

AI Systems Informed by Learning Engineering

[A Predictive Learning Engineering Framework for Modeling Active Learning](#)

[Adaptive Multi-Modal Deepfake Detection for Safer Learning Environments](#)

[Agentic PAL: Designing Human-Empowered AI Partnerships for Early Childhood Mathematics Learning](#)

[An Application of Design-Based Implementation Research to Develop a Framework to Support a Community of AI-experience Creators](#)

[Automated Run-on Sentence Detection and Correction for Educational Writing](#)

[Automatic Identification and Evaluation of Revisions in Student Writing Using Large Language Models](#)

[Automatically Generating Interactive Learning Experiences with an LLM-Driven Agentic Pipeline](#)

[Bridging Human Intelligence Augmentation \(IA\) and Classroom Practices via GenAI in Learning Engineering](#)

[Charm-bots: The Impact of A.I.'s Sycophancy Language on User Trust](#)

[Coaching, Not Autocomplete: Early Evidence from ConnectInk's AI-Supported Personal Narrative Pilot](#)

[Comparing Epistemic Emotions and User Experience Across Two AI Instructional Designs in Biology Learning](#)

[Currents of Inquiry: Insights From Two Years of Real-World AI-Learner Water Conversations](#)

[Design and Pilot Evaluation of a Gamified Narrative Chatbot for STEM Education](#)

[Designing for Student Engagement with AI in Courseware: Lessons from Iterative Improvements to DOT](#)

in REAL CHEM

- EdLight Research Portal: An Expert-Annotated Repository of Handwritten Math Student Work
- Epistemic Cognition and Uncertainty Navigation with a Domain-Specific AI Chatbot in STEM Education
- From Course Concept to Lecture Video: An AI-Powered System for Automated MOOC Development
- From Measurement to Action: A Learning Engineering Approach to AI-Powered Assessment for Human Power Skills Development
- Implementing Concept Instruction via MCP Server
- L2-French Learners and Generative AI (GenAI): Challenges, Needs, and Design Guidelines
- Learning-By-Explaining with Generative AI: A Pilot Implementation in Introductory Biology
- LLM Safety in an Educational Context: A holistic approach
- Media Mentor AI: How a SCAMPER-guided AI assistant is helping reimagine media literacy learning
- MIRANDA: Real-Time Learning Analytics for Authentic Embedded Assessment
- Multiple-Document Comprehension in High School Science: A Learning-Engineering Pilot Study
- NLP Validation of Prompt Strategies for Theory-Aligned LLM-Generated Personalization
- Open Repository for AI Models as Learning Engineering Components
- Optimizing Language-Focused Writing Feedback from Large Language Models through Prompt Engineering
- Quality Assessment Through Learning Engineering: An Evaluation Rubric of LLM-Generated Multiple-Choice Questions
- Reasoning LLMs are Competent Courseware Reviewers
- ReQUESTA: A Hybrid Agentic Framework for Generating Cognitively Diverse Multiple-Choice Questions
- Social and Emotional Dimensions of Generative AI Use
- Socio-Emotional Learning in AI K-12 Guidance and Policy Documents: A Gap Analysis
- The Difficult Conversations Bot: Findings on Fostering Empathy and Reflective Communication Among Faculty and Staff
- The Writing Analytics Tool: A Learning Engineering Approach to Designing AI-Supported Writing Instruction
- Towards Automated Detection of Struggling Student Programmers

User experience design of AI-assisted human-technology ecosystem for writing assessment

Using AI to Bridge Technology Gaps in Higher Education

