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From Traditional Instruction to AI-Augmented Learning: A Framework for Student Success and Teaching Excellence

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Abstract

Globally, Artificial Intelligence (AI) is no longer a peripheral educational technology; it is becoming a strategic infrastructure for improving learning quality, retention, feedback, and teaching productivity. This study proposes the Student Success and Teaching Excellence Framework (SSTEF), a six-step model that guides institutions from traditional instruction toward responsible AI-augmented learning through learning diagnosis, pedagogical alignment, AI augmentation, feedback orchestration, ethical governance, and continuous improvement. The proposed framework was tested in a first-class pilot involving 193 undergraduate students at one of University in Iraq, using a pre–post comparison between traditional delivery and AI-augmented delivery. The obtained results show a 7.7-point improvement in mean final score, an 11 percentage-point increase in assignment submission, a 33 percentage-point gain in early identification of at-risk students, a reduction of feedback turnaround from 9.2 to 3.1 days, an 8 percentage-point increase in course completion, a 3.7-hour weekly reduction in instructor grading workload, and a rise in student satisfaction from 2.7 to 4.3. These results indicate that AI-augmented learning can simultaneously strengthen student achievement, accelerate formative support, improve persistence, and protect teaching excellence when implemented with human oversight and ethical safeguards.

Keywords: Artificial Intelligence; AI-Augmented Learning; Teaching Excellence; Learning Analytics; Higher Education.