STIAEM

Slow Tech Innovation
AI, Ethics and
New Teaching Methods

Human Pedagogical Judgment and Pondered Task Delegation to Algorithmic Systems

Co-funded by the European Union

2025-1-IT02-KA220-SCH-000365213

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them... Project reference code: 2025-1-IT02-KA220-SCH-000365213

Università di Foggia
Studi Umanistici, Lettere, Beni Culturali, Scienze della Formazione

İSTANBUL - ESENLER
İLÇE MİLLİ EĞİTİM MÜDÜRLÜĞÜ

1474

STIAEM

Slow Tech Innovation AI, Ethics and New Teaching Methods

Co-funded by the European Union

2025-1-IT02-KA220-SCH-000365213

eduOpen

CC BY-NC-SA 4.0 International

This license requires that reusers give credit to the creator. It allows reusers to distribute, remix, adapt, and build upon the material in any medium or format, for noncommercial purposes only. If others modify or adapt the material, they must license the modified material under identical terms.

Università di Foggia
Studi Umanistici, Lettere, Beni Culturali, Scienze della Formazione

OER 1.2.2: Human Pedagogical Judgment and Pondered Task Delegation to Algorithmic Systems
Reference Module: Module 1 - Project Introduction and Pedagogical Model
Related Video-Pill: Video 4.2: Video 1.2 - The STIAEM Pedagogical Model
Authoring partner: University of Zaragoza – Spain
Topic / Thematic Focus: Human pedagogical judgment, pondered task delegation and algorithmic systems

Introduction and Learning Objectives

This resource complements, on an operational level, the path started with OER 1.2.1 and accompanies video-pill 1.2 «The STIAEM Pedagogical Model». If the previous resource outlined the framework of the model, this one focuses on its operational keystone: the teacher's pedagogical judgement and the pondered delegation of tasks to algorithmic systems, that is, the conscious decision on what to delegate, when and with what safeguards.

The text connects to the UNESCO framework for teacher competences (Miao & Cukurova, 2024) and to the UNESCO guidelines on generative AI (UNESCO, 2023), with their call for an assisted and supervised use of technologies, and to the evidence of the OECD Digital Education Outlook (OECD, 2021) on the transition of teaching practices. On the ethical level, the reference remains the Slow Tech paradigm (Patrignani & Whitehouse, 2014a; 2019).

The UNESCO ICT competency framework for teachers (version 3) represents the institutional antecedent of the shift towards a critical pedagogical use of technology (UNESCO, 2018).

The European digital competence framework DigComp 3.0 integrates AI-related competence across all areas (Cosgrove & Cachia, 2025).

By the end of the reading, the teacher will be able to:

- distinguish the tasks that may be delegated from the tasks that constitute the formative value of the experience;
- recognise the risks of uncritical delegation: cognitive load, bias, information asymmetries, anthropomorphisation, technostress;
- apply a pondered delegation protocol that keeps the teacher as human-in-the-loop and documents the validation of judgement.

1. From Instructions to Exemplars: Understanding Few-Shot Prompting

The STIAEM model places its theoretical core in the human-in-the-loop paradigm, and formulates it with a clarification worth reading in full: intentional control, critical validation and pedagogical authority must remain firmly in the hands of teachers and students, preventing a passive cognitive delegation to automated systems (STIAEM, 2026).

«Ensuring that intentional control, critical validation, and pedagogical authority remain firmly in the hands of teachers and students, preventing a passive cognitive delegation to automated systems» (STIAEM, 2026, our translation).

What does this mean, concretely, in daily work? At least four things. First: the decision on what is worth assessing, and how. Second: the choice of the tool and, above all, of the moment at which to introduce it into the learning process. Third: the critical reading of the

output, which must never be assumed to be a reliable outcome merely because it is fluent. Fourth: the responsibility for the final decision, which no automatic procedure can inherit.
There is, however, a dimension that no algorithm can assume: the educational relationship. Automatic feedback may be accurate and timely, but it does not know the student's history, it does not know when it is time to encourage and when to ask for more, it does not perceive the silence in which a difficulty matures. It is in this gap that the difference between intelligent support and a substitute for the teacher is measured.
On this point, international indications converge: the use of AI in education is conceived as assisted and supervised, with the teacher holding pedagogical agency (UNESCO, 2023). It is not a formal caution, but the recognition that assessment is an act of professional judgement, not a mechanical measurement.

2. What to delegate: criteria for a pondered delegation

The criterion that distinguishes a pondered delegation from an uncritical delegation is not the technical difficulty of the task, but its pedagogical value. If the process constitutes the goal of learning - formulating a hypothesis, selecting sources, building an argument, revising a text - delegating it means cancelling the learning itself, even when the outcome appears impeccable. If, on the other hand, the process is accessory - formatting, transcribing, translating an assignment, generating variants of an exercise - delegating it frees up time and cognitive resources for what really matters.

The following table proposes a decision grid, to be adapted to one's own subject.

Task	Pedagogical value	Delegate?	Required safeguard
Summarising a text to learn how to select	High	No	Selection guidance; comparison of outcomes in class
Transcribing an audio, translating an assignment	Accessory	Yes	Verification of the fidelity of the transcription or translation
Linguistic correction of a piece of work	Medium	Yes, assisted	Attention to bias towards non-native-speaker students; teacher review
Formulating hypotheses on data collected from the class	High	No	Observation of the process; log of discarded hypotheses
Generating examples and variants of exercises	Accessory	Yes	Validation of contents and difficulty levels

A classroom example helps to fix the criterion. In a class dealing with a civic theme, the teacher asks students to write an opinion article; AI can be used, in a pondered way, to check syntactic coherence and to generate a counter-argument for discussion. What cannot be delegated is the choice of the thesis, the selection of sources and the construction of the argument: these are precisely the operations that the activity intends to teach.
Two caveats make the grid usable. The first: the boundary between a goal-process and a means-process is not given once and for all, but depends on didactic design; it is the teacher who establishes it, declaring it to the students. The second: delegating an accessory task does not mean delegating control as well; verification remains a professional obligation, not an option.

3. The risks of uncritical delegation

The literature and reference documents allow the risks to be named precisely. Cognitive load: when the machine replaces the operations that the student should perform, competence does not form and the effort - which is part of learning - is removed rather than supported. Bias: systems trained on non-representative data reproduce discrimination; the case of automatic correctors that penalise those who are not native speakers is, for the STIAEM model, an example to use in class, not only to fear.

To these are added information asymmetries: rarely do teacher and student know the data, the objectives and the margins of error of a tool; and anthropomorphisation, the tendency to attribute to software intentions, competences and even feelings that it does not possess, with the risk of weakening critical thinking precisely when it is needed. Finally technostress: the acceleration of didactic rhythms without respect for learning times.

It must be said clearly that uncritical delegation is not only a pedagogical risk: it is also a risk of equity. If the tools that mediate learning and assessment inherit distortions, students who are already fragile are the first to be penalised. This is the reason why the model places bias control within professional routine, and not within the goodwill of individuals.

On an institutional scale, international evidence suggests that the transition of teaching practices does not depend on the availability of tools, but on the competences of those who govern them (OECD, 2021). Technology, if not accompanied by training and supervision, tends to make existing practices more rigid instead of transforming them.

4. Training doubt: the situational judgement test

The STIAEM model indicates a precise formative tool to prepare teachers for these decisions: dilemma scenarios, in the form of situational judgement tests (Situational Judgment Test). A concrete situation is presented and one is asked to argue for the choice. The example proposed is illuminating: should an automatic corrector that saves time be used or not, knowing that it can penalise non-native-speaker students because of biases in the training data?

The form of the dilemma has a precise pedagogical value: it forces one to make criteria explicit before facing the real situation, and shows that ethical decisions are not resolved by an abstract rule but by situated reasoning that holds together efficiency, equity and responsibility. The same device works with students: proposed in class, it becomes an exercise in digital citizenship and critical thinking.

5. Few-Shot Prompting Through the STIAEM Pedagogical Framework

On the formative level, the form of the dilemma has a further merit: it does not ask one to choose in the abstract between ‘using’ and ‘not using’ technology, but to decide in a concrete situation, weighing up didactic costs and benefits. In this way the competence that the UNESCO framework calls ethics of AI is trained: not the formal respect of a norm, but critical vigilance applied to real decisions (Miao & Cukurova, 2024).

From the preceding indications a five-step protocol is derived, usable before introducing an AI tool into a teaching or assessment activity: (1) define the learning goal and the process that makes it evident; (2) ask yourself whether that process is the goal or a means; (3) if you decide to delegate, make explicit the criteria, the limits of use and the information to be

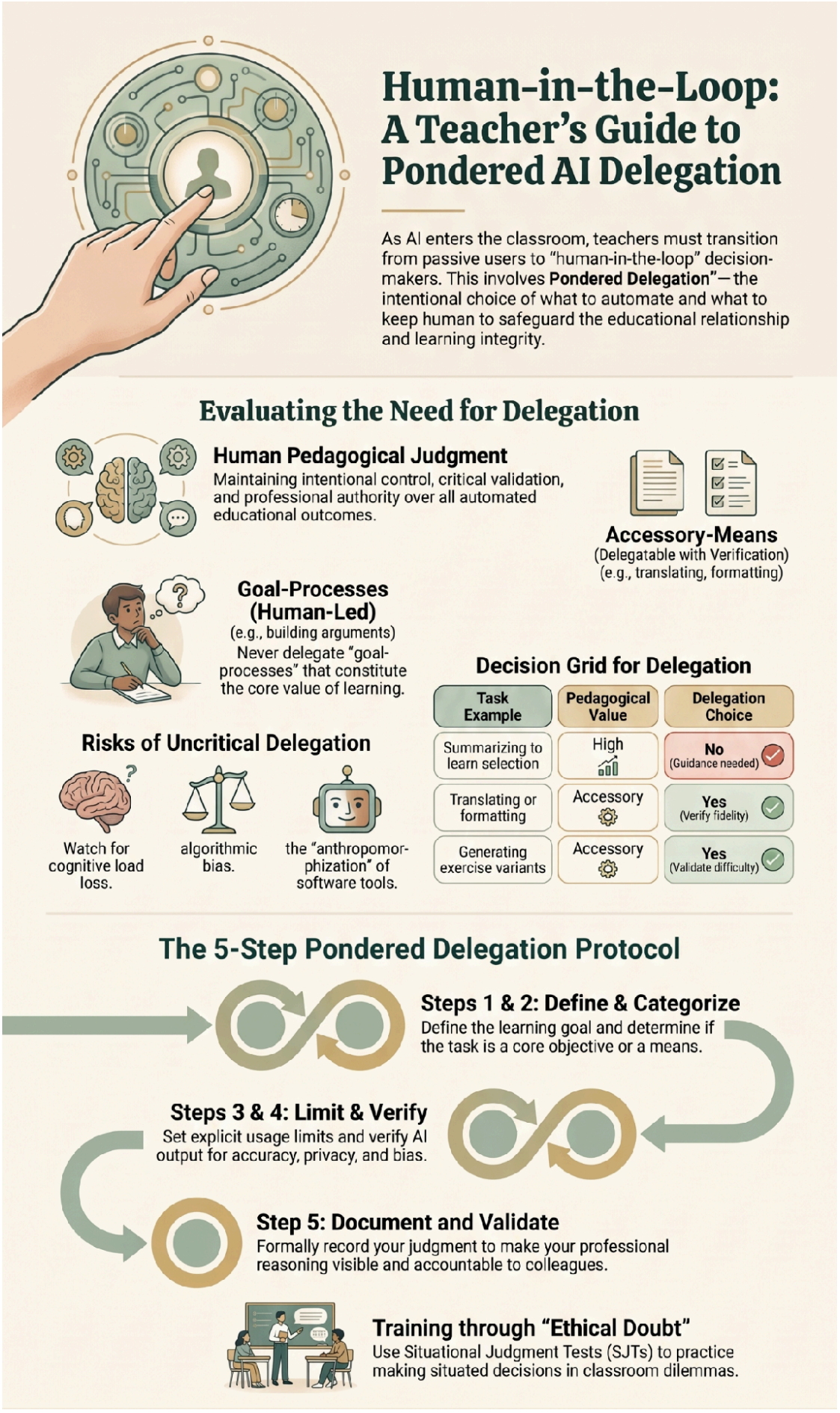
verified; (4) check the output for accuracy, equity, privacy and didactic adequacy; (5) assume and document the final decision.

The last step deserves particular attention. Documenting the validation of judgement is not a bureaucratic formality: it makes the teacher's reasoning visible, transferable and open to discussion in collegiate settings, and protects professional responsibility. In Slow Tech terms, it means preserving the Fair IT dimension (transparency and equity) while accepting technical mediation.

The protocol should be understood as a sequence of questions, not as a form to be filled in: its usefulness lies in making the reasoning explicit and in enabling comparison among colleagues. A department that discusses its own delegation choices becomes, in effect, a community of practice that learns from its own decisions.

The point, in the end, is not whether to delegate - the delegation of accessory operations is a gain of time for thought - but how to remain authors of the decision. Technology remains a tool in the hands of those who educate: judgement, responsibility and the relationship with the student cannot be delegated.

Visual Scaffolding



Conclusions and Metacognitive Reflection Prompts

This resource has translated the human-in-the-loop principle into a professional practice: pedagogical judgement as a non-delegable safeguard, pondered delegation as a conscious decision founded on the pedagogical value of the process, training in doubt through dilemma scenarios, and a five-step protocol that makes human validation visible and documented. The stake is not only methodological: it is the defence of students' epistemic agency and of teachers' professional ownership.

To transfer these core ideas to one's own practice, the following reflection prompts are proposed:

Choose an activity in your subject and apply the delegation grid: which tasks did you classify as goal-processes and which as accessory, and how did you justify this to the students?

Which dilemma scenario would you propose to your department on a concrete use of AI (marking, assessment, generation of materials), and which criteria would it put to the test?

How could you document the validation of your judgement so that it is also legible to other colleagues?

Technical Metadata Sheet

Metadata Field	Specification / Parameter Value
Identifier	OER 1.2.2
Title	Human Pedagogical Judgment and Pondered Task Delegation to Algorithmic Systems
Creator	University of Zaragoza - Spain
Description	Complementing OER 1.2.1, the resource focuses on the operational core of the model: which tasks may legitimately be delegated to algorithmic systems and which carry the formative value of the experience. It examines the risks of uncritical delegation — cognitive load, bias, information asymmetries, anthropomorphisation and technostress — and proposes a pondered delegation protocol. The practical focus is on keeping the teacher as human-in-the-loop and on documenting the validation of pedagogical judgement.
Keywords	pedagogical judgement; task delegation; human-in-the-loop; cognitive load; algorithmic bias; anthropomorphisation; situational judgement test; accountability
Language	EN (English)
Affiliation	University of Zaragoza - Spain
Contributor	STIAEM Transnational Scientific Board (peer review, Rhodes validation protocol)
Media Format	Text; Infographics
Genre	Training Manual; Educational Guide
URL	
Citation	Miao, F., & Cukurova, M. (2024). AI competency framework for teachers. UNESCO. https://doi.org/10.54675/ZJTE2084 OECD. (2021). OECD digital education outlook 2021: Pushing the frontiers with AI, data and online learning. OECD Publishing. https://doi.org/10.1787/589b283f-en Patrignani, N., & Whitehouse, D. (2014). Slow tech: A quest for good, clean and fair ICT. Journal of Information, Communication and Ethics in Society, 12(2), 78-92. https://doi.org/10.1108/JICES-11-2013-0051 Patrignani, N., & Whitehouse, D. (2019). Slow tech: Towards an ICT for the Anthropocene age. Visions for Sustainability, 12, 35-39. https://doi.org/10.13135/2384-8677/4039 STIAEM. (2026). STIAEM pedagogical model (working document, WP2). Erasmus+ KA220-SCH, Project ref. 2025-1-IT02-KA220-SCH-000365213. UNESCO. (2018). ICT competency framework for teachers (Version 3). UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000265721 UNESCO. (2023). Guidance for generative AI in education and research. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000386693
Educational Level	Secondary School
Associated Module / MOOC Video Lesson	Module 1 - Project Introduction and Pedagogical Model / Video 1.2 - The STIAEM Pedagogical Model
Learning Objectives	distinguish the tasks that may be delegated from the tasks that constitute the formative value of the experience; recognise the risks of uncritical delegation: cognitive load, bias, information asymmetries, anthropomorphisation, technostress; apply a pondered delegation protocol that keeps the teacher as human-in-the-loop and documents the validation of judgement.
Rights	Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0)
Date Available	14/09/2026
Date Modified	

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

Miao, F., & Cukurova, M. (2024). AI competency framework for teachers. UNESCO. https://doi.org/10.54675/ZJTE2084

OECD. (2021). OECD digital education outlook 2021: Pushing the frontiers with AI, data and online learning. OECD Publishing. https://doi.org/10.1787/589b283f-en

Patrignani, N., & Whitehouse, D. (2014). Slow tech: A quest for good, clean and fair ICT. Journal of Information, Communication and Ethics in Society, 12(2), 78-92. https://doi.org/10.1108/JICES-11-2013-0051

Patrignani, N., & Whitehouse, D. (2019). Slow tech: Towards an ICT for the Anthropocene age. Visions for Sustainability, 12, 35-39. https://doi.org/10.13135/2384-8677/4039

STIAEM. (2026). STIAEM pedagogical model (working document, WP2). Erasmus+ KA220-SCH, Project ref. 2025-1-IT02-KA220-SCH-000365213.

UNESCO. (2018). ICT competency framework for teachers (Version 3). UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000265721

UNESCO. (2023). Guidance for generative AI in education and research. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000386693