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OER 3.2.2

Operational Protocols for the 'Human-in-the-Loop' Model in Educational Governance

Identifier	OER 3.2.2
Title	Operational Protocols for the 'Human-in-the-Loop' Model in Educational Governance
Creator	Esenler District Directorate of National Education - Türkiye
Description	Complementing OER 3.2.1, the resource tackles the how of human oversight so that it becomes a verifiable practice rather than a statement of principle. It distinguishes HITL models (active learning, interactive machine learning, machine teaching) by who controls the process, and proposes a three-phase protocol — before adoption, during use, after evaluation. The practical focus is on the conditions of durability: training, traceability and oversight inside the cycle.
Keywords	human-in-the-loop; active learning; machine teaching; operational protocol; traceability; educational governance; oversight; institutional procedures
Language	EN (English)
Affiliation	Esenler District Directorate of National Education - Türkiye
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-3.2.2
Citation	Esenler District Directorate of National Education. (2026). *Operational Protocols for the 'Human-in-the-Loop' Model in Educational Governance* [Educational guide]. Slow Tech Innovation: AI, Ethics, and New Teaching Methods (STIAEM), 2025-1-IT02-KA220-SCH-000365213.
References	European Parliament and Council of the European Union. (2024). Regulation (EU) 2024/1689 laying down harmonised rules on artificial intelligence (Artificial Intelligence Act). Official Journal of the European Union. https://eur-lex.europa.eu/eli/reg/2024/1689/oj 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 Mosqueira-Rey, E., Hernandez-Pereira, E., Alonso-Rios, D., Bobes-Bascaran, J., & Fernandez-Leal, A. (2023). Human-in-the-loop machine learning: A state of the art. Artificial Intelligence Review, 56(4), 3005-3054. https://doi.org/10.1007/s10462-022-10246-w OECD. (2024). Recommendation of the Council on Artificial Intelligence (OECD/LEGAL/0449). OECD. https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0449 Miao, F., & Cukurova, M. (2024). AI competency framework for teachers. UNESCO. https://doi.org/10.54675/ZJTE2084
Educational Level	Secondary School
Associated Module / MOOC Video Lesson	Module 3 - AI Ethics and Systemic Biases / Video 3.2 - Accountability and Human-in-the-Loop
Learning Objectives	Distinguish HITL supervision models (active learning, interactive machine learning, machine teaching) according to who controls the process; apply a three-phase protocol - before adoption, during use,

	after evaluation - with defined actions and responsibilities; identify the conditions of durability (training, traceability, oversight inside the cycle) that make the protocol sustainable.
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