STIAEM — Open Educational Resource (OER) Repository for AI

Metadata Sheet — WP2 / Erasmus+ KA220-SCH, ref. 2025-1-IT02-KA220-SCH-000365213

OER 4.3.1

Integrating UDL Principles with Multimodal AI for Diverse Learning Needs

Identifier	OER 4.3.1
Title	Integrating UDL Principles with Multimodal AI for Diverse Learning Needs
Creator	Liceo "Don Lorenzo Milani" (Acquaviva delle Fonti - Cassano delle Murge) - Italy
Description	The resource explores the meeting point between Universal Design for Learning and multimodal artificial intelligence in order to address the diverse learning needs present in every classroom. It presents the three UDL principles — engagement, representation, action and expression — and the European normative frame, showing how to produce alternative representations of content with AI. The critical focus is the difference between simplifying access and impoverishing the cognitive challenge.
Keywords	Universal Design for Learning; multimodal AI; inclusion; engagement; representation; action and expression; accessibility; cognitive challenge
Language	EN (English)
Affiliation	Liceo "Don Lorenzo Milani" (Acquaviva delle Fonti - Cassano delle Murge) - Italy
Contributor	STIAEM Transnational Scientific Board (peer review, Rhodes validation protocol)
Media Format	Text; Infographics
Genre	Training Manual; Educational Guide
URL	https://www.stiaemproject.eu/?oer_download=OER-4.3.1
Citation	Liceo "Don Lorenzo Milani" (Acquaviva delle Fonti - Cassano delle Murge). (2026). *Integrating UDL Principles with Multimodal AI for Diverse Learning Needs* [Educational guide]. Slow Tech Innovation: AI, Ethics, and New Teaching Methods (STIAEM), 2025-1-IT02-KA220-SCH-000365213.
References	Capp, M. J. (2017). The effectiveness of universal design for learning: A meta-analysis of literature between 2013 and 2016. International Journal of Inclusive Education, 21(8), 791-807. https://doi.org/10.1080/13603116.2017.1325074 CAST (2024). Universal Design for Learning Guidelines version 3.0. CAST. https://udlguidelines.cast.org/ Cosgrove, J., & Cachia, R. (2025). DigComp 3.0: European digital competence framework (Fifth edition). Publications Office of the European Union. https://data.europa.eu/doi/10.2760/0001149 European Union (2019). Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services (European Accessibility Act). Official Journal of the European Union, L 151, 70-115. https://eur-lex.europa.eu/eli/dir/2019/882/oj UNESCO (2020). Global Education Monitoring Report 2020: Inclusion and education - All means all. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000373718

Educational Level	Secondary School
Associated Module / MOOC Video Lesson	Module 4 - Prompt Engineering for Inclusive Education / Video 4.3 - Applying UDL and Inclusive Personalisation
Learning Objectives	recognise the three UDL principles - engagement, representation, action and expression - and apply them to design; use multimodal AI to produce alternative representations of content addressed to different needs; reflect critically on the difference between simplifying access and impoverishing the cognitive challenge.
Rights	Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0)
Date Available	14/09/2026
Date Modified	