

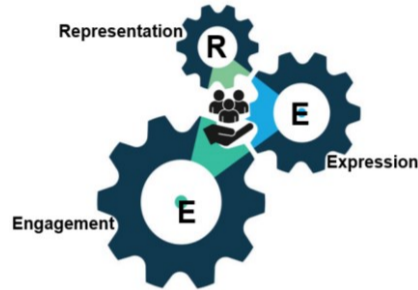


UDL and AI: Inclusive Learning for All - Salwa Mrayhi, Mohamed Koutheair Khribi, Mohamed Jemni

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01 INTRODUCTION

Education is changing rapidly, requiring innovative and inclusive approaches. This study examines how Universal Design for Learning (UDL), digital accessibility, and emerging technologies like AI can transform education. By fostering inclusive and equitable learning environments, we align with Sustainable Development Goal 4 to ensure quality education for all.



01 METHODS

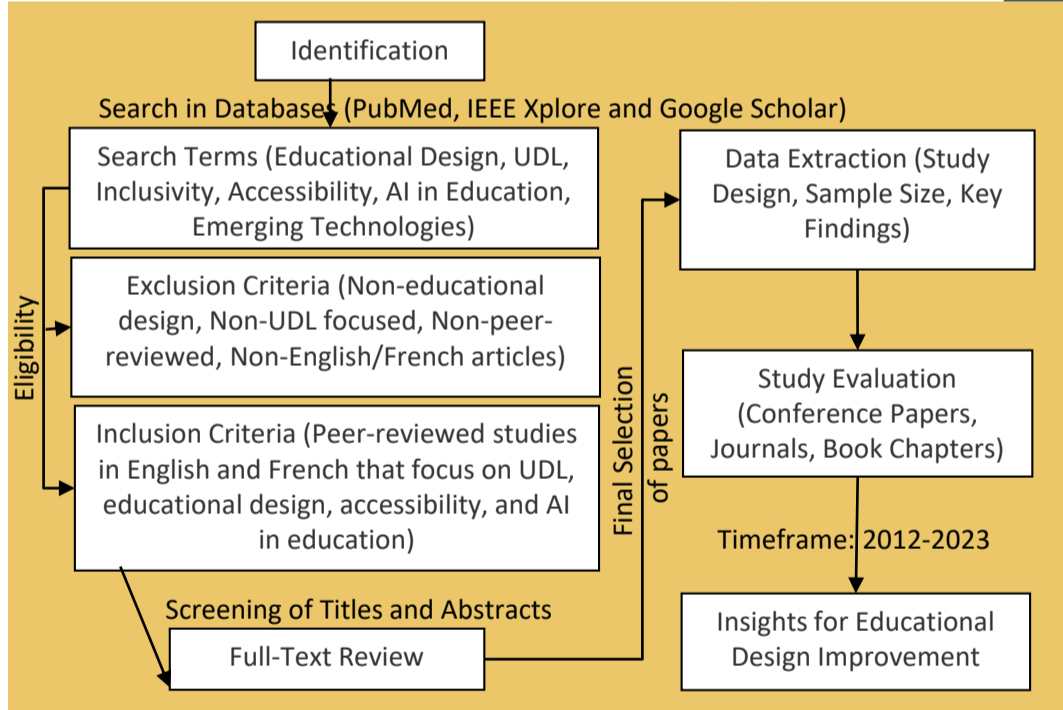


Figure 1: Systematic Literature Review: Adoption of PRISMA Model

Table 1: Comparison of Educational Design Approaches

Aspect	Instructional Design	Learning Design	UDL
Focus	Instructional materials/activities	Engaging and meaningful learning experiences	Accessible and inclusive learning for all
Scope	Narrow (individual lessons/modules)	Broader (overall learning experience)	Comprehensive (all learner needs, diverse contexts)
Key Principles	Systematic (e.g., ADDIE)	Learner-centered, pedagogical strategies	Engagement, Representation, Action & Expression
Technology	Mix of traditional and digital tools	Multimedia and interactive tools	Advanced tech to eliminate learning barriers

02 RESULTS/DISCUSSION

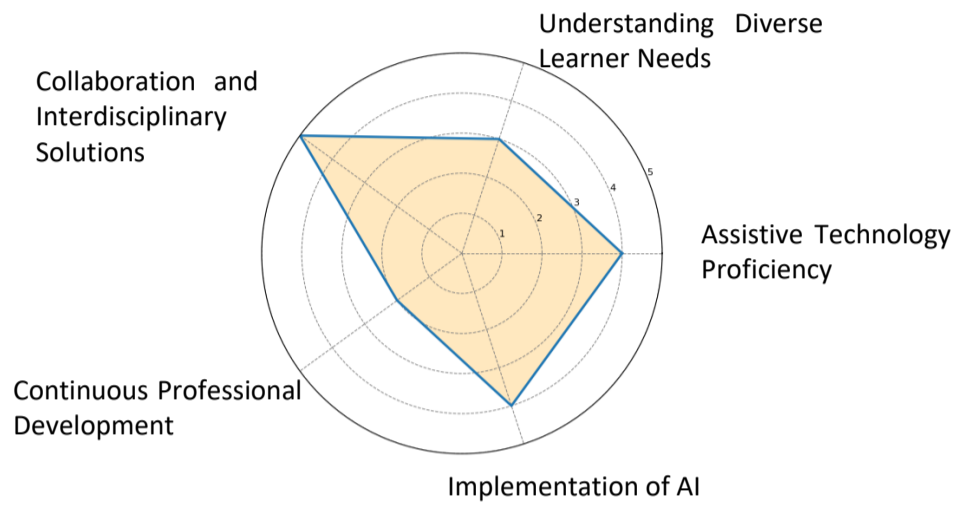


Figure 2: Competencies for Educators and Learning Designers

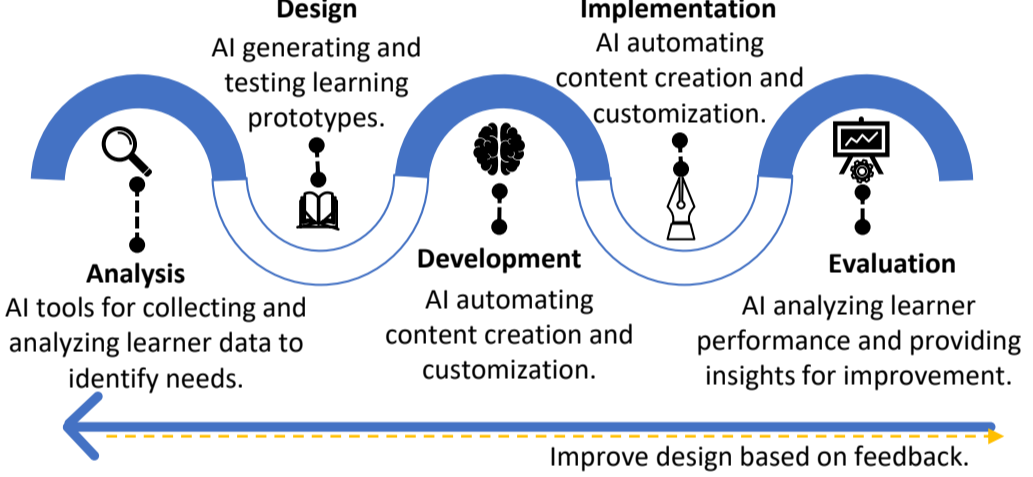
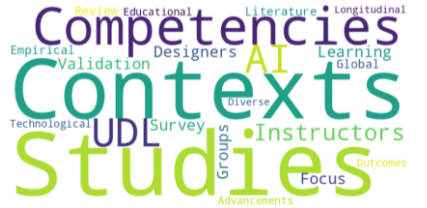


Figure 3: AI in the Learning Design Process

Table 2: Impact of UDL on Learner Engagement and Success

Study	Key Findings	Impact on Engagement/Success
Al-Azawei et al. (2017)	UDL increases learner satisfaction and engagement in e-learning environments.	Improved learner motivation and higher course completion rates.
Almeqdad et al. (2023)	Meta-analysis confirms the positive impact of UDL on academic performance.	Enhanced academic success, particularly among diverse learners.
CAST (2023)	UDL implementation in K-12 settings promotes more inclusive classroom practices.	Higher student participation rates and improved academic outcomes.

03 CONCLUSION



UDL + AI = Success:
UDL and AI together effectively meet diverse learner needs.
Continuous growth:
Ongoing educator development is essential for successful implementation.

Reference: Mrayhi, Salwa, Mohamed Koutheair Khribi, Haifa Belhadj, and Mohamed Jemni. 2024. "Designing Future Education for All: Principles and Frameworks." In *Envisioning the Future of Education Through Design*, 147–77. Springer.