STIAEM — Open Educational Resource (OER) Repository for AI

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

OER 3.1.2

Deploying Systematic Doubt as a Pedagogical Trigger for Critical Thinking

Identifier	OER 3.1.2
Title	Deploying Systematic Doubt as a Pedagogical Trigger for Critical Thinking
Creator	Konak Science and Art Center (BILSEM) - Türkiye
Description	Complementing OER 3.1.1, the resource turns awareness of algorithmic limits into teaching practice. It distinguishes intrinsic and extrinsic hallucination and their diagnostic value, and identifies the fluency heuristic as the mechanism that makes form more persuasive than content. The pedagogical focus is on designing activities that use systematic doubt as the engine of critical thinking and turn it into a classroom routine.
Keywords	systematic doubt; critical thinking; intrinsic hallucination; extrinsic hallucination; fluency heuristic; questioning routines; pedagogical design; AI literacy
Language	EN (English)
Affiliation	Konak Science and Art Center (BILSEM) - 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-3.1.2
Citation	Konak Science and Art Center (BILSEM). (2026). *Deploying Systematic Doubt as a Pedagogical Trigger for Critical Thinking* [Educational guide]. Slow Tech Innovation: AI, Ethics, and New Teaching Methods (STIAEM), 2025-1-IT02-KA220-SCH-000365213.
References	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 Commission. (2019). Ethics guidelines for trustworthy AI. High-Level Expert Group on Artificial Intelligence. https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai Ji, Z., Lee, N., Frieske, R., Yu, T., Su, D., Xu, Y., Ishii, E., Bang, Y., Chen, D., Dai, W., Chan, H. S., Madotto, A., & Fung, P. (2023). Survey of hallucination in natural language generation. ACM Computing Surveys, 55(12), Article 248. https://doi.org/10.1145/3571730 Miao, F., & Cukurova, M. (2024). AI competency framework for teachers. UNESCO. https://doi.org/10.54675/ZJTE2084 UNESCO. (2021). Recommendation on the ethics of artificial intelligence. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000381137
Educational Level	Secondary School
Associated Module / MOOC Video Lesson	Module 3 - AI Ethics and Systemic Biases / Video 3.1 - Black Box Systems, Opacity and Algorithmic Hallucinations
Learning Objectives	explain the difference between intrinsic and extrinsic hallucination and recognise their diagnostic value in the classroom; identify the

	fluency heuristic as the mechanism that leads one to trust form more than content; design teaching activities that use systematic doubt as the engine of critical thinking.
Rights	Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0)
Date Available	14/09/2026
Date Modified	