representations: Elementary Teachers' Perceptions. *AERA Annual Meeting*.
- Zhou, M., Mathayas, N., Danish, J. A., Vickery, M., & Steinberg, S. (2024). Exploring Students' Divergent Interpretations While Studying Ecosystems in an Embodied Mixed-Reality Environment (Poster 36). *AERA Annual Meeting. (AERA SIG Learning Sciences and Advanced Technology for Learning Runners up for the Best Student Paper award)*

2023

- Vickery, M. & Mithun, S. (2023). Comparing Novice and Advanced Undergraduate Computing Students' Engagement In Online Flipped Data Science Courses. *Annual Meeting of the American Educational Research Association, Chicago, IL*.

2022

- Zhou, M., Vickery, M., Danish, J., Tu, X., & Ryan, Z. (2022). The Role of Body in Goal Negotiation and Adoption During a Collective Modeling Activity. *American Educational Research Association Annual Meeting 2022*, San Jose, CA, USA.
- Heinze, J., & Vickery, M. (2022, October). Is it Learnable? Combining UX and Activity Theory for Intuitive & Humane Digital Products. Qualitative Research Consultants Association (QRCA) Conference, San Diego, CA
- Vickery, M. (2022, October). No such thing as universal design?: Putting multimodal and inclusive design theory into practice [Workshop]. *Learning Sciences Graduate Student Conference*, Bloomington, IN.

PRACTITIONER-ORIENTED & NON-PEER REVIEWED PUBLICATIONS

2023

- Vickery, M. (2023). Reconstructing Reality: How to Use Representations in Science Lessons. *LearnabilityHQ*.
<https://www.learnabilityhq.com/post/how-to-use-representations-in-science-education>

PROFESSIONAL ACTIVITIES

ACADEMIC APPOINTMENTS

- ↪ Center for Research on Learning & Technology (Indiana University) | Visiting Research Scientist 2025 - Present
- ↪ School of Education (Indiana University) | Lead Associate Instructor & Curriculum Designer 2023 - 2025
- ↪ Writing Tutorial Services (Indiana University) | Graduate Tutor & Multilingual Specialist 2023 - 2025
- ↪ Center for Research on Learning & Technology (Indiana University) | Graduate Research Assistant 2019 - 2023
- ↪ Department of Computer Science (UNC Chapel Hill) | Teaching Assistant 2016 - 2019
- ↪ Frank Porter Graham Child Development Institute | Research Intern 2019

NON-ACADEMIC APPOINTMENTS

- ↪ LEL Home Services | Direct-Support Professional 2025 - Present

↪ Inquirium, LLC	2023 - Present
→ Fieldscope Accessibility Consultant & Auditor	
→ Inqscribe Technical Documentation Editor	
→ RadioEverywhere.org Digital Product Architect, Designer, Developer	
→ To&Through (Chicago Public Schools) Analytics Architect & Data Analyst	
↪ WillowTree, LLC Digital Product / User Experience (UX) Researcher	2019 - 2022
→ Anheuser Busch Product Researcher	
→ Edward Jones Lead Product Researcher	
→ McGraw Hill User Experience Researcher	
→ Holiday Inn Club Vacations Research Analyst	
↪ WillowTree, LLC Software (Android) Engineering Intern	2018
○ Canadian Broadcasting Company (CBC)	
↪ Eagle's Nest Camp Senior Counselor & Instructor	2017
↪ Special Olympics Volunteer Aid	
↪ Miracle League of the Triangle Volunteer Aid	
↪ Wake County Self-Contained 'ID-Severe' Special Ed. Classroom Teacher's Assistant	
↪ Holly Springs Parks and Recreation Coach	

TECHNOLOGIES DESIGNED/DEVELOPED

↪ LS Personal Website Template ¹ Lead Designers & Developer	2025 - Present
↪ Interactive Literature Review Template ² Lead Designers & Developer	2025 - Present
↪ LearnabilityHQ ³ Lead Designer & Developer, CTO	2020 - Present
↪ Radio Everywhere ⁴ Lead Designer & Developer	2023 - Present
↪ InqScribe ⁵ Technical Documentation Editor	2023 - 2024
↪ Fieldscope ⁶ Accessibility Consultant & Auditor	2023 - 2024
↪ To&Through (Chicago Public Schools) ⁷ Analytics Architect & Data Analyst	2023 - 2024
↪ Camp Connections Site ⁸ Lead Designer & Developer	2023 - Present
↪ GEM-STEP Embodied Mixed-Reality Environment ⁹ Researcher & Designer	2019 - 2024
↪ Learning Sciences Graduate Student Conference (LSGSC) ¹⁰ Lead Designer & Developer	2022
↪ Learning Sciences Graduate Student Association (LSGSA) ¹¹ Lead Designer & Developer	2021
↪ Modeling & Evidence Mapping Environment (MEME) ¹² Researcher	2019 - 2021

AWARDS & FELLOWSHIPS

↪ Outstanding Associate Instructor Teaching Award Awardee [\$500]	2025
↪ IU Graduate School Grant-In-Aid of Doctoral Research Award Awardee [\$1000]	2024
↪ Frieda Renfro Fellowship Awardee [\$750]	2024
↪ AERA SIG Learning Sciences & ATL Best Student Paper Runner Up	2024
↪ CRLT Travel Scholarship Recipient [\$500]	2024

INVITED TALKS & WORKSHOPS

HDFS class visit

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- ¹ github.com/morganavickery/academic-website-template
² morganavickery.github.io/literature-review-database-template/
³ learnabilityhq.com
⁴ radioeverywhere.org
⁵ inqscribe.com
⁶ fieldscope.org
⁷ toandthrough.uchicago.edu
⁸ campconnectionsind.wixsite.com/camp
⁹ embodiedplay.org
¹⁰ lsgsc.org
¹¹ lgsaindiana.wixsite.com/juls
¹² modelingandevidence.org

- Vickery, M.** (2024, May). *Bodily-Autonomous & Trauma-Informed Activity Design for Young Children with Severe Disabilities* [Invited Discussion]. Camp Connections Staff Training at IU Speech and Language Pathology Clinic, Bloomington, IN.
- Vickery, M.** (2023a, May). *Designing Inclusive Activities: A Crash Course & Resource* [Invited Practitioner Training]. Camp Connections Staff Training at IU Speech and Language Pathology Clinic, Bloomington, IN.
- Vickery, M.** (2023b, August). *Who's Disabled? Reflections and Lingering Questions* [Invited Discussion]. MAGIC Lab Meeting, Madison, WI.
- Vickery, M.** (2023c, September). *Designing for Every Body & Overcoming Barriers to Participation for Young Campers with Disabilities in Embodied Activity* [Invited Colloquium]. IU Speech and Language Pathology Department Colloquium Series, Bloomington, IN.

ACADEMIC SERVICE

- ↳ International Society of the Learning Sciences
 - ISLS Annual Meeting Committee | Member 2024 - Present
 - ISLS AMC Hybrid Engagement Sub Committee | Member 2024 - Present
 - International Learning Sciences Student Association¹³ | Co-Chair 2024 - 2026
- ↳ IU Center of Excellence for Women and Technology Mentorship Program | Mentor 2025 - Present
- ↳ The inBody Learning Collective¹⁴ | Founder & Chair 2024 - Present
- ↳ American Educational Research Association (AERA) | Member, Reviewer 2021 - Present
- ↳ ILSSA Mentorship Program | Mentor 2024 - 2025
- ↳ University IT Services (UITS) | Student Outreach & Engagement Consultant 2024 - 2025
- ↳ Learning Sciences Graduate Student Conference (LSGSC) | Reviewer 2020 - 2022
- ↳ Learning Science Graduate Student Association (LSGSA, Indiana University) | President 2020 - 2022
- ↳ Hack 110 Hackathon at UNC Chapel Hill¹⁵ | Event Director & Chair 2017 - 2019
- ↳ Embodied Learning Summit at Duke University¹⁶ | Co-Director & Chair 2019
- ↳ IU Center of Excellence for Women and Technology Mentorship Program | Mentor 2025 - 2026
- ↳ Camp Connections | Consultant, Researcher, & Volunteer 2022 - 2025

CERTIFICATIONS/TRAININGS

- ↳ Mental Health First Aid (MFHA) Certification
- ↳ Safe Zone (LGBTQ+) Certified Counselor
- ↳ Haven (sexual assault prevention) Certified Counselor
- ↳ CITI Social-Behavioral-Educational Human Subjects Research Training
- ↳ Student Success Mentor Training | Mentor Collective
- ↳ Home and Community Support Professional (HCSP) Training | Indiana Family and Social Services
- ↳ Adult, Child and Baby First Aid/CPR/AED (ID #0232LL1) | American Red Cross

RESEARCH PROJECTS

4-ARTICLE DISSERTATION | Lead Researcher ^{17 18 19 20}

DEFENDED 2025

Advisor: Joshua Danish | This dissertation work takes a sociocritical and phenomenological perspective and participatory approach to working with young adolescents to reflect, critique, design, and reimagine classroom embodied learning activities. Of note, this work explicitly attends to how constructs such as bodily-relational

¹³ bit.ly/ILSSA

¹⁴ bit.ly/inbody-learning-collective

¹⁵ hack110.weebly.com

¹⁶ embodiedlearning.weebly.com

¹⁷ Vickery, M. (Passed by Committee) Doing No Harm: Theoretical & Methodological Guidance for Honoring Youths Bodies as Multidimensional & Intersectional. Dissertation Article 0. [*target venue: Equity & Excellence*]

¹⁸ Vickery, M. (Passed by Committee) "The Grey Area:" Youths' Everyday Resistance to Body-Normativity. Dissertation Article 1. [*target venue: International Journal of Qualitative Studies in Education*]

¹⁹ Vickery, M. (Passed by Committee) More than Movement: A Critical Deconstruction of Embodied Activity Design. Dissertation Article 2. [*target venue: Mind, Culture, and Activity*]

²⁰ Vickery, M. (Passed by Committee) Imagining Otherwise: A Youth-Participatory Theorization Towards Body-Inclusive Embodied Learning. Dissertation Article 3. [*target venue: Journal of the Learning Sciences*]

autonomy, trauma-sensitivity, disability-inclusion, and intersectionality manifest in (particularly) technology-facilitated embodied learning contexts.

CAMP CONNECTIONS²¹ | Lead Researcher²²

2022 - 2023

Advisor: Joshua Danish | A summer camp for young campers with moderate-to-severe communication disorders - I designed, facilitated, and analyzed a series of mixed-reality embodied learning activities designed to enable multimodal participation, communication, and coordination between campers.

STEP (*Science through Technology Enhanced Play*) PROJECTS | Graduate Research Assistant^{23 24} 2019 - PRESENT

PIs: Joshua Danish, Noel Enyedy | In the Science through Technology Enhanced Play (STEP) project and its iterations, we investigate how elementary students engage in hybrid computational-embodied modeling to understand scientific phenomena (e.g., the working of forces, complex behaviors of bees). As the lead graduate assistant, I was the technical lead where I facilitated computational modeling and programming activities, was an embodied model/simulation designer and 'GEMScript' developer, and led the analysis of multiple conference papers.

CITIES ON THE EDGE OF WAR | Graduate Research Assistant

2021 - PRESENT

PI: Joshua Danish | This is a bespoke semester-long board and roleplaying game we developed to help undergraduate history students explore the period leading up to and during the Peloponnesian war. In my role, I supported data collection, and analysis efforts.

REPTALS PROJECT (*Representations for Teachers as Learners*) | Graduate Research Assistant

2022 - 2023

PIs: Cindy Hmelo-Silver, Joshua Danish, Heidi Carbone, Dionne Cross Francis, Noel Enyedy | The Representations for Teachers as Learners (RepTal) project aims to better understand how elementary teachers think about representations as part of their science teaching. In this work, I supported the analysis, writing, and revisions of two journal manuscripts.

AT SETT PROJECT | Graduate Research Assistant

2021 - 2022

PI: Tina O'Neal | This project was an initiative within the Special Education department where I was responsible for leading the design, authorship, and development efforts of online modules to support preservice teachers' understanding of assistive technology integration into classrooms using Zabala's (2020) SETT (Student, Environment, Tasks, & Tools) framework.

SEEDS (*Scaffolding Explanations and Epistemic Development for Systems*) PROJECT²⁵

2019 - 2021

PIs: Joshua Danish, Cindy Hmelo-Silver, Ravit Duncan, Clark Chinn | In the Scaffolding Explanations and Epistemic Development for Systems (SEEDS) project, we explore how elementary students (5th grade) think about different kinds of evidence as important for helping them create and revise models of scientific phenomena via the Boutique Model and Evidence Mapping Environment (MEME) software. In my role, I lead the development of agent-based simulations to be used in MEME, co-facilitated a 5-week long elementary implementation, and lead the analysis and writing for two publications.

²¹ campconnectionsind.wixsite.com/camp

²² Vickery, M., & Danish, J. (2025). Realizations & re-mediations: Enabling expression and interaction in collective embodied activities for children with disabilities. *Learning, Culture and Social Interaction*, 53, 100919. <https://doi.org/10.1016/j.lcsi.2025.100919>

²³ Zhou, M., Vickery, M., & Danish, J.A. (2025). Goals in Motion: How Emergent Embodied Goals Support Elementary Students' Mechanistic Reasoning in Collaborative Modeling Activities. *Cognition and Instruction*, 43(3), 233-284. <https://doi.org/10.1080/07356331.2025.2503194>

²⁴ Danish, J. A., Anton, G., Mathayas, N., Jen, T., Vickery, M., Lee, S., Tu, X., Cosic, L., Zhou, M., Ayalon, E., Steinberg, S., Enyedy, N., & Ryan, Z. (2022). Designing for Shifting Learning Activities. *The Journal of Applied Instructional Design*, 11(4). https://edtechbooks.org/jaid_11_4/VMRrAXY

²⁵ Vickery, M., & Danish, J.A. (Under Review). Cultivating Constructive Critique: How a Software-Scaffolded Gallery Walk Elevated Elementary Student's Scientific Modeling Practices. [target venue: *Educational Technology, Research, and Development*]

CIT (Computation and Informatic Technologies) EDUCATION | Graduate Research Assistant **2019 - 2022**

PIs: Shimima Mithun | This project - in partnership with the Mosaic initiative at IU - evaluated and iterated on the instructional design of multiple undergraduate courses in computer science, database design and management, and informatics education in partnership with the courses in instructor. In my role, I independently designed data collection measures, analyzed student performance data, and first-authored publications around flipped and active learning pedagogies in computing education.

FPG CHILD DEVELOPMENT INSTITUTE / Research Intern **2019**

PIs: Kara Hume, Jessica Steinbrenner, Ann Sam | On the AFIRM (Autism Focused Intervention Resources and Modules) and CSESA (Center on Secondary Education for Students with Autism) projects, I supported research on youth and adults with Autism Spectrum Disorder, their families, and community initiatives through development of online modules / videos, survey design and distribution, & quantitative data analyses.

MINDFULNESS IN HUMAN DEVELOPMENT PROJECT / Research Assistant **2018 - 2019**

PIs: Michele Berger, Keval Kaur Khalsa | These projects investigated the mental, emotional, academic, and physical effects of implementing yoga and mindfulness practices in local public middle schools; conducted at Duke University and the University of North Carolina - Chapel Hill. In this work, I developed data collection measures, qualitative coding of video and text data, and directed/managed the 2019 Embodied Learning Summit at Duke University.