Simulated Pupils with AI Feedback — LMU Munich's Two Randomised Trials on Training Pre-Service Teachers to Diagnose Learning Difficulties

AI in Education · Good practice · Germany

Quality score: 67/100

Evidence strength: Moderate

Summary

LMU Munich researchers gave trainee teachers NLP-based adaptive feedback while they diagnosed simulated pupils. A lab RCT (n=178) and a five-university field replication (n=332) found better reasoning quality but no gain in diagnostic accuracy.

Key dimensions

Dimension	Score
Evidence of learning impact	2/3
Equity & inclusion	1/3
Transparency, ethics & data protection	2/3
Teacher capability & pedagogy	3/3
Scalability & sustainability	2/3

Evaluated by C-NAPSE

Data sources

C-NAPSE web research — accessed 2026-11-10

Ludwig-Maximilians-Universität München (LMU Munich) — accessed 2026-11-10

Sailer et al. (2023), Learning and Instruction 83, 101620 — accessed 2026-11-10

Bauer et al. (2025), Journal of Computer Assisted Learning — field replication — accessed 2026-11-10

University of Cambridge Faculty of Education news summary — accessed 2026-11-10

AIhub summary of the study — accessed 2026-11-10

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