

WEI WANG

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Knoxville, TN, USA

PROFESSIONAL SUMMARY

Ph.D. Candidate in Learning Design and Technology at the University of Tennessee, Knoxville, and co-founder of AskAboutEdu, an evidence-informed decision-support initiative for education. My research examines how generative AI, learning analytics, and evidence-grounded systems can support teaching, learning, critical thinking, AI literacy, and evidence-informed decision-making. I use design-based research, mixed methods, and computational methods to build and evaluate educational technologies, including retrieval-augmented generation (RAG) systems and interactive data platforms. I co-developed the AIREA Data Explorer and am first author of a forthcoming CRC Press book on computational analysis of educational data. Previously, I conducted mixed-method evaluations of large-scale smart-education initiatives at iFLYTEK's National Cognitive Intelligence Key Laboratory. Technical expertise includes Python, R, LLM systems, NLP, causal inference, and interactive data visualization.

EDUCATION

University of Tennessee, TN, USA	08/2023 – present
Ph.D. Learning Design and Technology, Education	
Committee: Dr. Joshua Rosenberg, Dr. Enilda Romero-Hall, Dr. Victor Lee, Dr. Jason Johnston	
Johnson University, TN, USA	06/2020 – 12/2021
M.A., Education Technology	
Anhui Normal University, Wuhu, China	09/2019 – 06/2022
M.S., Education Technology	
Longyan University, Longyan, China	09/2012 – 06/2016
B.S., Software Engineering	

PUBLICATIONS

- Wang, W., Pritchard, C., & Rosenberg, J. (2026). Analyzing Educational Video Transcripts with LLMs: Accuracy, Named Entities, and Interpretability. *Journal of Educational Data Mining*, 18(2), 143-168. <https://doi.org/10.5281/zenodo.22689987>
- Wang, W., & Sun, Q. (2026). Mapping generative AI policies in U.S. universities through LLM-assisted content analysis [Poster paper]. In *Proceedings of the International Conference of the Learning Sciences (ICLS 2026)* (pp. 3149–3151). International Society of the Learning Sciences.
- Zahra, F., Wang, W., Harper, F., & He, J. (Under review). Fluency without evidence: Constraint-first design and the limits of self-report in AI-assisted learning. *ACM Conference on Human Factors in Computing Systems (CHI 2027)*.
- Song, Y., Wang, W., Kilgore, C., & Kim, J. (SIGCSE 2027, under review). Developing GenAI Literacy among University Faculty: An Experience Report from a Nationwide Online Workshop. Paper - ERT.
- Duan, Y., Romero-Hall, E., Wang, W., & Morrow, J. A. (under review, 2026). Is Online Learning Really Ready for International Students? Acceptance, Participation, and Cultural Responsiveness in U.S. Higher Education. *Education Sciences*.
- Zhang, H., Rosenberg, J. M., Wang, W., & Sublett, C. (under revision, 2026). How Data Science Has Changed: Evidence from U.S. Job Postings, 2010–2025. *Harvard Data Science Review*.
- Zhang, H., Rosenberg, J. M., Frank, K. A., Wang, W., & Xu, R. (2026). Causal inference and sensitivity analysis methods: A field guide for science education researchers. *OSF Preprints*. https://doi.org/10.31234/osf.io/kn5qb_v2
- Wang, W., Rosenberg, J. M., & Koehler, M. J. (2025). Trends in AI Curriculum Materials: Insights from Data Mining a Teacher Marketplace. [EdArXiv Preprint](#).
- Ping, H., Wang, W., Xie, Y., Lv, S., Li, J., & Weng, L. (2025, April). Generative AI Dependency in Higher Education: Investigating Continuance Intention, Cognitive Response, and Creativity. In the *2025 7th International Conference on Computer Science and Technologies in Education (CSTE)* (pp. 615-621). IEEE. <https://doi.org/10.1109/CSTE64638.2025.11092242>

- Allman, B., Kimmons, R., **Wang, W.** *et al.* Trends and Topics in Educational Technology, 2024 Edition. *TechTrends* (2024). <https://doi.org/10.1007/s11528-024-00950-5>
- Sarah Narvaiz, Qinyun Lin, Joshua M. Rosenberg, Kenneth A. Frank, Spiro J. Maroulis, **Wei Wang**, Ran Xu (2024). Konfound: An R Sensitivity Analysis Package to Quantify the Robustness of Causal Inferences. *Journal of Open Source Software*, 9(95), 5779, <https://doi.org/10.21105/joss.05779>
- Ye, F.-z., & **Wang, W.** (2023). Returning to the main position of classroom education: A study on the teaching efficacy of smart classrooms and its influencing factors. *Journal of Bingtuan Education Institute*, 33(2), 57-65. (CNKI)
- **Wang, W.**, Duan, Y., Wang, Q., & Liu, H. (2021). An ECM-ISC Based on College Students' Continued Learning Intention toward E-Learning Space Post COVID-19. *Open Journal of Social Sciences*, 9, 377-395. DOI: [10.4236/jss.2021.912026](https://doi.org/10.4236/jss.2021.912026)
- **Wang, W.** (2020). Individual-construction strategy of school informatization based on MOOC. *China Education Technology & Equipment*. (CNKI)

BOOKS & GUIDEBOOKS

Wang, W., Akcaoglu, M., Rosenberg, J. M., & Kellogg, S. (under contract, anticipated publication late 2026). [*Computational Analysis of Educational Data: A Field Guide Using R*](#) (a volume in the *Chapman & Hall/CRC Big Data Series*). CRC Press.

Song, Y., Kilgore, C., & **Wang, W.** (Eds.). (2026). *[AI and Me] Generative AI guidebook for higher education faculty*. [EdtechBook].

GRANT PROPOSAL DEVELOPMENT

Institute of Education Sciences (IES) | 2026

Statistical and Research Methodology in Education, 84.305D

Principal Investigator: Kenneth Frank, Michigan State University

Status: In preparation.

- Co-conceived the proposal's AI component with a faculty mentor and contributed to proposal development.

Digital Promise | 2026

K-12 AI Infrastructure Program

Principal Investigator: Joshua Rosenberg, University of Tennessee, Knoxville

Proposal role: Co-Principal Investigator; lead proposal writer

Status: Advanced to an invited second-round revision and review; not funded.

- Led the drafting of the full proposal and invited second-round revision, incorporating feedback from the Principal Investigator and program reviewers.

Spencer Foundation | 2026

Research Grants on Education: Large

Principal Investigator: Fatima T. Zahra, University of Tennessee, Knoxville

Proposed project role: Graduate Research Assistant

Status: Invited full proposal under review.

- Contributed to the research design, methodology, and analysis plan, and participated in revisions throughout the proposal development process.

RESEARCH EXPERIENCE

Project: AskAboutEdu — Evidence-Informed Decision Support for Education

Role: Co-founder & Researcher

- Designed and deployed AskAboutEdu, an open-source AI interface that connects large language models (LLMs) with structured educational research evidence, enabling users to query intervention reports and receive answers grounded in primary sources.
- Built an end-to-end retrieval-augmented generation (RAG) pipeline using Python, Streamlit, and sentence-level embeddings to index and retrieve evidence from What Works Clearinghouse (WWC) intervention reports.
- Developed a reproducible data processing workflow to extract, normalize, and chunk long-form PDF research reports into structured JSON corpora, preserving document-level metadata for transparent citation and traceability.
- Implemented evidence-constrained prompting strategies that require the model to answer only from retrieved excerpts, reducing hallucination and enabling explicit source attribution at the chunk level.
- Designed the interface to support researchers, policymakers, and educators in exploring educational evidence interactively, serving as a prototype for transparent, explainable, and evidence-based AI systems in applied education research.

Project: Next Level Teaching Blueprint — Scaling AI-Assisted Critical Thinking Across Research Methods Courses

University of Tennessee | UTK ORIED-funded | PI: Dr. Fatima T. Zahra | Role: Student Principal Investigator & Graduate Researcher

- Co-led a multi-phase design-based research initiative examining how generative AI can function as a structured discourse partner to strengthen higher-order thinking, critical thinking, and AI literacy in undergraduate and graduate research methods courses.
- Contributed to the design and implementation of constraint-first, dialogic learning activities that require students to articulate their initial reasoning, interrogate assumptions through interaction with an LLM, revise their responses, and document metacognitive reflections.
- Developed an integrated mixed-methods research workflow linking pre/post measures of disciplinary learning, AI literacy, and critical thinking with student learning diaries, AI chat logs, assignment artifacts, classroom observations, and faculty feedback across the Spring 2026 CEHHS Phase 1 pilot.
- Conducted quantitative analyses for the Spring 2025 pre-pilot study, including data validation, demographic reporting, pre/post comparisons, and the production of publication-ready tables and visualizations for statistical learning and AI literacy outcomes.
- Designed computational analyses of student–AI discourse, including interaction-sequence modeling, dialogue-act classification, linguistic markers of learner authority and deference, and learner positioning of AI as an answer generator, validator, or co-thinker.
- Collaborated with an interdisciplinary research team and participating faculty to translate empirical findings into scalable pedagogical principles, faculty implementation resources, and scholarly publications, including a Phase 1 manuscript targeted for CHI 2027.

Project: The Advanced Infrastructure, Energy, and Agriculture (AIREA) Data Explorer (URL: [AIREA Data Explorer](#))

University of Tennessee | Funded by JP Morgan Chase

PI: Dr. Cameron Sublett | [Project Site](#)

R Shiny Repository: <https://github.com/data-edu/airea-data-explorer-shiny>

Data Prep Repository: <https://github.com/data-edu/airea-data-explorer-prep>

- Designed and deployed the AIREA Data Explorer, a web-based visualization platform showing how U.S. community colleges prepare students for high-opportunity occupations in infrastructure, energy, agriculture, and related sectors.

- Built the platform using R Shiny and Mapbox GL JS, integrating national datasets to visualize changes in job opportunities and credential completions since 2010.
- Collaborated with researchers at the Community College Research Center (Columbia University) to ensure research rigor, data accessibility, and user-centered interface design.
- The dashboard allows policymakers, educators, and researchers to analyze alignment between community college programs and labor market needs, promoting data-driven educational planning.
- Serves as a model for open, reproducible data communication in applied educational research and workforce analytics.

Institute of Education Sciences (IES) Funded Project — Quantifying the Robustness of Causal Inferences

Award No. R305D220022 | Michigan State University (Collaborative)

PI: Dr. Kenneth Frank | [IES Project Info](#)

- Contributed to the development and validation of the “[Konfound](#)” R package, an open-source statistical tool for causal inference robustness analysis.
- Collaborated with cross-institutional teams to test algorithms, ensure code reproducibility, and co-author peer-reviewed publications in *Journal of Open Source Software (JOSS)*.
- Enhanced model evaluation procedures relevant to AI-based educational analytics and scalable statistical workflows.

Project: Individualized Teaching and Educational Governance Supported by Artificial Intelligence

iFLYTEK Education Technology Institute | Bengbu, China | Grant No. IED2020-Z003

PI: Dr. Bang Qi Liu

- Conducted field studies on AI-supported educational governance and school-level adoption of smart classroom technologies.
- Designed and implemented qualitative interview protocols for teachers and principals, then coded and analyzed data to assess the impact of AI-driven teaching models.
- Authored regional governance reports that informed provincial education policy and smart classroom development strategies.

Project: Anhui Philosophy and Social Science Planning Project — Knowledge Supply and Deep Learning in the “Internet+” Era.

Anhui Normal University | Grant No. AHSKY2019D036

PI: Dr. Hehai Liu

- Developed and validated a survey instrument grounded in the ECM-ISC model to measure students’ continued engagement with online learning environments.
- Applied multilevel regression and confirmatory factor analysis using R and SPSS to assess behavioral intention and technology adoption factors.
- Published as first author in peer-reviewed journals, contributing to research on digital learning adoption and instructional technology design.

TEACHING, CURRICULUM, AND FACULTY DEVELOPMENT

Teaching Assistant, ESM 250: Applied Statistical Concepts for Decision Makers

Undergraduate course | Instructor: Fatima T. Zahra | University of Tennessee, Knoxville | Spring 2025

- Facilitated weekly applied sessions in R, Excel, Stata, and generative AI, guiding debugging, method selection, and a statistical consulting project.
- Developed instructor-reviewed model solutions, maintained Canvas discussions, and reinforced ethical GenAI use, independent problem-solving, critical evaluation, and attribution.
- Supported classroom research through survey and assessment administration, documentation of GenAI engagement, and FERPA-aware handling of student interaction data.

Instructor & Project Contributor, AI and Me: Navigating GenAI for Higher Education Faculty

CEHHS and Teaching & Learning Innovation | University of Tennessee, Knoxville | 2025–Present

- Supported design and delivery of a five-session national professional-development series on responsible GenAI use in teaching, assessment, research, media creation, and faculty workflows.

- Developed the self-paced Canvas course, organized accessible transcripts and resources, supported completion certificates, and co-edited the companion EdTech Books guidebook.

Faculty Development Facilitator, Teaching with Generative AI

Digital Learning Unit | University of Tennessee, Knoxville | Apr 2024–Present

- Facilitate professional learning on GenAI foundations, course integration, assessment, ethics, privacy, and responsible practice; provide formative feedback on faculty implementation plans.
- Analyze participant surveys, interviews, and reflections to refine curriculum and support for faculty across disciplinary and technical backgrounds.

Instructor & Adaptive Learning Specialist

Shanghai Squirrel AI Education Technology Co., Ltd. | Dec 2017–Aug 2019

- Implemented adaptive learning workflows for K–12 learners, used diagnostic data to personalize learning pathways, and trained teachers to integrate the system into instruction.

Founder and Tutor

YIXUE Tutoring Center, Longyan, China | 2015–2017

- Founded and operated a tutoring center serving primary, middle, and high school students.
- Organized in-person tutoring and preparation for the senior high school entrance examination and national college entrance examination.
- Organized teacher training activities as part of the center’s educational services.

WORK EXPERIENCE

Digital Learning Unit, University of Tennessee, Knoxville, TN, USA

Teaching Assistant & Research Assistant | Aug 2023 – Present

- Conducted research on AI-enhanced online teaching practices, synthesizing empirical evidence to inform design recommendations for higher-education contexts.
- Designed and administered survey and interview protocols; led qualitative coding and mixed-methods analysis on faculty perceptions and adoption of AI tools.
- Collaborated with a research team to prototype AI-informed instructional frameworks (e.g., teacher support workflows and reusable design patterns) and document implementation guidance.

National Cognitive Intelligence Key Laboratory, Institute of Educational Technology, iFLYTEK, China

Researcher | Mar 2021 – Jun 2023

- Conducted research in Smart Education Demonstration Zones, evaluating AI-enabled learning platforms and K–12 smart classroom ecosystems across regional pilots.
- Led mixed-method evaluation studies to examine impacts on teaching practices and student engagement (learning analytics + surveys/interviews/classroom observations).
- Maintained an intelligent-education policy and initiative database supporting evidence-based reporting and consultation for local education authorities.
- Contributed to the China Annual Blue Book of Artificial Intelligence Education Development and coordinated research-practice communication through the Annual Intelligent Education Development Forum, engaging researchers, educators, and product teams.

CONFERENCE PRESENTATIONS

- **Wang, W., & Sun, Q.** (2026). Mapping generative AI policies in U.S. universities through LLM-assisted content analysis [Poster presentation]. International Conference of the Learning Sciences, ISLS Annual Meeting, Irvine, CA, United States.
- **Wang, W** (2026). Localized Large Language Models for Educational Research: Two Privacy-Preserving Case Studies in Vision and Text Analysis. Chicago, AECT 2026.
- **Wang, W** (2026). Bridging Workforce Data and Decision-Making with a RAG-Enabled Community College Data Explorer. Stanford, Stanford EDS 2026.
- **Wang, W** (2026). Developing Prompt Engineering Competence Framework: Comparing China, EU, and U.S. Educators’ Digital Literacy Standards. Los Angeles, AERA 2026.

- **Wang, W** (2026). Educational Video Transcript Analysis with LLMs: Improving Entity Recognition and Qualitative Insights. Los Angeles, AERA 2026.
- **Wang, W** (2025). Bridging the AI Gap: Collaborative Strategies for Effective Integration in Higher Education. Orlando, OLC 2025.
- **Wang, W** (2025). Aligning Degree Production and In-Demand Middle Skill Occupations: National and Regional Insights. Seattle, APPAM 2025.
- **Wang, W** (2025). Faculty Voices: Sentiment and Thematic Analysis of GenAI Integration in Higher Education Course Design. Las Vegas, AECT 2025.
- Hongjie Ping, **Wang, W** (2025). Generative AI Dependency in Higher Education: Investigating Continuance Intention, Cognitive Response, and Creativity. The 7th International Conference on Computer Science and Technologies in Education (CSTE). Wuhan, China. CSTE 2025.
- **Wang, W** (2025). Exploring Dimensions of AI Integration and Designing an Effective GenAI-Based Teaching Model. Denver, AERA 2025.
- **Wang, W.** (2024). Navigating Sentimental Landscapes: An In-depth Analysis of ChatGPT Implementation in Universities through Policy Examination. Philadelphia, AERA 2024.
- **Wang, W.** (2024). Implementing Generative AI in Practice: Designing Assessments and Learning Activities in Faculty Development Program. Kansas City, AECT 2024.

SERVICE

Peer Reviewer, Journal of Research on Technology in Education, 2024–2025.

Peer Reviewer, Journal of Statistics and Data Science Education, 2025.

Peer Reviewer, AECT 2025.

President of CSSA, Student Union, University of Tennessee.

PROFESSIONAL SKILLS & RECOGNITIONS

TECHNICAL & ANALYTICAL SKILLS

- Programming Languages: Python, R
- AI/ML Frameworks: PyTorch, Hugging Face, OpenAI API, Scikit-learn
- Statistical & Modeling Tools: RStudio, SPSS, Mplus, Amos
- Data Science: Educational data mining, LLM evaluation, causal inference, NLP applications
- Data Visualization: R Shiny, Mapbox GL JS, Tableau, ggplot2
- Version Control & Cloud: Git/GitHub, AWS, Google Cloud
- Web & App Development: HTML/CSS, JavaScript, and mobile/web educational platforms

RESEARCH & DESIGN SKILLS

- Instructional Design: Design-based research for AI-supported teaching and learning
- Empirical Research: Mixed methods, survey design, factor analysis, and regression modeling
- AI for Education: LLM and GenAI integration in classroom and faculty-development contexts
- Evaluation & Assessment: Quantitative and qualitative evaluation of educational technologies and instruction
- Publication & Dissemination: Peer-reviewed articles, technical reports, and public data dashboards

CERTIFICATIONS

- National English Teacher Qualification Certificate (Junior High, China)
- National Mathematics Teacher Qualification Certificate (Junior High, China)
- National IT Teacher Qualification Certificate (Senior High, China)

AWARDS & HONORS

- Julius D. McElroy Scholarship, University of Tennessee, 2023
- GrowSTEM Project Fund Scholarship, University of Tennessee, 2023
- Outstanding Master's Thesis Award, Anhui Normal University, 2022