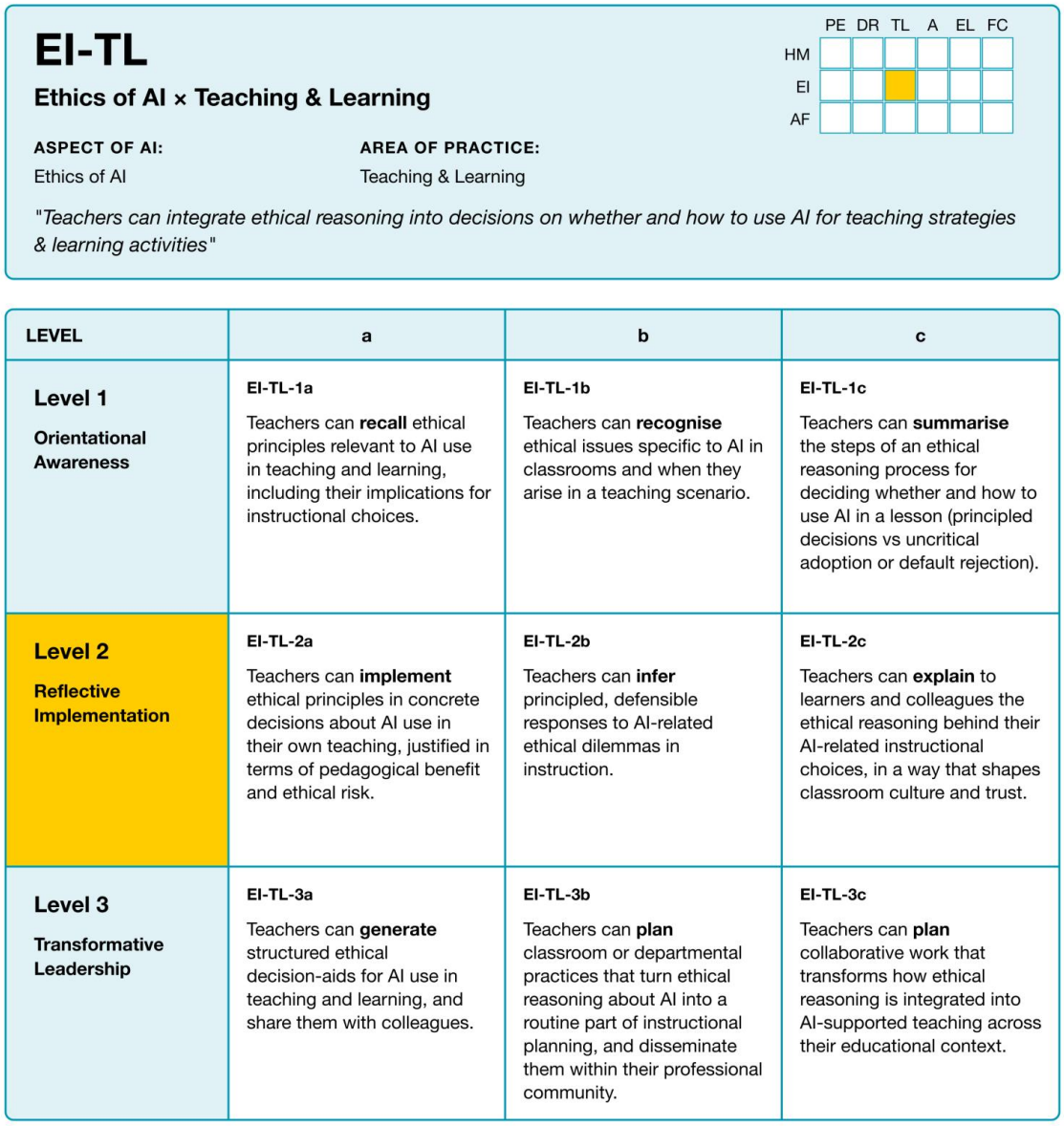
3.4 DUAL.AI.TEACHer Learning Objectives

For each of the eighteen competencies identified, a set of three specific learning objectives (a - c) has been defined in order to translate the competency into concrete and practical outcomes. These learning objectives specify the knowledge, skills, and attitudes that teachers are expected to develop to achieve the corresponding competency, providing a more detailed and practical description of what mastering that competency entails in practice.



EI-TL

Ethics of AI × Teaching & Learning

PE DR TL A EL FC
HM
EI
AF

ASPECT OF AI: Ethics of AI

AREA OF PRACTICE: Teaching & Learning

"Teachers can integrate ethical reasoning into decisions on whether and how to use AI for teaching strategies & learning activities"

LEVEL	a	b	c
Level 1 **Orientational Awareness**	**EI-TL-1a** Teachers can **recall** ethical principles relevant to AI use in teaching and learning, including their implications for instructional choices.	**EI-TL-1b** Teachers can **recognise** ethical issues specific to AI in classrooms and when they arise in a teaching scenario.	**EI-TL-1c** Teachers can **summarise** the steps of an ethical reasoning process for deciding whether and how to use AI in a lesson (principled decisions vs uncritical adoption or default rejection).
Level 2 **Reflective Implementation**	**EI-TL-2a** Teachers can **implement** ethical principles in concrete decisions about AI use in their own teaching, justified in terms of pedagogical benefit and ethical risk.	**EI-TL-2b** Teachers can **infer** principled, defensible responses to AI-related ethical dilemmas in instruction.	**EI-TL-2c** Teachers can **explain** to learners and colleagues the ethical reasoning behind their AI-related instructional choices, in a way that shapes classroom culture and trust.
Level 3 **Transformative Leadership**	**EI-TL-3a** Teachers can **generate** structured ethical decision-aids for AI use in teaching and learning, and share them with colleagues.	**EI-TL-3b** Teachers can **plan** classroom or departmental practices that turn ethical reasoning about AI into a routine part of instructional planning, and disseminate them within their professional community.	**EI-TL-3c** Teachers can **plan** collaborative work that transforms how ethical reasoning is integrated into AI-supported teaching across their educational context.

Fig. 1: Image generated with ...

By breaking down each competency into clearly defined learning objectives at different levels, the DUAL.AI.TEACHer Framework facilitates its practical application in professional development, training design, and self-assessment, offering educators a concrete blueprint for progressively building and demonstrating their AI-related competencies

Level 1 – Orientational Awareness

LEVEL 1	Professional Engagement	Digital Resources	Teaching & Learning	Assessment	Empowering Learners	Facilitating Learners' (AI) Digital Competence

Human-centred mindset	**HM-PE-1a** Teachers can recognise common AI use cases in professional communication and networking and the situations where human judgement, presence, or relationship-building must take precedence. **HM-PE-1b** Teachers can recognise their own AI-related learning needs and tools that support their continuous professional development. **HM-PE-1c** Teachers can summarise how AI is used in their institution for stakeholder engagement and organisational development, including the opportunities and risks it creates for human agency.	**HM-DR-1a** Teachers can summarise how AI tools can support the selection, creation, customisation, and management of digital resources, including which steps require human oversight and pedagogical judgement. **HM-DR-1b** Teachers can recognise typical quality criteria for AI-generated or AI-enhanced learning materials, including the indicators that signal when a resource needs human review. **HM-DR-1c** Teachers can interpret how learner agency and autonomy can be preserved or undermined by AI-generated or AI-personalised	**HM-TL-1a** Teachers can recognise, across the ways AI can be used in instruction, which pedagogical decisions must remain in human hands. **HM-TL-1b** Teachers can recognise situations in AI-supported lessons in which learner agency, human interaction, or teacher–learner relationships could be strengthened or weakened, along with the indicators of meaningful pedagogical use of AI. **HM-TL-1c** Teachers can classify AI use in teaching as either supporting pedagogical decision-making or substituting for it, and its implications for accountability	**HM-A-1a** Teachers can recognise, among the uses of AI in assessment, which evaluative decisions must remain a human responsibility. **HM-A-1b** Teachers can recognise typical risks in AI-assisted assessment for fairness, transparency, and learner well-being, including the signs that human review of AI-generated results is needed. **HM-A-1c** Teachers can classify AI in assessment as either a support for teacher judgement or a substitute for it, and its implications for	**HM-EL-1a** Teachers can recognise, among the ways AI tools can support diverse learners and which learner needs they can and cannot address. **HM-EL-1b** Teachers can recall typical risks of AI-supported differentiation for inclusion and equity, including the signs that an AI tool is restricting rather than expanding a learner's opportunities. **HM-EL-1c** Teachers can interpret how human dignity, equity, and the right to education apply to AI use in inclusive classrooms, including when learner agency and belonging must take	**HM-FC-1a** Teachers can recognise what it means to model a human-centred, critically informed relationship with AI in front of learners, including how their own practices and statements communicate attitudes about AI. **HM-FC-1b** Teachers can classify dispositions that support learners' reflective AI competence and the classroom situations in which these dispositions can be cultivated. **HM-FC-1c** Teachers can recognise the difference in their own teaching about AI as either transmitting knowledge or cultivating

Ethics of AI	**EI-PE-1a** Teachers can recall key ethical principles that apply to their own professional AI use, as well as the significance of each principle in a professional context. **EI-PE-1b** Teachers can recognise the legal and regulatory frameworks that govern AI use in professional communication, collaboration, and development. **EI-PE-1c** Teachers can recognise situations in their professional practice in which an ethical principle or regulatory requirement is at stake.	**EI-DR-1a** Teachers can recall typical ethical risks in AI-generated or AI-enhanced learning resources along with their effects on the learners. **EI-DR-1b** Teachers can recognise legal and regulatory frameworks relevant to AI-generated resources and when they apply. **EI-DR-1c** Teachers can classify sources of ethical risks originating from bias, inaccuracy, or inappropriate AI authorship in a given learning resource.	**EI-TL-1a** Teachers can recall ethical principles relevant to AI use in teaching and learning, including their implications for instructional choices. **EI-TL-1b** Teachers can recognise ethical issues specific to AI in classrooms and when they arise in a teaching scenario. **EI-TL-1c** Teachers can summarise the steps of an ethical reasoning process for deciding whether and how to use AI in a lesson (principled decisions vs uncritical adoption or default rejection).	**EI-A-1a** Teachers can recall the main fairness risks of AI-assisted assessment and how each can affect learners. **EI-A-1b** Teachers can recognise transparency obligations in AI-assisted assessment, such as the disclosure of AI involvement, the explanation of results, and the ability of the learners to contest or request human review of decisions. **EI-A-1c** Teachers can interpret why educational assessment is treated as high-risk under the legal and regulatory	**EI-EL-1a** Teachers can recall the main ethical risks of AI-based personalisation and how each can affect learners. **EI-EL-1b** Teachers can classify the types of learner data used by AI personalisation and how sensitive they are. **EI-EL-1c** Teachers can interpret why personalised educational AI is treated as high-risk under the legal and rights-based frameworks.	**EI-FC-1a** Teachers can recall what are the key ethical issues raised by AI that are relevant to students, including the environmental and privacy implications. **EI-FC-1b** Teachers can classify which ethical questions belong in which educational stage, in age- & context-appropriate ways. **EI-FC-1c** Teachers can interpret ethically problematic AI use by learners and why each is an ethical issue rather than only a rule violation.

AI foundations and applications	**AF-PE-1a** Teachers can summarise the core concepts of how contemporary AI systems function and which common AI tools are used in professional educational practice. **AF-PE-1b** Teachers can exemplify relevant criteria for evaluating an AI tool for a professional task. **AF-PE-1c** Teachers can interpret why an AI tool's limitations make it the wrong choice in typical situations in their professional work.	**AF-DR-1a** Teachers can summarise the core concepts of how the main types of AI tools used for resource creation function, providing correspondent examples. **AF-DR-1b** Teachers can classify the reliability of the outcome for the selected tool type for their corresponding tasks, including avoidable mistakes. **AF-DR-1c** Teachers can recall technical criteria for selecting an AI resource tool and what each entails.	**AF-TL-1a** Teachers can summarise the core concepts of how the main types of AI systems used in teaching function, providing respective examples. **AF-TL-1b** Teachers can classify the reliability of the outcome for the selected tool type for their classroom context, including avoidable mistakes. **AF-TL-1c** Teachers can interpret how technical understanding informs realistic decisions about whether, when, and how to integrate AI into a lesson.	**AF-A-1a** Teachers can summarise the core concepts of how the main types of AI systems used in assessment function, providing typical examples of each. **AF-A-1b** Teachers can classify what each type of assessment tool actually measures, what it is unable to measure, and in which situations it tends to fail. **AF-A-1c** Teachers can exemplify why particular technical questions about an AI assessment tool are worth to be done.	**AF-EL-1a** Teachers can summarise the core concepts of how the main types of AI used for personalisation and inclusion function, including typical examples. **AF-EL-1b** Teachers can classify what each type of tool can and cannot reliably do, as well as the areas where its performance is likely to break down for specific learner groups. **AF-EL-1c** Teachers can classify what an AI tool claims to measure or do versus what it actually measures or does, including why this distinction matters for inclusion.	**AF-FC-1a** Teachers can summarise the core concepts of AI that learners should understand, including age-appropriate examples. **AF-FC-1b** Teachers can recognise the technical limits of current AI systems that learners need to grasp. **AF-FC-1c** Teachers can interpret practical AI skills that learners should develop and how the mastery of each looks like at a given educational stage.

Level 2 – Reflective Implementation

LEVEL 2	Professional Engagement	Digital Resources	Teaching & Learning	Assessment	Empowering Learners	Facilitating Learners' (AI) Digital Competence

Human-centred mindset	**HM-PE-2a** Teachers can differentiate, in concrete AI-mediated communication and networking situations in their own practice, when to use, adapt, or refrain from AI on the basis of human-centred criteria. **HM-PE-2b** Teachers can organise a personal AI-supported professional development plan that integrates AI tools into their learning routines while safeguarding their growth, autonomy, and peer collaboration. **HM-PE-2c** Teachers can explain human-centred principles in institutional discussions or working groups on AI by proposing adjustments	**HM-DR-2a** Teachers can implement AI-generated or AI-enhanced resources into their teaching context, in line with pedagogical and human-centred criteria. **HM-DR-2b** Teachers can compare AI-based tools for creating and selecting digital resources in order to choose the one best suited to a specific instructional purpose. **HM-DR-2c** Teachers can implement ways of involving learners in the evaluation and use of AI-enhanced resources that strengthen learner agency and pedagogical quality.	**HM-TL-2a** Teachers can implement AI-supported lessons in which their own pedagogical judgement guides when, how, and why AI is used, preserving learner agency and human interaction. **HM-TL-2b** Teachers can explain the impact of AI use on classroom interaction, participation and learning processes, safeguarding meaningful teacher–learner interactions and peer relationships through instructional strategies. **HM-TL-2c** Teachers can implement ways of shaping how AI is used in lessons and how this strengthens learner agency and	**HM-A-2a** Teachers can implement AI-assisted assessment tools in their own practice, basing the final evaluative decision on a critical reading of the tools' outputs and on pedagogical and human-centred criteria. **HM-A-2b** Teachers can check AI-generated grades, analytics, or feedback for fair, accurate, and aligned with learning goals, adjusting assessment practices to safeguard equity and meaningful learner support. **HM-A-2c** Teachers can explain to learners	**HM-EL-2a** Teachers can implement AI tools to support learners with different abilities, backgrounds, and preferences, basing the choices on equity, dignity, and inclusive pedagogy. **HM-EL-2b** Teachers can explain how AI-supported differentiation affects learners' participation, autonomy, and sense of belonging in their own practice, safeguarding inclusion and meaningful learning for every student. **HM-EL-2c** Teachers can implement ways to involve learners and, where appropriate, families or support staff in decisions about AI-	**HM-FC-2a** Teachers can execute human-centred AI practices in their own visible practice basing the choices on educational and citizenship goals. **HM-FC-2b** Teachers can implement learning situations to invite learners reflecting on their own attitudes, agency, and responsibilities in relation to AI, while strengthen their critical engagement. **HM-FC-2c** Teachers can organise dialogues with learners about the role of AI in their lives, schools and society, that contributes to informed agency and responsible participation in an AI-

Ethics of AI	**EI-PE-2a** Teachers can implement ethical principles and regulatory requirements to concrete decisions about their own professional AI use, justified in relation to integrity, transparency, accountability and sustainability. **EI-PE-2b** Teachers can infer principled responses to ethical dilemmas arising in AI-mediated professional engagement. **EI-PE-2c** Teachers can explain institutional AI norms, ethically grounded practices, and how their own conduct contributes to a trustworthy professional culture.	**EI-DR-2a** Teachers can differentiate which ethical risks are present in AI-generated or AI-enhanced resources in their own practice and how serious each is, using structured criteria. **EI-DR-2b** Teachers can implement concrete strategies to mitigate the risks arising from AI-generated resources. **EI-DR-2c** Teachers can explain transparently to learners and colleagues about the AI involvement and the residual risks in a resource, in a way that strengthens trust and supports learning.	**EI-TL-2a** Teachers can implement ethical principles in concrete decisions about AI use in their own teaching, justified in terms of pedagogical benefit and ethical risk. **EI-TL-2b** Teachers can infer principled, defensible responses to AI-related ethical dilemmas in instruction. **EI-TL-2c** Teachers can explain to learners and colleagues the ethical reasoning behind their AI-related instructional choices, in a way that shapes classroom culture and trust.	**EI-A-2a** Teachers can critique, in AI-assisted assessment tools and outputs in their own practice, for standards of fairness, transparency, and legal compliance, adjusting their practice accordingly. **EI-A-2b** Teachers can implement transparency practices in their own assessment while strengthening trust and learner understanding. **EI-A-2c** Teachers can infer the changes needed in their assessment practice based on AI-assisted feedback to ensure fairness.	**EI-EL-2a** Teachers can critique AI-based personalisation tools and practices in their own context about risks of data misuse, discrimination, and curricular confinement. **EI-EL-2b** Teachers can implement concrete safeguards in their own personalisation practice that protect learners. **EI-EL-2c** Teachers can explain transparently to learners and families how AI personalises learning, what data are used, and what rights learners have, strengthening trust and equity.	**EI-FC-2a** Teachers can implement learning activities that develop learners' ethical reasoning about AI, justified by the methodological choices. **EI-FC-2b** Teachers can infer designs to help learners weighing up conflicting values, based on the assumptions arising from the ethical reasoning they demonstrate in using AI. **EI-FC-2c** Teachers can infer learning opportunities in learners' ethically questionable use of AI.

AI foundations and applications	**AF-PE-2a** Teachers can compare AI tools for their own professional tasks using foundational AI knowledge to select tools based on their technical capabilities and limitations. **AF-PE-2b** Teachers can implement adjustments to their use of AI tools that reflect how the underlying system actually works and improve the quality of outcomes. **AF-PE-2c** Teachers can explain technical concepts about AI tools to colleagues in accessible language, contributing to informed collegial dialogue about AI in professional practice.	**AF-DR-2a** Teachers can compare AI tools for specific resource-creation tasks in their own practice to select tools based on their technical capabilities and limitations. **AF-DR-2b** Teachers can implement prompting, iteration, and refinement strategies to obtain usable AI-generated resources. **AF-DR-2c** Teachers can explain to colleagues when a tool should be replaced by a different tool, approach, or non-AI resource.	**AF-TL-2a** Teachers can compare AI tools for specific teaching and learning purposes in their own practice to select tools based on their technical capabilities and limitations. **AF-TL-2b** Teachers can organise lesson elements that embed AI use with clear pedagogical roles and strategies to verify the output elements. **AF-TL-2c** Teachers can implement adjustments to their instructional design approaches and use of AI tools based on their technical performance.	**AF-A-2a** Teachers can compare AI tools for specific assessment tasks in their own practice, based on the tool's technical capabilities, limits, and reliability. **AF-A-2b** Teachers can implement assessment workflows that combine AI outputs with structured human review, recognising when an AI output is too unreliable. **AF-A-2c** Teachers can implement refinements to their use of AI assessment tools based on their technical performance.	**AF-EL-2a** Teachers can compare AI tools considering their technical capabilities and performance for personalisation, accessibility and inclusion of specific learners involved. **AF-EL-2b** Teachers can implement customised configurations of AI tools for inclusive use, focused on learners who need it most. **AF-EL-2c** Teachers can differentiate how AI tools actually perform across different learners in their practice, switching tools or combining AI with non-AI alternatives.	**AF-FC-2a** Teachers can organise learning activities that build learners' conceptual understanding of how AI works. **AF-FC-2b** Teachers can implement guidance that helps learners developing practical AI skills, adapting the tasks to learners' prior knowledge and the AI tools available. **AF-FC-2c** Teachers can explain societal implications of AI from a technical perspective and ways the learners can engage with.

Level 3 – Transformative Leadership

LEVEL 3	Professional Engagement	Digital Resources	Teaching & Learning	Assessment	Empowering Learners	Facilitating Learners' (AI) Digital Competence

Human-centred mindset	**HM-PE-3a** Teachers can plan new human-centred practices for AI-mediated professional communication and networking within their team or institution, modelling them and mentoring colleagues in their use.	**HM-DR-3a** Teachers can plan workflows for the AI-supported creation and curation of digital resources that embed human oversight, learner voice, and pedagogical accountability as standard practice, and share them with colleagues.	**HM-TL-3a** Teachers can generate innovative AI-supported teaching approaches that explicitly centre learner agency, human relationships, and teacher judgement, trialling them and sharing the outcomes with colleagues.	**HM-A-3a** Teachers can plan AI-assisted assessment practices that explicitly safeguard human accountability, fairness, and pedagogical purpose, and share these designs with colleagues.	**HM-EL-3a** Teachers can generate inclusive AI-supported learning environments that explicitly centre dignity, equity, and learner agency for diverse groups, and share these designs with colleagues.	**HM-FC-3a** Teachers can generate classroom approaches that explicitly model and cultivate human-centred attitudes towards AI across subjects or year groups, trialling them and sharing them with colleagues.
	HM-PE-3b Teachers can generate innovative formats of AI-supported professional learning that strengthen self-direction and collective professional growth across the wider educational community.	**HM-DR-3b** Teachers can generate quality criteria, review protocols, or guidance documents for AI-enhanced resources and disseminate them within their team, school, or wider professional community.	**HM-TL-3b** Teachers can generate pedagogical principles and produce according lesson formats, or classroom protocols for human-centred AI use in teaching and learning, and disseminate them within their team or professional community.	**HM-A-3b** Teachers can generate principles, review protocols, or guidance for the responsible use of AI in assessment within their team, school, or wider professional community.	**HM-EL-3b** Teachers can generate inclusive-practice principles, accessibility checklists, or differentiation protocols for AI use within their team, school, or wider professional community.	**HM-FC-3b** Teachers can generate principles, classroom rituals, or pedagogical formats for nurturing critical AI citizenship in learners, and disseminate them within their team or professional community.
	HM-PE-3c Teachers can plan institutional change processes that embed human-centred AI use in professional	**HM-DR-3c** Teachers can plan collaborative practices that transform how AI-	**HM-TL-3c** Teachers can plan collaborative practice development that	**HM-A-3c** Teachers can plan collaborative developme	**HM-EL-3c** Teachers can plan collaborative initiatives that transform how AI is used to advance equity and the right to education in their context.	**HM-FC-3c** Teachers can plan collaborative initiatives that transform how learners' human-centred AI dispositions are

Ethics of AI	**EI-PE-3a** Teachers can generate ethical guidelines, decision-aids, or codes of practice for AI use in professional engagement, and share them within their team or institution.	**EI-DR-3a** Teachers can produce review protocols, risk check-lists, or plan mitigation workflows for AI-generated learning resources, and share them with colleagues.	**EI-TL-3a** Teachers can generate structured ethical decision-aids for AI use in teaching and learning, and share them with colleagues.	**EI-A-3a** Teachers can produce fairness-, transparency-, and compliance-check protocols for AI-assisted assessment in their context, and share them with colleagues.	**EI-EL-3a** Teachers can produce ethical review protocols, data check-lists, or safeguard frameworks for AI-based personalisation in their context, and share them with colleagues.	**EI-FC-3a** Teachers can plan longer learning sequences, project formats, or cross-subject units that systematically develop learners' ethical AI reasoning and environmental responsibility.
	EI-PE-3b Teachers can plan institutional review or accountability mechanisms that strengthen ethical and regulatory compliance in professional AI use.	**EI-DR-3b** Teachers can plan team or departmental practices that turn risk identification and mitigation into a routine part of resource development and curation.	**EI-TL-3b** Teachers can plan classroom or departmental practices that turn ethical reasoning about AI into a routine part of instructional planning, and disseminate them within their professional community.	**EI-A-3b** Teachers can plan structured reflection routines that turn assessment feedback into systematic practice improvement.	**EI-EL-3b** Teachers can plan team or school practices that turn risk identification, data minimisation, and human review into routine elements of personalised AI use.	**EI-FC-3b** Teachers can generate age-appropriate frameworks, vocabularies, or routines for cultivating learners' ethical AI agency.
	EI-PE-3c Teachers can plan the development of shared ethical norms and responsible AI practices within their educational organisation, shaping a culture in which AI use is principled, transparent,	**EI-DR-3c** Teachers can plan collaborative initiatives that transform how ethical risks in AI-generated resources are handled across their educational context.	**EI-TL-3c** Teachers can plan collaborative work that transforms how ethical reasoning is integrated into AI-supported teaching across their educational context.	**EI-A-3c** Teachers can plan collaborative initiatives that transform how fairness, transparency, and legal compliance are upheld in AI-	**EI-EL-3c** Teachers can plan collaborative initiatives that transform how the ethical risks of AI personalisation are handled in their educational context.	**EI-FC-3c** Teachers can plan collaborative initiatives that transform how learners' ethical AI agency is developed across their educational context.

AI foundations and applications	**AF-PE-3a** Teachers can plan evaluation procedures, tool-selection frameworks, or onboarding materials that help colleagues apply foundational AI knowledge to professional decisions, and share them within the institution. **AF-PE-3b** Teachers can generate AI-related professional learning formats that build AI literacy across their team or school. **AF-PE-3c** Teachers can generate institutional capacity-building on AI that transforms how foundational AI knowledge informs practice across their	**AF-DR-3a** Teachers can plan technical workflows or guidance documents for AI-supported resource creation and share them with colleagues. **AF-DR-3b** Teachers can generate novel uses of AI resource tools that exploit their actual capabilities rather than novelty, trialling them and disseminating the results within their professional community. **AF-DR-3c** Teachers can plan capacity-building on AI tools for resource design that transforms how AI is used for educational resources in their context.	**AF-TL-3a** Teachers can generate technically grounded instructional formats or produce lesson templates for AI-integrated teaching and share them with colleagues. **AF-TL-3b** Teachers can generate novel AI-supported teaching approaches that exploit the actual capabilities of current AI systems, trialling them and disseminating the results within their professional community. **AF-TL-3c** Teachers can plan capacity-building on AI in teaching and learning that transforms how foundational AI knowledge shapes instructional design across	**AF-A-3a** Teachers can plan technical evaluation protocols, tool-validation routines, or workflow templates for AI-enhanced assessment in their context, and share them with colleagues. **AF-A-3b** Teachers can plan systematic practices for tracking and improving the technical performance of AI assessment tools, and disseminate them within their team or school. **AF-A-3c** Teachers can plan capacity-building on AI in assessment that transforms how	**AF-EL-3a** Teachers can generate technical guidance, tool-selection frameworks, or configuration templates for inclusive AI use in their context, and share them with colleagues. **AF-EL-3b** Teachers can generate novel uses of AI tools for personalisation and accessibility that are grounded in a realistic understanding of what current systems can and cannot do, trialling them and disseminating the results within their professional community. **AF-EL-3c** Teachers can plan capacity-building on AI for inclusion that transforms how foundational	**AF-FC-3a** Teachers can plan longer learning sequences, project formats, or cross-subject units that systematically build learners' technical AI literacy, and share them with colleagues. **AF-FC-3b** Teachers can produce age-appropriate pedagogical resources, analogies, or activity formats for teaching AI foundations and practical AI skills, and disseminate them within their team or professional community. **AF-FC-3c** Teachers can plan collaborative initiatives that transform how learners' technical AI competence is built across their educational

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