AIME-CON 2025

Incorporating AI into Educational Measurement:
Faculty, Research, Curriculum, and Universities

Advancing AI at Washington State University

Shenghai Dai
WSU Educational Psychology & Methodology

WASHINGTON STATE
UNIVERSITY

Outline

➢ About the program – WSU Ed Psych & Methodology

➢ Changes to teaching practice/curricula/course offerings

➢ University- & college-wide programs that support AI integration into the curriculum/use or internal partners

➢ Professional development and/or hiring strategies for new or existing faculty

➢ Existing research for faculty or graduate students

About WSU Ed Psych & Methodology

➢ College of Education, Sport, and Human Sciences
➢ Educational Psychology & Methodology
  ▪ Program-wide: 9 faculty + 17 (current) graduate students
  ▪ **Measurement & Psychometrics**
    o 2 faculty (Brian French & Shenghai Dai)
    o 3-5 students
  ▪ Affiliated center and labs
    o LPRC – Learning and Performance Research Center
      • Psychometric Lab
      • MERIT Lab
      • Large-Scale Data Lab

Changes to Teaching Practice/Curricula/Course Offerings

➢ **Increasing demand in and outside the program**
- AI and machine learning
- Python (especially after the NCME career webinar)

➢ **Our efforts**
- LPRC methods workshop – Intro to ML (2022)
- Group discussions (2022-2025) on various topics (education data science, AI & ChatGPT, etc.)
- Fund students for online Python training
- Proposed a new course, "ML Applications in Education"; first offer in Fall 2025
- Projects using ML, Topic modeling, and LLMs

➢ **Student efforts**
- Coursera and other online certification training
- AI-related Internship

University Policy & Resources

➢ **University Policy**

- **Office of Provost Memorandum on AI Use (Aug. 2025)**
  - "…it is the instructor's prerogative to allow or prohibit the use of any generative AI tool…. An expectation for our students is that there is accurate and transparent attribution of AI use in their classroom assessments. "
- **WSU AI Council:** System-wide AI Strategy and Policy Task Force to address Academic policies, pedagogy (including faculty training), intellectual property and research policy, and data security.
- Some colleges & departments also have their own AI policy.

➢ **Resources – WSU AI Website**

- Benefits & challenges of AI, detecting & reporting gen AI misconduct, events & training opportunities, faculty studying AI, teaching considerations, etc.

➢ **Monthly AI Literacy Series sponsored by Office of the Provost**

- Oct 13 - Using AI: From Efficiency to Effectiveness Through Collaboration

➢ **AI Workshops**

Example of Department AI Policy

➢ **I. Policy Statement**

➢ **II. Core Principles of AI Use**

➢ **III. Guidelines for AI Use**

➢ **IV. AI Use in Courses: Guidelines for Students and Instructors**

- **A. AI Use in Assignments**: no AI allowed, allowed for specific tasks, fully allowed

- **B. Academic Integrity & AI Citation Requirements**

- **C. Allowed & Prohibited Uses of AI**

- **V. AI and Data Privacy**

College-Level AI Integration

➢**AI working group (2025)**

➢**Faculty panel on AI (Oct. 2025)**

▪ LEADS: Leadership in Education & AI for a Digital Society

▪ The Panel

✓ 3 winners of "Microsoft AI for Good" research awards on using AI for robust solutions to societal grand challenges.

✓ 2 faculty with AI research ("Remixing Special Education Practices with Artificial Intelligence: UDL, EBP, and HLPs")

PD and/or hiring strategies for new or existing faculty

➢ PD & Training

- LPRC Methods workshop
- WSU AI workshops & training
- College-level panels and activities

➢ Existing faculty with AI grants and projects

➢ New faculty with AI research profiles

Research for Faculty or Graduate Students

➤ Grots

- Microsoft AI for Good (2025-26)
    - ✓ **Brian French,** *WARNS* (to develop large language models for the elementary-school level to reduce absenteeism and prevent dropouts by initiating a dialogue with students about what they need to thrive).
        - In collaboration with JMU with the E-WARNS work.
    - ✓ **Tingting Li,** *Supporting rural science education* (to develop an AI-powered tool to help rural elementary teachers develop high-quality science assessments).
    - ✓ **Peng He,** *Helping science teachers* (to provide science teachers with an AI-powered tool that provides real-time support for argumentation-based science learning in diverse classrooms.)
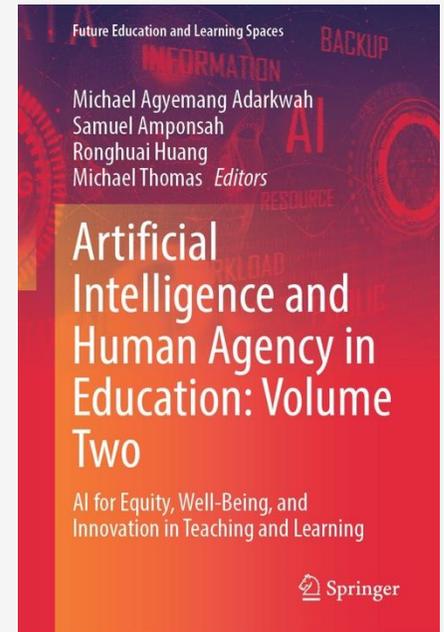- NAEd/Spencer Postdoctoral Fellowship
    - ✓ Tignting Li, *Designing An LLM-Based Multi-Agent System for Customized Science Assessments Through Multidisciplinary Human-AI Collaboration*

Research for Faculty or Graduate Students

➢Selected Faculty Research in AI

- He et al. (2025). *Leveraging Generative AI in Designing and Delivering Individualized Responsive Feedback for Pre-service Teachers in Higher Education*.
- Li et al. (2025). Human-AI Collaboration for Knowledge-in-use Assessment Design: Leveraging LLMs with RAG
- McMahon & Firestone (2024). *Remixing Special Education Practices with Artificial Intelligence: UDL, EBP, and HLPs*.

Research for Faculty or Graduate Students

➢Student projects

- Kehinde et a. (2021) *Application of text mining for the motivational-developmental assessment for university students.* APA
- Demir (2025) *Scoring motivational assessments with free responses via transformers* [dissertation]
- Demir et al. (2025). *Detection of AI-Generated Argumentative Essays.* [NCME]

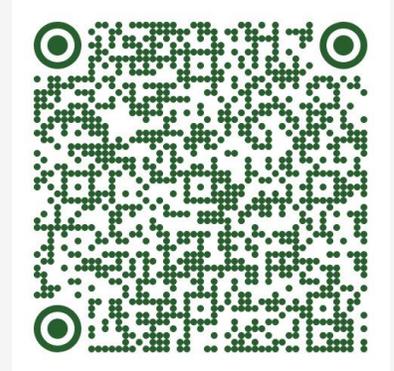**Detection of AI-Generated Argumentative Essays**

Cihan Demir[1], Amy Burkhardt[2], Alexander Kwako[2], Zachary Schultz[2], Susan Lottridge[2]

[1]Washington State University [2]Cambium Assessment Inc.

National Council on Measurement in Education (NCME) 2025

AI in Measurement – Call for Papers

➤ *Applied Measurement in Education* special issue

➤ **Topic**: Artificial Intelligence in Measurement – Emerging Innovations and Challenges

➤ Guest editors:
  ▪ **Mark Shermis,** Performance Assessment Analytics, LLC, mshermis@gmail.com
  ▪ **Brian French,** Washington State University, frenchb@wsu.edu

➤ **Focus areas:**
  ▪ AI in Assessing and Scoring Complex Constructs
  ▪ Test Security in the Era of AI
  ▪ Fairness, Bias, and Equity
  ▪ Ethical and Legal Implications

➤ Proposal due Jan 5, 2026; Notification of acceptance: Feb 1, 2026; Full manuscript due June 1, 2026.