MORGAN VICKERY

(she/her)

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EDUCATION

PHD - LEARNING SCIENCES   2025

→ Indiana University - Bloomington

A Critical Participatory Study of Body-Inclusive Embodied Activity

↳ 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

2023

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

IN PRESS

Vickery, M. (In Press, 2025). Integrating Critical Theories for More Just Embodied Pedagogies. In *Encyclopedia of Social Justice in Education*: Vol. 8 (*Bodies and Different Abilities*). Bloomsbury Publishing.

UNDER REVIEW

Vickery, M., & Danish, J.A. (Under Review). Realizations & Re-Mediations: Enabling Participation in Collective Embodied Activities for Children with Disabilities. *Learning, Cultural, and Social Interaction.*

Zhou, M., **Vickery, M.**, & Danish, J.A. (Under Review). Goals in motion: How emergent embodied goals support mechanistic reasoning in collaborative modeling activities. *Cognition and Instruction.*

MANUSCRIPTS IN PROGRESS

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

Vickery, M. (In Progress). Addressing the Dinosaur in the Room: An Unexpected Evolution From Partnership to Participation. The *Journal of Participatory Research Methods.*

Vickery, M. & The inBody Learning Collective (In Progress). Many Bodies, Many Futures: A Speculative Dialogue on the Future of Embodiment. *International Society of the Learning Sciences; Equity & Excellence.*

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

Refereed Conference Proceedings

Under Review

Vickery, M., Cosic, L., Lauren, L. H., Chatain, J., Zhou, M., Steinberg, Selena, Muller, C., Reyes-Denis, T., Tancredi, S., Hussain, F. N., Xia, F., Humburg, M., Mathayas, N., & Love, C. (Under Review). *Envisioning Embodiment: A Collective Re-Imagining for Multiplicity in Embodied Learning*. International Society of the Learning Sciences, Helsinki, Finland.

2024

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

Tancredi, S. & **Vickery, M.** (2024). Learning for Every Body: Intersectional Dimensions of Embodied Learning (Symposium). 18th International Conference of the Learning Sciences (ICLS), Buffalo, New York, USA.

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.

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. 18th International Conference of the Learning Sciences (ICLS), 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. 18th International Conference of the Learning Sciences (ICLS), 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. 18th International Conference of the Learning Sciences (ICLS), 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. 17th International Conference of the Learning Sciences (ICLS), Montreal.

Vickery, M. (2023). Re-mediating Collective Embodied Learning Activities to Overcome Barriers to Participation for Learners with Disabilities. Building Knowledge and Sustaining Our Community. 17th International Conference of the Learning Sciences (ICLS), Montreal.

Vickery, M. (2023). Who is Disabled? An Exploration of Production of Disabled Bodies in School Habitus. Building Knowledge and Sustaining Our Community. 17th International Conference of the Learning Sciences (ICLS), 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. International Collaboration toward Educational Innovation for All: Overarching Research, Development, and Practices, 846–847.

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 in the design of learning environments. Proceedings of the 17th Annual Meeting of the International Society of the Learning Sciences. Annual Meeting of the International Society of the Learning Sciences, Hiroshima, Japan.

Vickery, M. (2022). Every Body Belongs: Principles for Inclusive Instruction in Embodied Learning Activities. International Collaboration toward Educational Innovation for All: Overarching Research, Development, and Practices, 1744–1745.

Vickery, M., & Mithun, S. (2022). Novice versus Advanced Undergraduate Computing Students' Engagement in Collaboration in an Online Flipped Classroom. International Collaboration toward Educational Innovation for All: Overarching Research, Development, and Practices, 2072–2073.

Vickery, M., Zhou, M., & Danish, J. (2022). Mediated goal navigation in a mixed-reality embodied learning environment. International Collaboration toward Educational Innovation for All: Overarching Research, Development, and Practices - CSCL Proceedings, 534–535.

Zhou, M., **Vickery, M.**, & Danish, J. (2022). Mediating elementary students' mechanistic reasoning in collective embodied modeling activities. International Collaboration toward Educational Innovation for All: Overarching Research, Development, and Practices, 488–495.

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 International Conference of the Learning Sciences—ICLS 2021 (Vol. 46, pp. 632–654).

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/gq8mxp

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 International Conference of the Learning Sciences - ICLS 2021, 8.

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 International Conference of the Learning Sciences - ICLS 2021, 8.

Vickery, M., Danish, J., Tu, X., & Zhou, M. (2021). Scientific Modeling Practices Through Perspective Taking in a Mixed Reality Embodied Learning Environment. In E. de Vries, Y. Hod, & J. Ahn (Eds.), Proceedings of the 15th International Conference of the Learning Sciences—ICLS 2021 (p. 4).

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. 2.

CONFERENCE PRESENTATIONS

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*.

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)*

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.*

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 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

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PROFESSIONAL ACTIVITIES

TEACHING APPOINTMENTS

- Indiana University School of Education | *Associate Instructor*   2023 - Present
- Indiana University Writing Tutorial Services | *Graduate Tutor*   2023 - Present
- Indiana University Writing Tutorial Services | *Multilingual Learning Specialist*   2023 - Present
- Department of Computer Science at UNC Chapel Hill | *Teaching Assistant*   2016 – 2019
- Eagle's Nest Camp | *Senior Counselor & Instructor*   2017
- Department of Computer Science at UNC Chapel Hill | *Teaching Assistant*   2016 – 2019
- Wake County Self-Contained 'ID-Severe' Special Ed. Classroom | *Teacher's Assistant*

INDUSTRY APPOINTMENTS

- Inquirium, LLC   2023 - Present
  - Fieldscope | *Accessibility Consultant & Auditor*
  - Inqscribe | *Technical Documentation Editor*
  - RadioEverywhere | *Digital Product Architect & Designer*
  - 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)

RESEARCH PROJECTS

INDIANA UNIVERSITY - BLOOMINGTON

Independent Research | Doctoral Student

A Critical Participatory Study of Body-Inclusive Embodied Activity [1]   2024-Present

Advisor: Joshua Danish | This dissertation work takes a critical 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 autonomy, trauma-sensitivity, disability-inclusion, and intersectionality manifest in (particularly) technology-facilitated embodied learning contexts.

Camp Connections [2]   2022 - 2023

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[1] bit.ly/learning-with-bodies
[2] campconnectionsind.wixsite.com/camp

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.

Funded Assistantships | Graduate Research Assistant

STEP (Science through Technology Enhanced Play) Projects [3]   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 [4]   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.

RepTaL (Representations for Teachers as Learners) [5]   2022 - 2023

PIs: Cindy Hmelo-Silver, Joshua Danish, Heidi Carlone, 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 (Assistive Technologies + SETT Framework)   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) Project [6]   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.

CIT (Computation and Informatic Technologies) Education Research   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.

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[3] theraptlab.org/projects/step
[4] theraptlab.org/projects/cities
[5] theraptlab.org/projects/RepTal
[6] theraptlab.org/projects/seeds

Duke University & The University of North Carolina at Chapel Hill

FPG Child Development Institute | Research Intern   2019

> PIs: Kara Hume, Jessica Steinbrenner, Ann Sam | On the AFIRM[7] (Autism Focused Intervention Resources and Modules) and CSESA[8] (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.

Invited Talks & Presentations

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.

Awards & Fellowships

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

Professional Memberships & Service

○ ISLS Annual Meeting Committee| *Chair*	2024 - Present
○ ISLS AMC Hybrid Engagement Sub Committee| *Chair*	2024 - Present
○ International Learning Sciences Student Association[9]	*Chair*	2024 - 2025
○ University IT Services (UITS)	*Student Outreach & Engagement Consultant*	2024 - 2025
○ The inBody Learning Collective[10]	*Founder & Chair*	2024 - Present
○ International Society of the Learning Sciences (ISLS)	*Member, Reviewer*	2020 - Present
○ American Educational Research Association (AERA)	*Member, Reviewer*	2021 - Present
○ 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 Hill[11]	*Event Director & Chair*	2017 - 2019
○ Embodied Learning Summit at Duke University[12]	*Co-Director & Chair*	2019

Technologies

LearnabilityHQ[13]	*Lead Designer & Developer, CTO*	2020 - Present

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[7] afirm.fpg.unc.edu
[8] csesa.fpg.unc.edu
[9] bit.ly/ILSSA-Committee
[10] bit.ly/inbody-learning-collective
[11] hack110.weebly.com
[12] embodiedlearning.weebly.com
[13] learnabilityhq.com

Radio Everywhere[14] | *Lead Designer & Developer*   2023 - Present
Inqscribe**[15]** | *Technical Documentation Editor*   2023 - 2024
Fieldscope[16] | *Accessibility Consultant & Auditor*   2023 - 2024

To&Through (Chicago Public Schools)[17] | *Analytics Architect & Data Analyst*   2023 - 2024
Camp Connections Site[18] | *Lead Designer & Developer*   2023 - Present
GEM-STEP Embodied Mixed-Reality Environment[19] | *Researcher & Designer*   2019 - Present
Learning Sciences Graduate Student Conference (LSGSC)[20] | *Lead Designer & Developer* 2022
Learning Sciences Graduate Student Association (LSGSA)[21] | *Lead Designer & Developer* 2021
Modeling & Evidence Mapping Environment (MEME)[22] | *Researcher*   2019 - 2021

COMMUNITY SERVICE

- Camp Connections | *Consultant, Researcher, & Volunteer*
- 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 | *Volunteer Coach*

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

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[14] radioeverywhere.org
[15] inqscribe.com
[16] fieldscope.org
[17] toandthrough.uchicago.edu
[18] campconnectionsind.wixsite.com/camp
[19] embodiedplay.org
[20] lsgsc.org
[21] lsgsaindiana.wixsite.com/iuls
[22] modelingandevidence.org