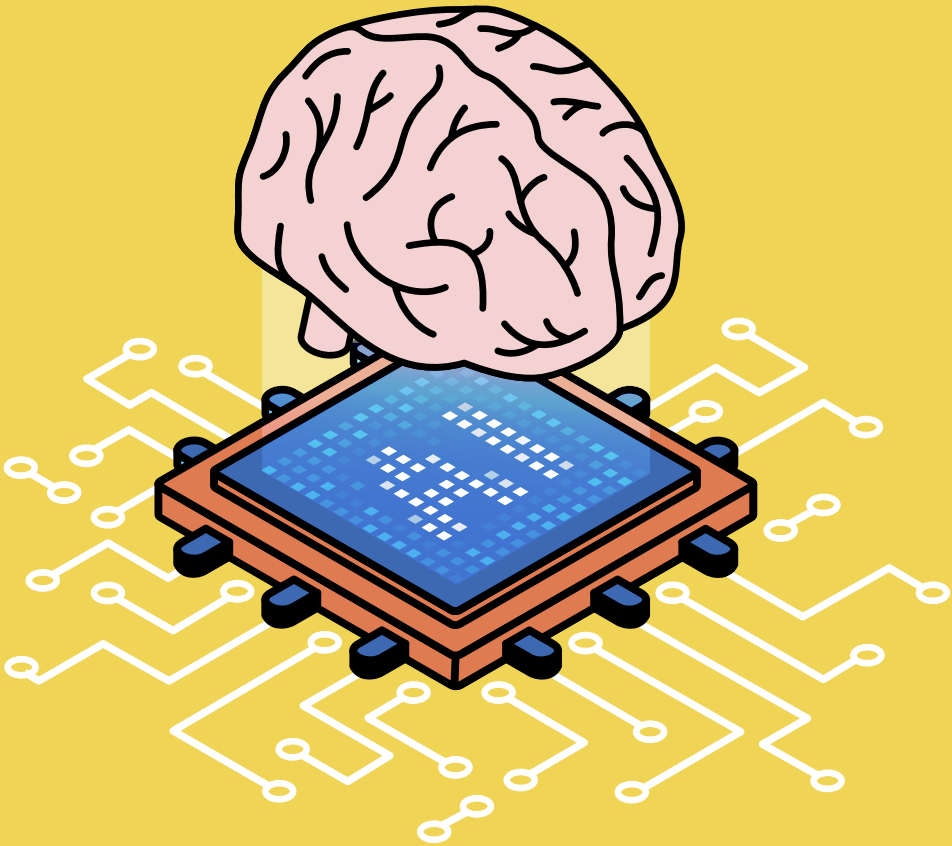
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AI-GO in Action.

Guide to AI Literacy in Education

AI Literacy

AI-GO in Action.
Guide to AI Literacy in Education

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Introduction

The AI-GO framework (Renkema et al., 2025a) provides an overview of what is needed to develop AI literacy at three levels: individual, team and organisation. Four components are at the heart of this framework: knowledge, skills, attitude and ethics. In an educational context, there is an additional dimension: pedagogy and didactics. This does not only facilitate a better understanding of AI literacy but also helps to implement it in a meaningful and responsible way in the practice of learning and teaching.

This document, *AI-GO in Action*, is the practical translation of the theoretical model and focuses on educational practice. It shows how programme departments, teams and education professionals can work on enhancing their AI literacy in a concrete and contextual way.

To this end, we have formulated eight steps which allow you to work on knowledge, awareness, skills, ethics and knowledge-sharing through manageable actions. The framework supports professionals, teams and the organisation in designing learning activities, establishing prerequisites, monitoring progress and scaling up successful approaches. Day-to-day educational practice is always the main focus; the questions, dilemmas and choices faced by programme departments determine how and where the framework is applied.

Because these steps follow a cyclical pattern, experiences and insights gained lead to ongoing improvements. In this way, AI-GO in Action contributes to developing AI literacy collectively and embedding it in educational practice.

Background

The AI-GO framework was developed on the basis of a systematic review of Dutch and international studies on AI literacy (Renkema et al., 2025b). This framework provides an academically grounded description of the knowledge, skills, attitudes and ethical principles which, when taken together, constitute AI literacy. AI-GO in Action builds on the AI-GO framework and the associated systematic review to combine these insights with general didactic recommendations from educational science and principles of design research. This means that the framework is not only based on research into AI literacy but also rooted in a more comprehensive educational body of evidence on learning, professional development and curriculum design.

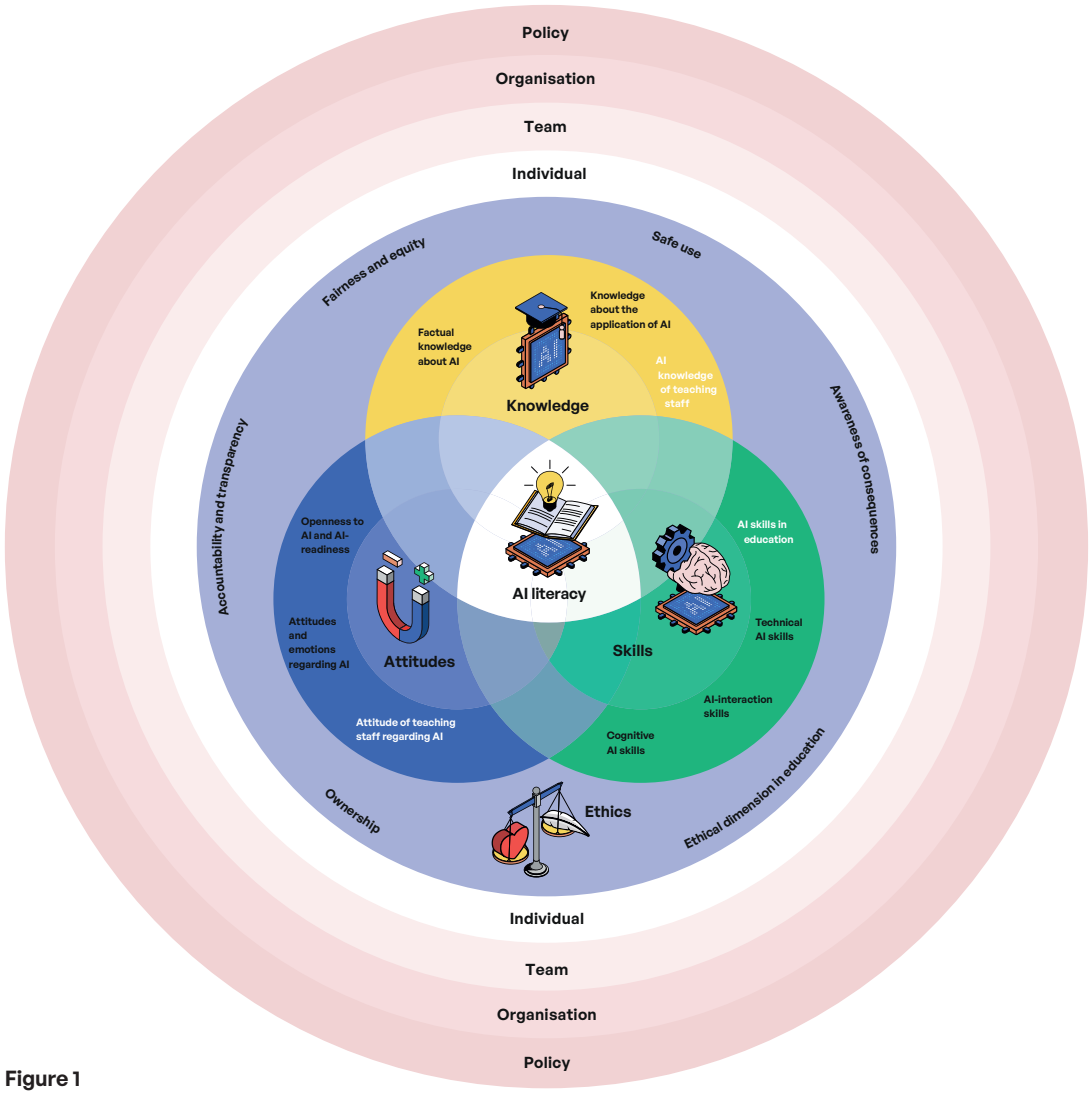


Figure 1
AI-GO framework

Nevertheless, a framework alone does not automatically lead to its application in practice. To develop AI literacy in programme departments and educational organisations in a meaningful way requires a shift from theory to action. AI-GO in Action has been designed to bridge that gap: it offers a practical way of using the framework in design processes, professional development and policymaking.

The structure of this phased plan draws on the methodology of Educational Design Research (EDR; McKenney & Reeves, 2019, 2025), an iterative approach where design, implementation and evaluation reinforce one another in a cyclical process. Following this approach, research insights are directly linked to developments in practice so that learning, improving and innovating go hand in hand.

This approach is well-suited to the topic of AI literacy, as the technological and societal landscape is constantly changing. It is only by adopting learning, reflective and design-oriented ways of working that programme departments can continue to adapt to new AI developments and take responsible decisions about whether or not to integrate AI in their educational offerings and practice. Enhancing AI literacy is not the same as increasing the use of AI – in fact, a higher level of AI literacy may lead programme departments or teaching staff to make a conscious decision to use AI less.

Who is AI-GO in Action for?

AI-GO in Action is focused mainly on programme departments and educational teams that wish to enhance AI literacy in their curricula and within their professional contexts and culture. This guide has been designed to support collaborative reflection, design and development at programme level.

At the same time, efforts to promote AI literacy always cut across multiple levels in an educational institution. This is why AI-GO in Action is also relevant for individual members of teaching and support staff, educational support departments, programme management and administrators. However, these different target groups will not use this guide in exactly the same way: the focus will vary depending on their role.

For teaching staff, the phased plan provides guidance on professional development and on making sound didactic and ethical choices in teaching practice. For teams and programme departments, it supports collaborative design, coordination and learning. For management and the executive board, it highlights the prerequisites, policy choices and resources required to embed AI literacy in a sustainable manner.

The guide is therefore not a generic “one-size-fits-all” tool, but a common framework that can be interpreted and applied at different levels based on a single programme-oriented approach.

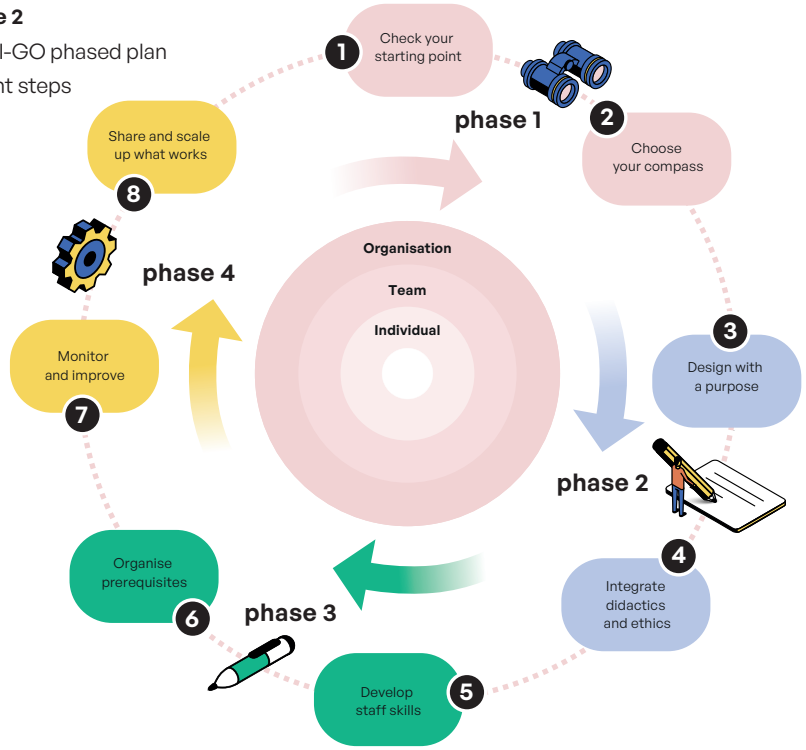
How to use AI-GO in Action?

AI-GO in Action is intended as a practical compass to guide programme departments through the process of developing AI literacy. Although we refer to eight steps in this guide, the framework is not a linear phased plan with a starting point and an end point. It has in fact been designed specifically as a learning-based and iterative approach (see Figure 1), which professionals and teams can join at the stage it makes sense to them.

It is advisable to first look at all the steps in context to get a better understanding of how they influence and reinforce one another. In practice, teams and professionals will move back and forth between steps, returning to earlier steps to reassess choices, repeating steps to explore them in greater depth or temporarily skipping steps when required by the context. Reflection, collaboration and improvement are the common thread linking all the steps.

The phased plan follows a cyclical pattern: Step 8 does not mark the end but rather the start of a new cycle of learning and development. Insights gained from monitoring, evaluation and knowledge-sharing lead to a new direction, more focused objectives and a redesign. Thanks to this approach, AI literacy does not develop through a single project or intervention but as an ongoing culture of learning and development within the programme department.

Figure 2
The AI-GO phased plan in eight steps



The eight steps are grouped into four interconnected phases that reinforce one another and regularly intersect (see colour coding):



Phase I (Steps 1-2): Orientation and setting the course
In this phase, we explore the current situation of the programme department, teaching teams or professionals in terms of AI literacy and set the desired course. This gives us a better understanding of the initial situation, underlying values and ambitions that guide further decisions.



Phase II (Steps 3-4): Designing with vision and responsibility
In this phase, the focus is on design – how do we give AI a meaningful role in learning, teaching or organisation? Pedagogical choices are explicitly linked to ethical considerations and social responsibility.



Phase III (Steps 5-6): Implementation and facilitation
In this phase, the focus is on practical action. Skills are developed and prerequisites are put in place so that professionals and teams can start working with AI in practice and are supported throughout their learning process.



Phase IV (Steps 7-8): Learning, improving and embedding
In this phase, experiences are systematically documented in order to learn, refine approaches and share and embed best practices. This forms the basis for structural embedding and new rounds of development.

Each step consists of a brief explanation, specific actions, examples and tips. Taken together, these steps provide guidance and flexibility – guidance for targeting AI literacy, and flexibility to apply the framework adaptively within one's own context.

AI literacy at three levels

Although AI-GO in Action is primarily aimed at programme level (team level), AI literacy always cuts across multiple levels in an educational organisation. Individual professionals (such as teaching staff), teams and the organisation continually influence one another; learning about AI unfolds in the interconnected context of policy, culture and professional collaboration.

To illustrate this interconnection, we have included a table in Annex 1 which describes the activities for each step at three levels:

- **individual level**, where education professionals work on their knowledge, skills, attitudes and ethical awareness;
- **team level**, where programme departments design, learn and reflect together;
- **organisational level**, where policy, infrastructure and culture create the right conditions for structurally embedding all learning.

AI-GO in Action focuses specifically on the educational programme level, as this is where the link between individual professional development and organisation-wide development is established.

You can use the table in Annex 1 as a quick reference card for reading AI-GO in Action.

AI-GO in Action: working through the steps

In this chapter, we work through the eight steps of AI-GO in Action one by one. Although each step can be carried out individually, it only takes on full meaning in conjunction with the other steps. Depending on the context, objectives and stage of a study programme, it may make sense to get involved at different steps, repeat certain steps or revisit previous choices during the process. The steps vary in scope and level of detail. This does not reflect the relative priority of the steps, but rather the type of support required for each step. Some steps (such as design, professional development and implementation) require more detailed elaboration and examples, whereas others mainly serve as guidance and are reflective in nature. All steps are essential and derive meaning precisely from their interconnection in the cyclical process.

Phase I

Orientation and setting the course

Step 1: Check your starting point

Explore the initial situation

Purpose of this step

Before AI literacy can be integrated into a study programme, it is essential to understand what the current situation is. In this phase, you analyse the initial situation on three levels: (1) individual (teaching staff member or support staff member), (2) team and (3) organisation, and identify the existing knowledge, attitudes, skills and ethical principles. This exploratory analysis serves as the basis for targeted design and policy work in subsequent phases.

Position within Educational Design Research (EDR)

This step corresponds to the analysis and exploration phase of the EDR model (McKenney & Reeves, 2019, 2025). It is the phase in which problems, needs and contextual conditions are analysed. The aim is to formulate a clear definition of the problem and objectives, explain why AI literacy is relevant to your study programme and outline how this aligns with the existing vision of learning and professional development.

Why this step is important

A clear understanding of the starting point keeps AI literacy from becoming a one-off initiative. By systematically mapping out the current situation, you can:

- formulate realistic goals and measure progress;
- align with existing competence profiles (e.g. teaching competencies, occupational profiles, higher professional education qualifications);
- incorporate existing literacy frameworks such as the:
  - Npuls AI-GO framework (Renkema et al., 2025a), which focuses on education with the dimensions of knowledge, skills, attitude and ethics.
  - UNESCO AI Competency Framework for teachers (2024), an international benchmark for knowledge, skills and ethics.
  - EU Digital Competence Framework for Educators (DigCompEdu) (European Commission, 2022), a framework for digital competencies of education professionals.

By connecting these frameworks, AI literacy becomes not just an additional topic but an integrated component of existing quality systems and educational visions.

Actions to take in this step

1. Analyse the initial situation

- Identify and list existing initiatives: Which modules, courses or professional development pathways already include AI elements? How do they relate to digital literacy or data literacy?
- Research knowledge, skills and attitude: What do teaching staff know about AI? What is their attitude towards using AI in learning and assessment?
- Identify the prerequisites: Available infrastructure, policy, time, expertise and support.
- Analyse the learning and professional contexts: How is AI changing the professional field for which students are being trained? What AI skills are expected in professional practice?

2. Use or develop measurement tools

There are now several scales for measuring AI literacy, but there is still no widely validated tool suitable for vocational education and training schools (VET), universities of applied sciences (UASs) and research universities. Most measurements are based on self-reporting and focus on knowledge, attitudes and skills, while reliability and context-sensitivity still vary.

Until a nationally recommended tool is available, programme departments may:

- Expand existing digital and data literacy assessments to include AI-specific questions.
- Adapt AI literacy scales (such as AILS, SNAIL or Intelligent-TPACK) to their own context.
- Draw on the AI-GO indicators to carry out their own baseline measurements by means of questionnaires or focus groups.
- Enrich the quality of the results through interviews.



Tip: educational institutions or programme departments can establish a joint measurement strategy so that results remain comparable and useful for quality assurance and policy development.

3. Analysis at three levels

Level	Questions	Possible actions
Individual	What do teaching staff know, understand and think about AI?	Personal reflection or self-assessment; a brief survey on knowledge, attitudes, skills and ethics.
Team	Where is the greatest expertise and where the greatest need?	Team meeting or workshop; gathering practices.
Programme department	How does AI literacy relate to vision, policy and curricula?	Policy analysis; mapping of AI initiatives in curricula and professional development.

Examples of suitable tools

- DigComp 2.2 Self-assessment: identify overlaps and gaps in digital skills.

Output of this step

After completing this step, you will have:

- A baseline measurement of AI literacy in the programme department (qualitative, quantitative or both).
- An overview of strengths, gaps and opportunities across the four AI-GO components.
- A definition of the problem and objectives: why AI literacy is relevant to the programme department, the related risks or opportunities and where further development is needed.
- Input for Step 2 (“Choose your compass”); formulating the direction, values and ambitions.

Embedding AI literacy monitoring in quality assurance

The baseline measurement is not a one-off activity but the start of a cyclical process (see Step 7 for a more detailed look at monitoring of AI literacy).
It is therefore advisable to schedule regular monitoring of AI literacy as part of standard quality assurance procedures; both formative (to track progress and make adjustments) and summative (to highlight impacts at curriculum or institutional level).

- Formative: use brief reflections or team discussions to visualise growth and adjust interventions in good time.
- Summative: link AI literacy indicators to evaluation or accreditation cycles to gain a systematic understanding of developments at programme level.

- Establish and document who is responsible for collecting, interpreting and providing feedback on data (e.g. the curriculum committee, quality assurance officer, research group, etc.).

This continuous monitoring process is consistent with EDR iteration as well as the PDCA principles (Plan–Do–Check–Act); the output of each round feeds into the next design or improvement cycle.



Tips for practical application

- Involve students (e.g. through student associations or study societies), alumni and the professional community – they can provide clear insights into which AI competencies are relevant.
- Organise *learning communities, professional communities*, AI labs and AI-hubs to carry out this exploration collaboratively.
- Document all findings so that it is easier in Step 7 (“Monitor and improve”) to build on this baseline measurement.

Step 2: Choose your compass

Determine your direction and values

Purpose of this step

In this step, the programme department sets the direction for AI literacy. While Step 1 provided a picture of the current situation, Step 2 focuses on defining the direction, values and ambitions that will guide the use of AI in learning, teaching and organisation.
The aim is to develop a shared compass to guide decisions on curriculum development, professional development and policy:

- Vision: what is our view on the role of AI in excellent education?
- Goals: what knowledge, skills, attitudes and ethical principles do we consider essential for lecturers and students?
- Values: what are the guiding principles for responsible use of AI in our programme department or institution?

By making this vision explicit, programme departments can design AI literacy in a *considered and cohesive manner* rather than taking an ad hoc or tool-driven approach. The compass provides guidance for design decisions in the next step and ensures that AI literacy is structurally embedded in educational practice.

Position within Educational Design Research (EDR)

This step corresponds to the design phase (strategic concept development) of the EDR model (McKenney & Reeves, 2019, 2025). In this phase, you translate insights from the analysis into design principles: which goals and values will serve as a guide for further curriculum development?

Why this step is important

AI literacy can only be developed and embedded in the organisation if it is rooted in vision and values. An explicit compass:

- Provides guidance on design choices (what will or will we not do with AI?).
- Clarifies the relationship with existing competence profiles and institutional policy.
- Ensures that ethics, inclusion and pedagogical quality are not overshadowed by technological innovation.

By aligning our vision of AI literacy with frameworks such as the AI-GO framework, the UNESCO AI Competency Framework and DigCompEdu, consistency is achieved with Dutch and international standards and with other literacy initiatives in the institution.

Actions to take in this step

1. Formulate the vision and values

- Discuss, as programme team, the following: Why do we consider AI literacy important? What is our pedagogical and societal responsibility?
- Translate this into core principles, such as:
  - AI enhances learning but does not replace teaching staff;
  - students learn to use AI critically and creatively;
  - ethical awareness (transparency, privacy, bias) is an integral part of AI use.
- Align with existing strategic documents, such as the institution’s vision on learning, digitalisation strategy, AI policy and data ethics policy.

2. Determine goals and focus areas

Use the four AI-GO-components as the starting point:

Component	Goal at programme or teacher level	Relationship to student learning
Knowledge	Teaching staff understand fundamental AI concepts, applications and their implications for learning, assessment and the career for which students are being prepared.	Students gain an understanding of how AI affects their subject area, their learning and their future careers.
Skills	Teaching staff can select, implement and critically evaluate AI applications in the context of educational design, guidance and assessment.	Students learn to use AI responsibly in professional contexts and educational settings.

Component	Goal at programme or teacher level	Relationship to student learning
Attitude	Teaching staff adopt an inquisitive, critical and open-minded approach to AI innovations and reflect on their own role in an AI-rich learning environment.	Students are encouraged to adopt a critical and ethically conscious attitude towards AI.
Ethics	Teaching staff act in accordance with ethical principles when using AI (transparency, privacy, fairness) and guide students in making ethical considerations.	Students learn to recognise the ethical implications of using AI and make responsible choices when using AI.

Link these goals to existing competence and qualification frameworks, such as:
- *HBO-kwalificatiedossier* (UAS qualification framework) / *NLQF-niveau* (professional and academic final qualification levels).
- UNESCO AI Competency Framework (domains: Understanding AI, Using AI, Evaluating AI, Creating AI, Ethical AI).
- DigComp 3.0 (information literacy, communication, content creation, safety, problem-solving).

This helps to illustrate how AI literacy reinforces existing learning outcomes rather than simply being added as a separate module.

3. Develop joint frameworks for each role or profile
- Use personas or role profiles (teacher, coordinator, policy officer, student) to clarify expectations.
- Specify what AI literacy means for each profile (e.g. teaching staff = critical and didactic use; students = ethical and professional use).
- Formulate target profiles or “AI literacy profiles” for each stage of the programme.

4. Connect vision with ethics and policy
- Organise dialogue sessions on values and dilemmas (e.g., bias, authorship, authenticity, the environmental impact of AI).
- Document the outcome as ethical guiding principles or “AI principles” for the programme.
- Link these to existing frameworks such as the AI Act and internal privacy and data policies.

Output of this step
After completing this step, you will have:
- A vision document or compass for AI literacy at programme level (setting out mission, core values and guiding principles).
- An initial set of AI literacy objectives aligned with the AI-GO dimensions and relevant competence frameworks.
- An overview of ethical guidelines or principles by which design and implementation can be assessed.
- Input for Step 3 (design with a purpose): the basis for formulating learning outcomes and curriculum redesign.



Tips for practical application
- Organise a compass workshop where teaching staff and students work together to formulate core values regarding AI in education.
- Also involve examination boards and curriculum committees to ensure that the vision is incorporated into learning outcomes and assessment policy.
- Have the vision align with ongoing initiatives relating to digital literacy or data ethics.
- Make sure it remains dynamic: annually review the vision against technological and social developments.

Phase II

Designing with vision and responsibility

Step 3: Design with a purpose
Make AI literacy an explicit part of learning objectives, learning activities and assessment/evaluation.

Purpose of this step
In this phase, you translate the direction and values from Step 2 into *specific learning objectives, learning activities and evaluation/assessment methods*. The purpose is to integrate AI literacy into the curriculum in a targeted and ethically sound way so that students but also teaching staff learn to use AI in a way that aligns with the programme department’s vision. In other words, make AI literacy an explicit and integral part of educational design rather than a separate addition.

Position within Educational Design Research (EDR)
This step corresponds to the design and construction phase of the EDR model (McKenney & Reeves, 2019, 2025). Based on the analysis (Step 1) and the formulated vision (Step 2), the teaching team develops a *prototype design* for educational and professional development activities; these can be tested and refined at a later stage. The guiding principle for this

is constructive alignment (Biggs & Tang, 2011): learning objectives, learning activities and assessment/evaluation reinforce one another and are consistent with the four AI-GO components of *knowledge*, *skills*, *attitude* and *ethics*.

Why this step is important

This step is the backbone of the AI-GO Guide – it is where vision translates into action. Without a well-considered design, AI literacy often remains a collection of one-off initiatives – a training session here, a tool there – rather than a coherent learning pathway. A sound design process involves continuous consideration – not only of what we want to achieve with AI but also how we go about doing so. By integrating ethical and didactic principles from the start, the use of AI will not only be effective but also fair, explainable and in line with the values of good education.

And by properly aligning learning objectives, learning activities and assessment/evaluation, you create a coherent curriculum in which AI literacy can develop progressively. A well-designed curriculum also ensures the following.

- Consistency: students and teaching staff know what is expected of them and how the use of AI is assessed.
- Relevance: AI literacy is tailored to the careers for which students are being prepared and to current societal and technological developments.
- Embedding of ethics: didactics and assessment are designed in such a way that responsible use of AI becomes a self-evident part of learning and teaching. Use Step 4 for a more in-depth exploration of these ethical considerations.
- Structural integration: integrating AI literacy into learning objectives, PILOs and competence profiles makes it is resistant to staff turnover and passing trends.

This step ensures that AI literacy is not considered a temporary project but becomes a structural part of good educational design.

Actions to take in this step

1. Formulate explicit AI learning objectives

- Translate the values from Step 2 into specific, measurable learning objectives (at programme level or module level).
- Use indicators from the AI-GO framework as building blocks for these learning objectives.
- Differentiate according to context and level using the NLQF or vocational competence profiles. For example: build up basic knowledge and work on responsible use, then move on to critical assessment and application and finally innovate or develop policy on AI.
- Consider objectives geared to teaching staff and teams ("teaching staff can ... integrate AI into ...") as well as objectives geared to students ("students can ..."); see the table below.
- When formulating objectives, use the ethical component as a guideline: what values does the programme department or team wish to demonstrate in its use of AI (e.g. transparency, fairness, privacy, inclusion)?

AI-GO-component	Learning objectives at the level of teaching staff / programme department	Example of an objective geared to students
Knowledge	Teaching staff can explain which AI concepts and technologies are relevant to their subject area as well as their impact on learning, assessment and professional development.	Students understand how AI applications influence their (future) professional practice.
Skills	Teaching staff design learning activities in which AI is used responsibly (e.g. for running simulations, analysing data and generating feedback).	Students apply AI tools critically in real-world professional contexts.
Attitude	Teaching staff encourage an open, inquiring attitude towards AI and discuss the opportunities and dilemmas of AI with students.	Students adopt a reflective and critical attitude towards the use of AI.
Ethics	Teaching staff integrate ethical and legal considerations (privacy, bias, authorship) into their lessons and assessment criteria.	Students recognise the ethical risks and account for their use of AI.

2. Design learning activities and didactic strategies

Designing with AI always involves designing with values in mind. This means that for each learning activity, you should not only consider the didactic added value of using AI but also the potential ethical consequences of using AI. AI literacy is not developed by completing individual courses but by designing, experimenting and reflecting collaboratively in one's own teaching practice. This step therefore focuses on learning from and with teaching staff, taking into account how this is reflected in the curriculum for students.

For teaching staff and teams:

- Co-design sessions: organise design workshops in which teaching staff work together to redesign education, refine learning outcomes or adapt assessment methods with the help of examples generated by AI.
- Microlearning and peer review: offer short learning sessions (online or in person) on specific topics like prompt engineering, AI feedback or bias detection, followed by a peer-to-peer exchange of experiences.
- AI labs/hubs or communities of practice: create a safe environment in which teaching staff can try out new tools, test didactic scenarios and give each other feedback.

- Reflective practical assignments: encourage teaching staff to analyse their own use of AI – such as through a logbook, portfolio or learning report – and to share their findings in team meetings.
- Peer review of course material: teaching staff assess each other's AI applications or assignments in terms of didactic quality, inclusivity and ethical embedding.
- Collaboration between students and teaching staff: organise sessions in which students and teaching staff jointly explore how AI influences the learning process so that both perspectives are taken into account in the design.

For students and the curriculum:
- Integrate AI literacy in existing educational units (digital skills, research skills, project-based learning) rather than separate modules.
- Build a spiral curriculum: first introduce basic concepts, then explore them in greater depth later with more complex applications and ethical issues.
- Provide scaffolding: start by providing guidance (e.g. with examples or checklists) and allow for greater autonomy later on.

Please note: These activities are aimed at knowledge transfer as well as practice-oriented learning and collective reflection. They help in developing AI literacy as a team skill but also as a curriculum competence – embedded in day-to-day teaching practice.

3. Review and adjust the design

AI literacy is developed continuously – in technology, policy and educational practice. It is therefore essential that teaching teams engage in *formative evaluation* of their own designs and practices and make *cyclical adjustments* accordingly. This evaluation is about results as well as learning processes: what have we learned, what has to be adapted and how do we embed that in policy and in the curriculum?

For teaching staff and teams:
- Schedule evaluation checkpoints in the design cycle, e.g. after pilot projects, semesters or course modules. Discuss what went well, where uncertainties arose and what could be improved.
- Draw on feedback from colleagues and students to gain a better understanding of how AI impacts learning and teaching.
- As a team, reflect on questions such as:
  - How does our use of AI support the learning process of students?
  - Are our ethical principles still relevant and visible in the design?
  - What have we learned about responsible use of AI?
- Document learning experiences in logbooks or team portfolios so that insights can be shared and embedded in the organisation.
- Use the results to adjust learning objectives, rubrics or professional development activities.

For students and the curriculum:

In addition to team reflection, it is also essential to regularly evaluate the curriculum and assessment methods with regard to their effectiveness and robustness in an AI-rich context.
- Ensure that assessment is in line with learning objectives and that it is AI-resilient.
- Assess process, reasoning and reflection as well as the final products.
- Ask students to explain how and why they used AI.
- Combine product and process assessment (e.g. logbook + presentation).
- Use context-specific assignments or verbal explanations to ensure authenticity.
- Design rubrics that make AI literacy visible in assessment criteria (knowledge – skills – attitude – ethics).



Tip: combine this internal evaluation with the PDCA cycle or the programme department's quality assurance system. That way, AI literacy does not remain a one-off project but becomes part of a process of continuous improvement – at individual, team and curriculum levels.

Output of this step

After completing this step, the programme department or teaching team will have:
- Clearly formulated AI literacy objectives for teaching staff and programme department aligned to the AI-GO dimensions (knowledge, skills, attitude and ethics) and appropriate to the level and context of the programme.
- A *team or curriculum design* in which these objectives have been translated into coherent professional development activities, learning experiences and assessment methods (constructive alignment within the team).
- An *overview of strategies for team learning and professional development* – such as co-design, peer review, microlearning and AI labs – which encourage responsible and investigative use of AI.
- A cyclical evaluation and improvement approach in which team reflection, student feedback and quality data are used to continuously adjust objectives, activities and policy (PDCA/EDR).
- AI literacy embedded in both curriculum *and* organisational documents – such as final qualifications (PILOs), competence profiles, professional development pathways or policy plans – so that the ambitions are systematically established in accreditation, review and quality assurance processes.



Tips for practical application

- Start small and take an iterative approach: begin with a single pilot subject, team or teaching guideline, and use the results as a basis for scaling up.
- Visualise the connections: use curriculum or professional development mapping to identify where AI literacy has already made inroads and where there are still opportunities.
- Work together: facilitate co-design sessions or communities of practice in which teaching staff collaborate in designing, testing and reflecting.
- Embed reflection into these processes: schedule regular evaluation checkpoints (PDCA or EDR) to adjust designs and share successes.
- Make use of existing expertise: involve internal support staff such as education-alists, CELT, AI centres of expertise or learning technology teams in design and implementation processes.
- Make results visible: document decisions, successes and dilemmas so that experiences can be shared both within programme departments and beyond.

This design is elaborated in Step 4 and assessed for didactic and ethical consistency. By doing so, the values identified in Step 2 are made tangible in educational practice.

Step 4: Responsible design: Integrate didactics and ethics

Integrate the pedagogical-didactic dimension and treat ethics as a foundational principle.

Purpose of this step

In this step, the educational design from Step 3 is developed further by incorporating pedagogical principles and ethical considerations. While Step 3 focused on targeted design of AI literacy in learning objectives and activities, Step 4 is about responsible implementation of that design: how do you ensure that the use of AI enhances learning without undermining didactic or ethical values?

The aim is to view AI integration as both a pedagogical and an ethical design issue. This means that decisions relating to AI are always considered in the light of the principles of good education (transparency, autonomy, inclusion, authenticity) and the programme department's social responsibility.

Position within Educational Design Research (EDR)

This step corresponds to the design phase and construction phase of EDR McKenney & Reeves, 2019, 2025). In this phase, the design is further refined and assessed for feasibility, quality and values. The emphasis is on reflective design: didactic decisions are explicitly linked to ethical considerations.

Why this step is important

AI applications influence how students learn, how teaching staff guide and assess students and how knowledge is generated. Without conscious didactic and ethical choices, certain risks may arise – such as dependence on technology, reduced autonomy or bias in (support for) decision-making.

By intertwining didactics and ethics:

- Students learn to engage with AI and AI output with greater awareness.
- Trust and transparency in education are strengthened.
- AI use is consistent with the values of academic and professional ethics.

Actions to take in this step

1. Analyse the didactic implications of AI use

- Investigate how AI influences teaching and learning.
- Identify opportunities and risks for different educational roles (feedback, assessment, reflection, instruction).
- Link this to the educational vision (e.g. active learning, inquiry-based learning, formative assessment).

2. Make ethical principles an integral part of design decisions

- Use frameworks such as the UNESCO Ethical AI Guidelines or the EU Ethics Guidelines for Trustworthy AI.
- For each design decision, ask questions such as: Is this fair? Is it explainable? Is it proportionate?
- Develop ethical checklists or rubrics for design and assessment decisions (privacy, authorship, bias, explainability).

3. Design activating and reflective learning activities

- Choose teaching formats that enable students to actively explore how AI works (e.g. prompt analysis, bias detection, debates on AI ethics).
- Use scaffolding to teach students how to work with AI tools one step at a time.
- Incorporate guided reflection moments (e.g. logbooks or ethical dialogue sessions).
- Make use of realistic case studies (e.g. generative AI in assessment, AI feedback on writing assignments) and dialogue on ethical dilemmas.
- Have team discussions about ethical boundaries and professional responsibility.
- Review the design for didactic and ethical consistency.

- Organise peer review sessions or ethical walkthroughs with colleagues: discuss specific lesson plans, assignments or assessment methods and examine, step by step, the didactic choices made and the ethical implications of these choices (e.g. privacy, bias, transparency).
- Review activities or assessment methods that present risks to autonomy, inclusion or privacy.

Output of this step

After completing this step, you will have:

- An educational design in which AI use has been explicitly assessed against didactic and ethical principles.
- A translation of the values identified in Step 2 into assessment criteria, learning activities and forms of guidance.
- A practical ethics checklist or rubric for responsible use of AI in educational design.
- Input for Step 5: professional development of teaching staff in using this didactic-ethical approach.



Tips for practical application

- Organise “ethics-in-action” sessions in which teaching staff and students work together on educational design and discuss moral dilemmas.
- Use the AI-GO framework as a lens: Every didactic choice has an impact on knowledge, skills, attitudes and ethics.
- Explicitly document ethical choices in lesson plans and assessment files (transparency and accountability).

Phase III

Implementation and facilitation

Step 5: Develop staff skills

Organise targeted professional development for teaching staff and support staff

Purpose of this step

The purpose of this step is competence development for teaching staff and support staff with regard to responsible use, interpretation and application of AI in their own educational or professional context. This involves targeted professional development aimed at strengthening all four AI-GO-components: (a) knowledge, (b) skills, (c) attitude and (d) ethics.

Position within Educational Design Research (EDR)

This step corresponds to the design and construction phase as well as the implementation phase of Educational Design Research (EDR). It is in this step that the blueprint for educational and professional development activities, as designed in Steps 3 and 4, is evaluated and refined. Step 5 is the phase in which the designs that have been assessed against ethical and didactic principles (the output of Step 4) are actually translated into practice-oriented learning experiences for teaching staff and support staff. The professional development involved in this step generates insights that serve as input for Step 6 (establishing the prerequisites).

Why this step is important

AI literacy is not developed through one-off initiatives but by designing, experimenting and reflecting collaboratively in one’s own teaching practice. This step is essential because technologies like AI are constantly evolving, which calls for a learning-oriented, reflective approach. Effective professional development ensures that routines and underlying knowledge and views about education are explicitly reconsidered. By supporting teaching staff and facilitating professional development, professionals and teams can effectively get started with AI.

Actions to take in this step (Integration of Building Blocks)

The professional development process outlined in Step 5 must be organised according to the Building Blocks for effective professional development (Schildkamp et al., 2021), which take into account both the characteristics of teaching staff and the characteristics of the professional development programme itself (content and form/teaching methods).

1. Align with Teacher Characteristics (Starting Point & Objective):

- When it comes to professional development for teaching staff, take into account their needs and characteristics, such as their prior knowledge and individual needs and interests.
- Design professional development programmes with a view to increasing self-efficacy (belief in one’s own abilities), fostering motivation (intrinsic and extrinsic) and encouraging critical reflection on teacher beliefs (beliefs about good teaching with AI). Also support the development of professional identity (what constitutes good teaching). This is crucial when it comes to responding adequately to changes brought about by new technology.

2. Determine the Content (AI-GO components):

- The content of professional development must involve all four AI-GO-dimensions. Connect subject content and subject-specific didactics to knowledge about AI technology.
- Make ethics a regular focus. Educate teaching staff about the ethical issues raised by AI (such as freedom, privacy, justice, equity and autonomy) and how they can act in accordance with ethical principles.

3. Choose the Instruction Form/Didactics:

- Professional development in AI literacy is a long-term and ongoing process, designed to give teaching staff the time to learn, practise and reflect. It should not be a “one-shot instruction”. One option is for teaching staff to take part in professional learning communities (PLCs).
- Encourage teaching staff to actively participate in learning activities such as designing or redesigning their own lessons using AI, trying out AI tools in the classroom, analysing specific case studies or reflecting collectively on their experiences. This allows for deeply rooted development of knowledge, skills and attitudes in the organisation.
- Facilitate collaborative learning: organise peer review sessions, hackathons, AI labs or learning sprints in which team members learn how to work with AI together and share experiences and dilemmas. Having multidisciplinary teams (e.g. PLCs) makes it possible to learn from each other’s perspectives.
- Create opportunities for learning by experimenting with AI in education and in professional practice. This can be done in a sandbox setting, where teaching staff can try out new digital tools in a safe environment.
- Make the content relevant to teaching staff’s own practice. Have teaching staff apply what they have learned directly in their own teaching practice (e.g. lesson planning or giving feedback to students).
- Draw on support from experts like educationalists, coaches or IT/AI experts who can act as role models or discussion partners.

The table below describes core activities in Step 5 at the three levels and indicates the AI-GO components involved.

Level	Core activity	AI-GO component	Explanation
Individual	Learning & practising	Skills, Knowledge, Attitude, Ethics	Teaching staff take part in training courses or micro-learning modules on AI tools. They experiment with applications in their teaching practice and reflect on their own competencies and insecurities, which enhances self-efficacy.
Team	Collaborative learning	Skills, Knowledge, Attitude, Ethics	Organise peer review sessions, AI labs or learning sprints. Team members practise together, share experiences, tips and dilemmas and discuss ethical boundaries and professional accountability (Ethics).
Organi-sation	Facilitate learning	Skills, Knowledge, Attitude, Ethics	Develop a professional development programme or policy that includes AI skills as a structural component of professional development. Foster communities of practice, e.g. through PLCs, and knowledge-sharing across teams. In this way, AI literacy becomes a structural component of long-term and continuing professional development.

Output of this step

After completing Step 5, the programme department will have:

- Developed competence in using AI responsibly at individual and team levels, with all four AI-GO-components taken into consideration.
- An overview of successful working methods and dilemmas arising from practice and experimentation.
- Input for Step 6 regarding the required organisational and policy-related prerequisites (conditions, infrastructure) that are needed to embed newly acquired knowledge, skills and attitudes.

This step ensures that – through active learning, experimentation and collaboration – teaching staff come to see AI literacy as an integral part of their professional identity.

Step 6: Organise the prerequisites and implement AI literacy

From design to action: implement organisational and policy-related conditions and embed them in the programme department.

Purpose of this step

The purpose of this step is to implement and integrate AI literacy into the programme department’s day-to-day teaching practice. To be able to integrate AI literacy into the organisation, an organisational framework must be established (see, for example, Renkema et al., 2025a). In this step, you ensure that the programme department facilitates the development of AI literacy and integrates it into its training policy. It is important that the organisation’s technology infrastructure and data governance system are up to standard, that teaching staff are included in the implementation of AI literacy and that HR policy is developed.

In this phase, programme directors/managers and supervisors have a dual role. They are responsible for: (1) good infrastructure and HR policy in the area of AI literacy; and (2) their own AI literacy, focusing on the role of programme managers and supervisors.

Position within Educational Design Research (EDR)

This step corresponds to the design and construction phase of the EDR model (McKenney & Reeves, 2019, 2025). Steps 1 through 5 are used as input for developing prerequisites and policy choices.

Why this step is important

Developing policy and aligning it with the vision developed earlier (Step 2), but also designing learning activities, are vital for fostering AI literacy. Without a targeted strategy for implement-

ing these initiatives, they will not be able to reach their full potential. It is therefore essential to develop clearly defined actions for implementing AI literacy in educational practice.

Actions to take in this step?

To achieve structural change in the programme department, the following concrete steps are vital:

1. Instil a sense of urgency and cultivate ownership

- Create a sense of urgency about the significance of AI literacy.
- Set up a taskforce to implement the initiatives. This taskforce should include key representatives from different disciplines and roles (IT, HR, legal affairs, programme management, teaching staff).
- Conduct a stakeholder analysis to get a better understanding of which parties should be involved in implementation.

2. Translate vision into concrete action

- Transform the vision in Phase II into concrete action points for implementation across the programme department.
- Conduct a cost-benefit analysis of the implementation steps to be taken.
- Focus on the continued need to communicate the vision and implement AI literacy initiatives (see Step 2) – consider for instance the following actions:
  - Organise meetings with the programme department to discuss the new vision, and feedback sessions with staff where concerns and obstacles can be shared and education professionals can have a say on the proposed change (Hiatt, 2006).
  - Share the vision with the programme department and the teaching team through various channels, such as newsletters, internal platforms and social media (Stouten et al., 2018).

3. Set up the required infrastructure and organisational parameters

- Organise the required infrastructure, taking into account standards, routines and organisational culture (McKenney & Reeves, 2025).
- Provide the needed data and technology infrastructure, for instance enough accounts for secure and responsible AI applications, so that teaching staff and students can start working with AI responsibly.
- Develop new routines for the use of AI by showcasing best practices of AI use by teaching staff (e.g. based on pilot projects).
- Invest in cultural change; embed AI literacy into your organisation's core values and develop new initiatives to boost engagement.
- Offer training sessions and workshops and foster team development.

4. Embed AI literacy in HR policy and leadership

- Work and task design: include AI literacy as part of teaching staff profiles and job descriptions.
- Recruitment and selection: include AI literacy in job openings.
- Performance management: make training and proficiency in AI literacy part of performance cycles.
- Invest in leadership in the field of AI literacy by ensuring that key staff members are AI-literate.
- Impact of role models: ensure that leaders set a good example when using AI.

5. Facilitate support and experimentation

- Ensure that education professionals have easy access to support in developing AI literacy. Set up an AI office or AI support hub that can help teaching staff with their questions, suggestions, issues or technical challenges. A facility like this serves not only as a helpdesk but also as a learning and meeting platform where people can experiment, share knowledge and offer each other support.
  - By reducing practical barriers, the confidence and ability of education professionals to use – or choose not to use – AI responsibly are enhanced.

6. Understand resistance and uncertainty

- Acknowledge that improving AI literacy may also raise questions, doubts or concerns. These types of processes can give rise to obstacles (Kotter, 2014). Rather than fighting resistance, it is important to listen actively and build connections: talk to colleagues about their experiences, concerns and values. After all, ethical concerns are an explicit part of AI literacy. Use these dialogues to give meaning to AI in educational practice together. One way of doing so is to ask questions like: what do we consider important, where do we draw the line, and what opportunities can we identify?

7. Build collaborative learning

- By accommodating different perspectives, a sense of shared ownership and a culture of collaborative learning are fostered and AI literacy becomes a collective competence.

When carrying out each of the above steps, make sure to facilitate interdisciplinary collaboration between academic roles (teaching staff, programme management) and support services (IT, HR, legal affairs).

AI-GO component	Learning objectives for programme management and supervisors	Translation into implementation and organisational policy
Knowledge	Programme management and supervisors can explain which AI concepts are relevant to their organisation and what impact these have on policy.	Programme management and supervisors have developed infrastructure and policy aimed at fostering the *knowledge* of teaching staff, for example through knowledge-sharing and training sessions.
Skills	Programme management and supervisors design interventions in infrastructure and HR policy that incorporate AI in a responsible manner.	Programme management and supervisors have developed infrastructure and policy aimed at boosting the *skills* of teaching staff, for example through workshops and training sessions.
Attitude	Programme management and supervisors adopt an open, inquisitive and critical attitude to AI and discuss the opportunities and risks with programme managers and teaching staff.	Programme management and supervisors have developed infrastructure and policy aimed at encouraging the right attitude of teaching staff, for example through knowledge-sharing and training sessions.
Ethics	Programme management and supervisors have an understanding of the ethical issues surrounding the use of AI in education and integrate ethical and legal considerations into the development of infrastructure and HR policy.	Programme management and supervisors have developed infrastructure and policy aimed at encouraging an ethics-oriented attitude of teaching staff, e.g. by focusing on the ethical aspects of AI and facilitating discussions between teaching staff on the ethical use of AI.

Output of this step

After completing this step, programme departments and teaching teams will have:

- Drawn up an AI-in-Action plan for the implementation of AI literacy based on the defined actions – including sequence, timeline and stakeholder responsibilities.
- Set up technology infrastructure for the (responsible) use of AI.
- *Embedded AI literacy in the existing technological infrastructure of the organisation and developed HR policy* that incorporates the objectives of AI interventions.
- Facilitated AI literacy for programme management and supervisors.

Tips for practical application

- Organise social activities to bring AI literacy to life, for example by holding an AI literacy competition or launching an "AI literacy idea of the month" competition.
  - Encourage teaching staff to come up with ideas on how to integrate AI literacy into education more effectively.
- Draw up a list of the implementation goals to be achieved and update it regularly.
- Identify the potential consequences and side effects of the implementation plan.
- Although the implementation plan is similar in nature to a project plan, it is important to work in an agile manner and to remain adaptable in the face of new AI developments.
- Ensure that initiatives are flexible and resilient. An implementation plan will need continuous adjustment rather than remaining static.

Phase IV

Learning, improving and embedding

Step 7: Monitor and improve as a "learning programme department"

Purpose of this step

A programme department that seeks to strengthen AI literacy in the long term must view itself as a learning organisation. This means systematically monitoring how students, teaching staff and teams are developing in terms of adopting AI and drawing on the monitoring insights to continuously improve education and policy.

This step builds on the implementation and facilitation steps outlined in Steps 5 and 6. Implementing AI literacy is not an end point in this process but an ongoing journey of experimenting, learning and adapting. Monitoring and evaluation are effective in illustrating what works in practice, where obstacles arise and what support or redesign is needed.

The purpose of this step at programme level is to make AI literacy visible, open to discussion and capable of being developed throughout the programme department. By systematically monitoring experiences, reflecting together on the outcomes and making targeted improvements, AI literacy becomes an integral part of the programme department's quality culture – not as a stand-alone innovation but as an integrated way of working and learning. As such, this step does not signify a closing point but a turning point: the insights gained from mon-

itoring and evaluation inform new design and implementation choices in the next development cycle.

Position within Educational Design Research (EDR)

Although evaluation is not an end point in *Educational Design Research* (EDR) but an ongoing part of the design process, this step is best positioned in the Evaluation and Reflection phase (McKenney & Reeves, 2019, 2025). In this step, the programme department positions itself as a learning system that continuously examines and adjusts its education and curriculum, HR policy and professional development. Monitoring provides insight into how AI literacy is developing among students, teaching staff and teams, and what this means for the curriculum and the organisation. By systematically gathering data, experiences and reflections, the programme functions as a living lab where design, practice and research reinforce one another. This step represents the empirical core of the EDR cycle: it is here that knowledge and insights are gained that lead to redesign and improvement.

Actions to take in this step?

- Develop a common language for AI literacy. Together with teaching staff, support staff and students, develop a shared understanding of what AI literacy means in your subject area and curriculum. This is the foundation for evaluation and improvement.
- Reflect on the vision and objectives in Steps 3 and 4. Assess whether these objectives have been achieved, whether the vision has been accomplished, and explain why this is (or is not) the case. Make adjustments to this vision and these objectives as necessary, and draw up plans for the coming period.
- Connect quality assurance to AI development. Incorporate AI literacy targets and indicators into existing quality cycles, such as PDCA or annual reports. These efforts ensure that AI is structurally incorporated into accreditation processes, evaluations and curriculum reviews.
- Combine data and experience. Combine hard data (such as student results or participation in professional development) with soft data (reflection reports, conversations, observations) to gain a comprehensive picture of development and impact.
- Make time for group reflection. Organise sessions where teaching staff, students, researchers and supervisors can reflect together on the use and impact of AI. Discuss the results but also the associated values and dilemmas.
- Learn from pilot projects and experiments. Gather insights from initiatives within the programme (such as small-scale AI projects or subject innovations) and use them to improve policy, support and educational design.
- Communicate what you have learned. Share successes, lessons learned and next steps by means of training days, newsletters or dashboards. Show how feedback is used to adjust policy, education and curriculum.

The programme director's role in this step

For programme directors, this step entails creating the right conditions for continuous learning and improvement within the programme. AI literacy calls for strategic leadership – showing how students and staff are learning to use AI, how this benefits the quality of education and how the programme department is developing in this area.
The programme director focuses on:

- Developing a shared vision of AI literacy. Ensuring that teaching staff, support staff and students have a common understanding of what AI literacy means in the programme department. This serves as the reference framework for monitoring and evaluation.
- Integrating AI literacy in quality cycles. Incorporate indicators for AI competence and responsible technology development into the existing PDCA cycle. This way, AI becomes a recurring topic in evaluations, annual plans and accreditation meetings.
- Fostering data-literate leadership. Develop a culture that focuses on using data to understand rather than to assess. Discuss what data means with teams and examine how data can be translated into didactic or organisational improvements.
- Building in periodic reflection checkpoints. Schedule study days or AI labs where teaching staff, students and researchers collaboratively reflect on the impact of AI in educational design, didactics and cooperation.
- Maintaining a balance between innovation and wellbeing. Take the human aspect of technological change into consideration: monitor workload, consensus for the change and professional development. Use these insights to adjust policies and support.
- Ensuring there is visible feedback. Share the results of monitoring in accessible formats (dashboards, stories, visuals) and communicate to stakeholders what will be done with the findings. This enhances transparency and trust.

Programme directors act as a director of structural learning: they connect education, research and policy and monitor the balance between innovation and wellbeing.
In this way, monitoring and improvement become a means to provide direction to structural change rather than a means of control.

Output of this step

When the programme department adopts systematic monitoring and learns from its own practices, it becomes a learning ecosystem that continuously adapts and improves. AI literacy thus becomes not only a subject in the curriculum but an integral part of a culture of collaboration, research and innovation.

Results at three levels in the programme department

- Students learn how to reflect on their personal use of AI and gain a better understanding of how technology influences their creativity, their learning process and their professional future.

- Teaching staff expand their repertoire of didactics and ethical practices and learn, from each other, what works when using AI in educational design and guidance.
- The programme department as a whole builds a shared body of knowledge on AI literacy – which guides curriculum development, quality assurance and professional development.

Collective gains
The programme department develops an integrated learning capacity: the ability to draw on reflection, data and dialogue to continuously innovate. AI literacy is integrated into the programme department's DNA, as demonstrated in its vision, curriculum, quality assurance and professional culture. "Monitoring and improving" is no longer a final step in a list of actions but a systematic way of working: a cyclical process in which learning, evaluating and developing continuously reinforce one another.

Step 8: Share and scale up what works

Disseminate, embed and innovate best practices of AI literacy

Purpose of this step

Although this may appear to be the final step in the process, sharing and embedding knowledge are not an end in themselves but an ongoing practice (McKenney & Reeves, 2019, 2025). By sharing what does or does not work, not only do you strengthen your own professionalism but also the collective learning capacity in your programme department. A programme department that is intent on structurally strengthening its AI literacy shares and embeds what works: this way, what has been learned is not lost but continues to inform policy, curriculum and culture.

Structural integration means organising learning and change in such a way that insights, working methods and values continue to develop, deepen and broaden – in the context of the education system as a whole. The goal is not only to preserve the lessons learned but also to embed change in behaviour, routines and structures so that these can continue to adapt to new contexts Structural change occurs when what has been learned persists over time (length), is disseminated across people and teams (breadth), and becomes embedded in the beliefs and practices of professionals (depth) (Van den Boom-Muilenburg & Vanlommel, in press). These three dimensions reinforce one another and ensure that AI literacy does not remain a one-off project but is a dynamic, enduring part of the programme department.

This step therefore focuses on highlighting, sharing and embedding successful working methods, insights and learning routines that have emerged from previous phases. Translating knowledge and experience into structural improvements – in the curriculum, in professional development and in the way teams collaborate on AI – is the ultimate goal. By sharing results within and outside the programme department, AI literacy develops into a shared capability that is continuously nurtured and renewed.

Position within Educational Design Research (EDR)

In Educational Design Research (EDR), this step forms part of the valorisation and dissemination phase of the design and learning process (McKenney & Reeves, 2019, 2025). In this step, the programme department acts as a knowledge-sharing ecosystem: insights are shared through internal and external networks, embedded in policy and curriculum and used as building blocks for new design. As a result, the framework remains a dynamic approach as it is continuously adapted to new technological, pedagogical and societal developments.

Actions to take in this step?

- Showcase results and successes. Publish or present the results (or lack of results) of experiments, evaluations and improvement initiatives. Use accessible formats (infographics, dashboards, stories) to showcase the impact of these results.
- Share knowledge and experience. This can be achieved through internal knowledge-sharing sessions, AI cafés, study days, peer review sessions or learning labs in which lecturers and students discuss successes and lessons learned, but also through digital knowledge bases, for example. Communicate what the programme department has learned – not only internally but also to partners, management and the professional field.
- Embed what works. Incorporate effective methods and principles into curriculum documents, professional development programmes and quality assurance. Use what works to adapt policy, learning outcomes and design principles. Explicitly embed AI literacy in curricula, job profiles and quality cycles.
- Encourage knowledge-sharing. Connect teaching staff, students and researchers from different programme departments to share best practices, to learn from each other and to continue to develop AI literacy together.
- Maintain networks. Take part in and maintain regional or national initiatives on AI and education. Share lessons learned and learn from others.
- Update the framework. Review annually whether the current approach is still in line with new technological, societal and educational developments. Keep the framework dynamic.

The programme director's role in this step

For programme directors, this step is about embedding, sharing and ongoing development of what works. AI literacy becomes embedded in an organisation when best practices are not limited to one-off initiatives but are integrated into policy, curricula and professional development. The programme director focuses on:

- Embedding AI literacy. Incorporate proven approaches and learning principles into policy documents, curriculum reviews and quality cycles so that they become part of standard practice.
- Fostering knowledge-sharing and cross-pollination. Provide opportunities for teams, programme departments and partners to share good practices through knowledge sessions, peer review sessions or digital platforms.
- Building and maintaining networks. Boost collaboration with other programme departments, partners in the professional field and knowledge institutions so as to continue exchanging and developing new insights.
- Translating lessons learned into strategic choices. Use what has been learned from pilot projects and evaluations to refine policy and vision.
- Keeping the framework dynamic. Ensure that objectives and approaches are reviewed periodically, in line with new technological and societal developments.

In this phase, the role of programme directors is to keep an eye on continuity and change: they ensure a balance between what works and what remains to be discovered, and ensure that knowledge is shared between teams and transferred to policy and practice. This embeds AI literacy but also ensures it is constantly being developed as an integral part of the programme department's identity and culture of quality.

Output of this step

When the programme department actively shares and embeds what works, it creates an enduring and integrated culture of knowledge and learning. AI literacy is no longer seen as a one-of topic but as a structural part of the programme department's identity.

Results at three levels in the programme department

- Students learn in an environment where AI literacy is visible, is openly discussed and is integrated in their learning process.
- Teaching staff experience continuity because knowledge and didactic innovation are maintained and developed further in teams and departments.
- The programme department as a whole has a shared, up-to-date and widely supported framework for AI literacy, embedded in quality assurance, professional development and collaboration with the professional field.

Collective gains

The programme department has a dynamic framework in which knowledge circulates, deepens and has continuous effects over time (length), across people and teams (breadth) and in beliefs and values (depth). AI literacy thus becomes an integral part of professional practice, curriculum development and strategic decision-making.

Concluding remarks

Developing AI literacy in education is not a one-off initiative, nor is it solely a technological issue. It requires continuous alignment between vision, didactics, ethics, professional development and organisational change. That is precisely why AI-GO in Action has been designed as a cyclical guide – not as a fixed formula but as a guiding framework to help educational institutions make informed, responsible and context-specific choices.

What makes this guide a valuable resource is that it not only outlines the eight steps involved in developing AI literacy, but also provides guidance for the collective learning process that it can help initiate. AI literacy is created when education professionals, teams and organisations work together to explore what is needed, articulate what is important to them and are willing to continuously rethink their educational practice against the backdrop of technological and societal developments. Sometimes this results in more use of AI, and sometimes in more caution when using AI. In both these cases, the focus is not on technology but on the quality and values of education.

We hope that with AI-GO in Action, we have given programme departments, teams and education professionals the tools and guidance to approach AI literacy not as a hype or an obligation, but as a collaborative and structural development goal. It is a challenge that calls for curiosity, critical thinking, dialogue and the courage to decide what makes for excellent and responsible education in one's own particular context.

Through AI-GO in Action, AI literacy can become more than just knowledge and skills: it can develop into a shared professional and organisational capacity to continue acting with care, critical thinking and a human-centred approach in a changing world.

Terms and abbreviations

CELT / CTL / TLC Organisational units in educational institutions that support and help teaching staff develop their professional skills in the areas of didactics, curriculum development and educational innovation. These abbreviations stand for Centre for Excellence in Learning and Teaching, Centre for Teaching and Learning and Teaching and Learning Centre.

Community of practice (CoP) A group of professionals who share a common practice or area of expertise and who, through ongoing interaction, learn and develop knowledge together. In this guide, CoPs are used to enable teaching staff to collaborate in designing, testing and reflecting on AI applications.

Constructive alignment A didactic design principle involving the systematic alignment of learning objectives, learning activities and assessment. This delivers a cohesive curriculum that allows students to work specifically towards achieving the intended learning outcomes, which are in part focused on AI literacy.

EDR (Educational Design Research) An iterative research approach in which educational interventions are cyclically designed, tested and refined in practice. The structure of the AI-GO phased plan is inspired by this methodology.

Infographic A visual representation of information that combines text, data and graphics to convey complex information – such as the impact of experiments – quickly and clearly.

Learning sprint A short, intensive period of learning and development during which participants (such as an educational team) work specifically on solving a concrete problem or developing a product.

Microlearning An educational approach based on short, targeted learning activities with a narrow focus, such as a module on prompt engineering or bias detection.

Persona A fictional, data-driven representation of a typical user (e.g. a specific teacher or student), used to clarify design choices and expectations regarding AI literacy.

PILO (Programme Intended Learning Outcomes) The intended learning outcomes at programme level, which describe what a student should know and be able to do after graduation. The guide recommends structurally embedding AI literacy in these PILOs.

PLC (Professional Learning Community) A group of education professionals who work together systematically to improve educational practice. The guide proposes PLCs for long-term, continuous professional development in the field of AI.

PDCA (Plan–Do–Check–Act) A cyclical model for quality improvement that involves planning, carrying out, evaluating and adjusting activities. The guide uses this model to systematically monitor AI literacy as part of the programme's quality cycle.

Quick reference card A concise, visual summary of key information designed to provide quick guidance. The overview table in Annex 1 to this guide serves as a quick reference card for the reader.

Role profile A description of the duties, responsibilities and competencies associated with a specific role (such as a teacher or coordinator).

Sandbox A secure digital testing environment in which teaching staff can safely try out new AI technologies without this posing a risk to regular teaching practice.

Scaffolding Didactic support that provides temporary and adaptive assistance to learners and is gradually phased out as learners' independence increases.

Spiral curricula Curriculum design in which core concepts recur at progressively higher levels of complexity and depth.

Walkthrough A step-by-step demonstration or guided walkthrough of a process, task or tool, often used for training or professional development.

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Annex 1. Table Overview of AI-GO in Action

Table Overview of AI-GO in Action: eight steps aimed at the individual, team and organisation levels

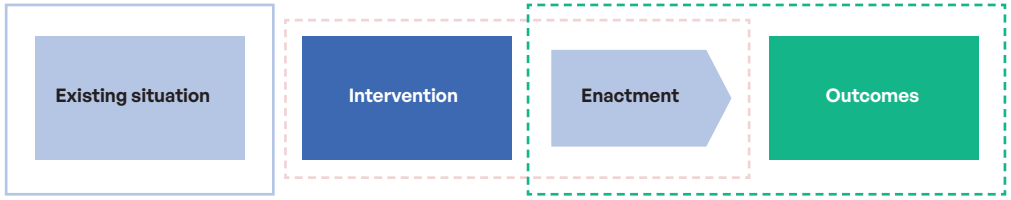
	Step	Core activity	Individual level	Team level	Organisation level	AI-GO component
1.	Determine your starting point (Explore the initial situation)	Analyse your current situation in terms of knowledge about, use of and attitude towards AI.	**Reflection**: Examine your own knowledge, beliefs and experience of AI. Identify your strengths and weaknesses in this area.	**Collective exploration**: Discuss what the team is already doing with AI in education or research and identify opportunities or concerns.	**Baseline measurement**: Make a list of policies, infrastructure, professional development and culture relating to AI.	Knowledge, attitude, skills, ethics
2.	Choose your compass (Determine the direction and values)	Formulate a vision, objectives and ethical principles for AI literacy.	**Personal direction**: Set personal learning objectives and values in relation to the use of AI.	**Team direction**: Develop a shared vision of responsible AI use in learning and teaching.	**Strategic direction**: Embed a widely supported vision of AI literacy in strategic policy or the organisation's mission.	Attitude, ethiek
3.	Design with a purpose	Design learning activities or interventions that integrate AI with learning objectives.	**Individual design**: Experiment with AI tools in your lessons, research or work processes, and assess the added value.	**Collaborative design**: Align learning objectives, learning activities, assessment and AI use in the curriculum.	**Parameters and & support**: Create the time, space and support needed to innovate responsibly with AI.	Knowledge, vaardigheden, ethiek
4.	Integrate didactics & ethics (Design responsibly)	Design learning activities or interventions that integrate AI with learning objectives.	**Professional reflection**: Explore how AI affects the learning process, your role and your relationship with students.	**Team reflection**: Discuss case studies on the ethical use of AI, formulate shared values and make agreements on this.	**Ethics policy**: Develop guidelines on data use, privacy and the responsible use of AI.	Ethics, houding
5.	Develop staff skills (Develop and practice professional skills)	Develop competence in the responsible use, interpretation and application of AI in your own educational practice or professional context.	**Learning & practising**: Take part in training courses or micro-learning modules on AI tools. Experiment with applications in your own professional practice (e.g. lesson planning, data analysis and feedback). Reflect on your own competencies and uncertainties.	**Collaborative learning**: Organise peer review sessions, AI labs or learning sprints in which team members practise using AI together. Share experiences, tips and dilemmas.	**Facilitate learning**: Develop a professional development programme or policy that includes AI skills as a structural component of professional development. Foster communities of practice and knowledge-sharing across teams.	Skills, kennis, houding, ethiek
6.	Organise the prerequisites (Create conditions)	Create the technological and cultural conditions required to make responsible AU use possible.	**Individual conditions**: Ensure access to tools, accounts and a safe learning environment for experiments. Enlist support where necessary.	**Team conditions**: As a team, agree on which AI tools and methods will be used and discuss the related privacy and quality aspects. Create an open learning environment that allows for mistakes.	**Organisation conditions**: Formulate policy on data ethics, privacy, authorship and intellectual property. Provide IT support, time and funding for innovation. Organise governance for responsible AI use.	Knowledge, vaardigheden, ethiek
7.	Monitor and improve (Learn and evaluate)	Monitor and evaluate the learning process, impact and quality of AI applications. Use feedback and data for continuous improvement.	**Reflection:** Keep track of how your own AI use is developing. Use logbooks, portfolios or self-evaluations to track growth and identify obstacles.	**Evaluation in the team**: Regularly discuss the effects of AI on learning, workload, motivation or collaboration. Use joint reflection as input for adjusting the design or practice.	**Organisation monitoring**: Develop indicators for AI literacy and implement cyclical evaluations (e.g. using PDCA or EDR). Use insights gained to adjust policy and inform strategic decision-making.	Knowledge, houding, vaardigheden, ethiek
8.	Share & scale up what works (Disseminate and integrate)	Share the knowledge you have gained, successful approaches and lessons learned. Make sure that what works well is embedded into policy, curricula and networks.	**Sharing personal experiences**: Share your own experiences at meetings or through blogs. Become an ambassador or mentor for your colleagues.	**Team learning & dissemination**: Work together to develop best practices, guides or lesson plans. Share the results in the organisation or with external networks.	**Integration & upscaling**: Embed best practices into policy, study programmes and quality cycles. Encourage knowledge-sharing between teams and institutions. Build and maintain a learning network or community of practice.	Skills, houding, ethiek

Annex 2. Theory

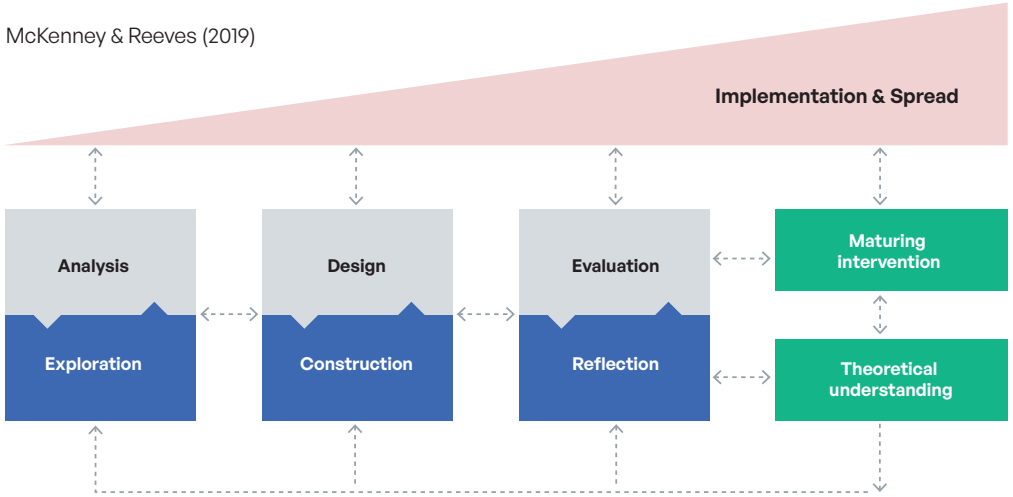
Educational Design Research
(McKenney & Reeves, 2019, 2025)

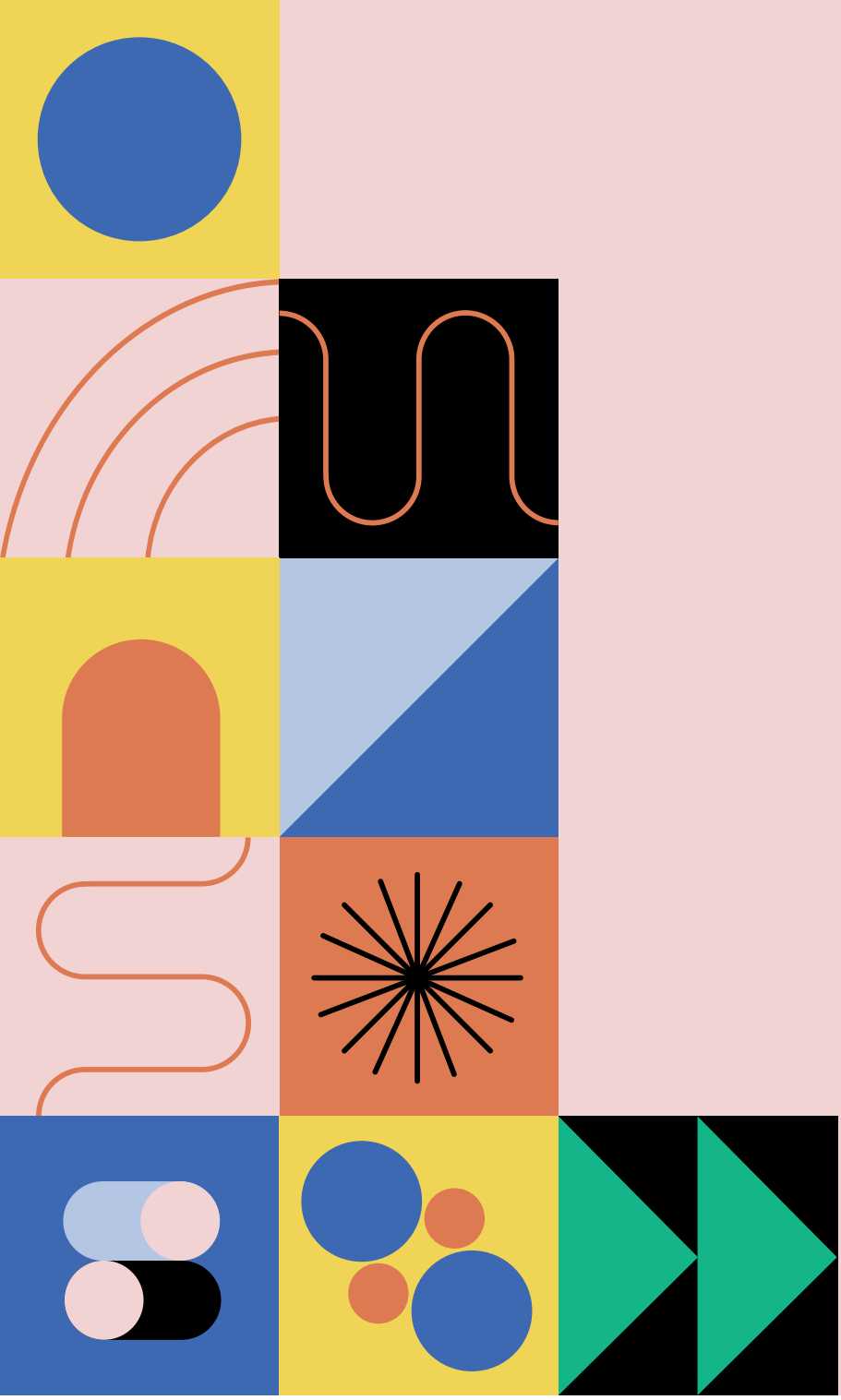
Educational design research (edr) is typically conducted

for interventions **on** interventions or **through** interventions



McKenney & Reeves (2019)





Moving education.