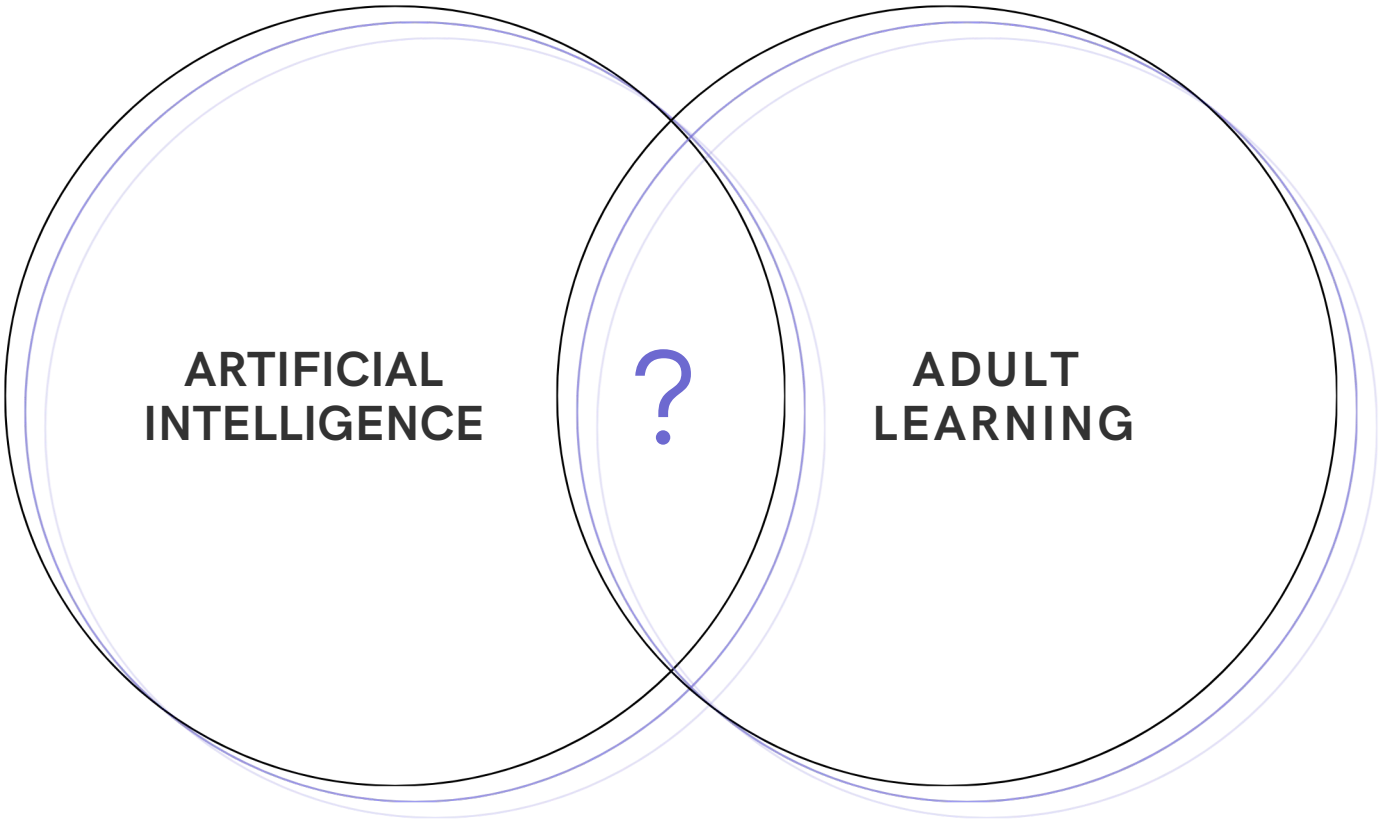
AI Act(ing)
in Adult Education

Co-funded by
the European Union

Artificial Intelligence (AI): Challenges & Needs in the Adult Education Sector

Erasmus + KA220-ADU: Cooperation
Partnerships in Adult Education

Grant Agreement n°:
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Executive Summary

Adult educators are already living with AI, whether they asked for it or not. Across Europe, teachers are using AI to save time, prepare lessons, summarise documents, translate materials, support learners and manage the growing pressure of modern work. In many cases, they are adapting quickly and creatively, finding ways to make new tools useful in classrooms, training rooms and community settings. But they are doing all of this in a system that has not fully caught up, and that is where the challenge begins.

What stands out most is not a lack of interest, but a lack of support. Adult education is a fragmented world, with people working across community centres, vocational providers, universities, NGOs and other settings, often without a shared rulebook or consistent professional development. That means the same tools are being used in very different ways, with very different levels of confidence, guidance and organisational backing. Some educators are already experimenting with AI in hands-on and thoughtful ways, while others are unsure whether they should use it at all. The common thread is that most people want to use it well, but they need clearer direction, stronger institutional support and training that speaks to the realities of their work.

The next step is to give educators the support they need to use AI responsibly. If AI is going to complement adult education rather than complicate it, educators need AI literacy, ethical safeguards and guidance that is based on everyday teaching practice. They need training that fits busy schedules, builds confidence and helps them make decisions about lesson planning, assessment, learner support, privacy and responsible use. In short, the people teaching adults are ready to move forward. What they need now are the right conditions to do it well.

The AI Act(ing) Project

The AI Act(ing) in Adult Education (AAA) project is a European initiative developed to help adult educators understand and use artificial intelligence in ways that are practical, ethical and relevant to teaching contexts. Funded through the Erasmus+ programme, the project brings together organisations from several EU countries to study current needs, identify gaps in knowledge and support and create useful resources such as training, guidance and implementation tools. Its main objective is to strengthen AI literacy in adult education while also supporting responsible use, institutional readiness and more confident everyday practice across different learning environments.

The AI Act(ing) Partnership

die Berater bridges to europe
CESGA GALICIA SUPERCOMPUTING CENTER
fip Future In Perspective
ReadLab
HEADWAY
syncnify

Table of contents

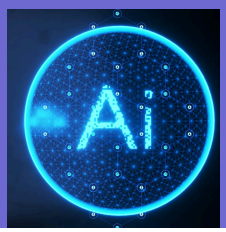
5 Introduction



5 Setting the Scene: Adult Educators and Artificial Intelligence



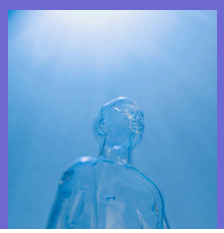
7 The Research Behind the Report: How We Gathered Our Evidence



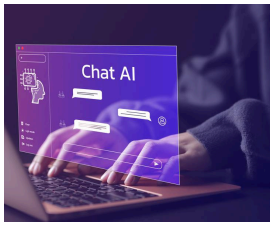
10 A Sector at a Crossroads: Adult Education in the Age of AI



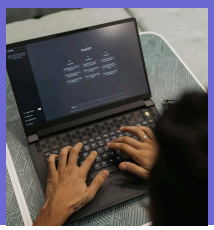
16 Six Countries, Six Realities: A Closer Look at Each National Context



20 What the Six Countries Tell Us Together



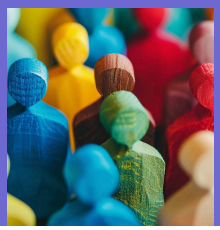
24 Best Practices and Training Initiatives Across Partner Countries



28 The Needs: What Adult Educators Are Actually Asking For



34 Towards Better AI Training: Principles That Should Guide the Work Ahead



35 Recommendations & A Way Forward



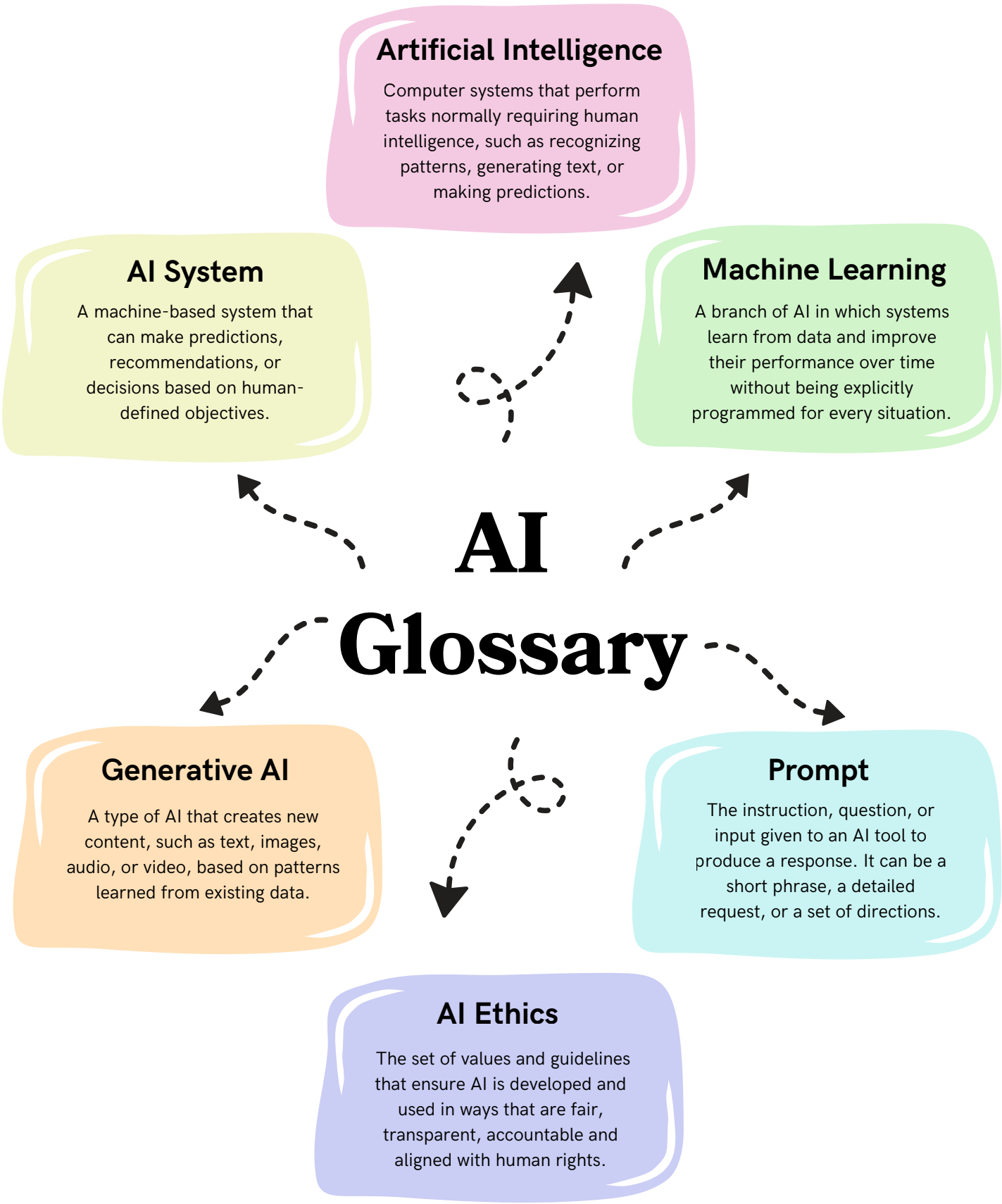
37 Final Remarks: A Field That Cannot Wait

38 Resources & Additional Reading

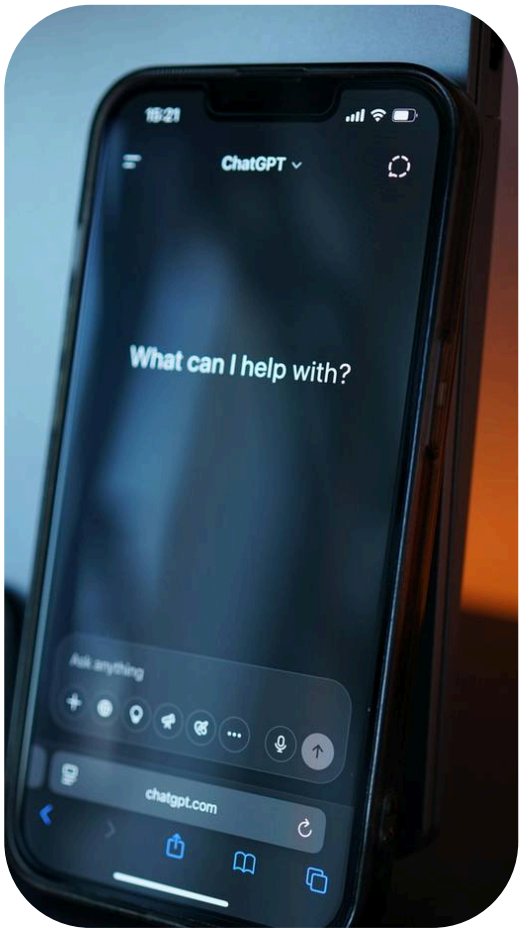
39 Annexes

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Source: AI Act(ing) in Adult Education, 2026



Introduction

Artificial intelligence (AI) is already part of everyday life in adult education. Teachers, trainers and many other professionals are using it to prepare lessons, summarise documents, translate materials, support learners and manage the pressure of busy working lives. It is already changing the way adult education is designed, delivered and experienced by both educators and learners. The present report examines this shift across six European countries and asks what adult educators need in order to use AI well. The answer that arises is not a lack of interest. In fact, many educators are open, curious and currently experimenting. What educators lack is adequate guidance, relevant training, workable governance arrangements and support suited to the conditions of adult education, where people often work across different institutions, with different levels of experience and different levels of access to resources.

The work brings together national research, stakeholder consultations, and comparative analysis to show both the opportunities and the challenges that AI brings into the sector. It highlights where educators are finding value, where they are encountering uncertainty and what kinds of support would make responsible use more realistic. Above all, it shows that adult educators are ready to move forward but they need the right conditions to do it confidently, safely and well.

Setting the Scene: Adult Educators & Artificial Intelligence

1.1 The Growing Presence of AI in Everyday Professional Life

Something significant has shifted in the world of work over the past few years and most people working in education have felt it, even if they have not always had the words to describe it. Tools that once seemed futuristic are now sitting inside the browser, the email client and the document editor. A teacher preparing a lesson on a Tuesday evening might use a generative AI tool to draft a quiz, summarise a dense policy document, or translate a resource for a multilingual group of learners. They might not even think of it as "using AI." It has simply become part of how they get things done.

However, this is not a story about technology taking over. It is a story about technology arriving quietly and unevenly. Adult educators are at the epicenter of this story. They work with adults returning to learning after years away, workers retraining as industries change, people developing language skills in a new country and older learners trying to stay connected in an increasingly digital world. These educators do important work in conditions that are rarely simple. They manage diverse classrooms, limited resources, shifting expectations and now they are being asked to add AI to that frame.

1.2 Why Adult Educators Are Particularly Affected

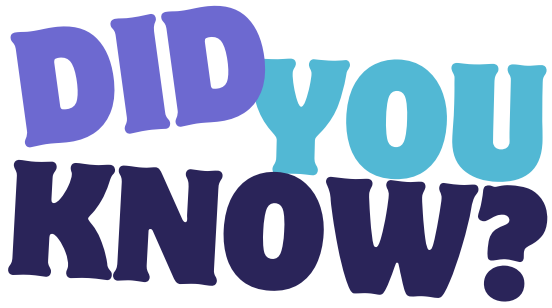
There is a particular kind of pressure that comes with working in adult education. Unlike school teachers, who operate within established institutional structures and national curricula, adult educators often work across a patchwork of providers, i.e., community centres, vocational institutes, private training companies, non-profit organisations and university continuing education departments. There is no single employer, no single rulebook, and rarely a shared professional development programme that everyone can access. When AI arrived, it entered an already fragmented sector. Some educators embraced it immediately, experimenting with generative tools and finding genuine time savings and creative

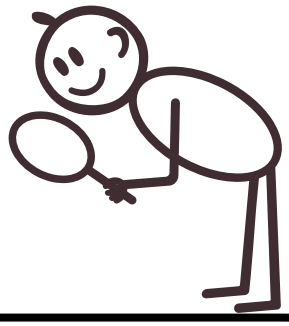
possibilities. Others were more cautious, unsure whether using AI was appropriate, ethical, or even allowed. Many, probably the majority, found themselves somewhere in the middle, curious about the possibilities but uncertain about how to make informed decisions. What the research behind this report makes explicit is that this is not a problem of motivation or willingness. Adult educators across Europe are not resistant to AI. They are interested, often enthusiastic and frequently using AI tools in their daily work. What they are lacking is support, meaningful training, institutional guidance, concrete frameworks for ethical decision-making and the confidence that comes from knowing they are doing things right. That gap between interest and support is what this report is about.

1.3 Who Produced This Report and Why

This report was written by a transnational partnership of six organisations from across Europe, i.e., Austria, Belgium, France, Greece, Ireland and Spain, working together on a shared project supported by the European Union's Erasmus+ programme. The project is called AI Act(ing) in Adult Education, and its main ambition is straightforward: to understand what adult educators across Europe actually need when it comes to AI and then to build something genuinely useful in response. Before developing the project resources, the partnership began by listening to the people working in the sector. Partners in all six countries reviewed national policies and existing training provision before speaking directly with adult educators, trainers, institutional managers, curriculum designers and policymakers. They ran surveys. They held interviews. They compared notes across borders and looked for what was shared and what was specific to each national context.

The insights gathered throughout this process form the basis of the report. Findings from 12 national reports, 161 survey responses and 89 interviews were consolidated to provide an evidence-based account of where adult education currently stands in relation to AI. The organisations behind this work are not detached researchers writing from the outside. They know the sector from their own experience, which helped keep the research closely connected to the day-to-day realities of the work. That proximity is important. It means the questions asked were the right ones and that the findings in this report are based on day-to-day classrooms and training rooms, rather than in theory alone.





- In 2025, 32.7% of people aged 16-74 in the EU used generative AI tools. This means that AI is becoming part of everyday learning, work and communication (Eurostat, 2025a).
- Among young Europeans aged 16-24, 63.8% used generative AI tools in 2025. This is almost double the general population rate of 32.7% (Eurostat, 2026).
- The EU Digital Decade aims for 80% of adults to have at least basic digital skills by 2030. Yet in 2025, only 60% of people aged 16-74 met this threshold (European Commission, 2025; Eurostat, 2025b). According to the Digital Skills Indicator (DSI), basic digital skills involve being able to carry out everyday tasks across key areas such as information literacy, communication, digital content creation, safety, and problem solving.
- In 2025, 55.03% of large EU enterprises used AI technologies, compared with 19.95% of all EU enterprises (Eurostat, 2025c).
- Some useful resources for further reading include the EPALE platform for adult learning in Europe, the European Commission's AI policy pages, and the AI Act information portal.

1.4 How to Navigate This Document

This document is written for anyone with a genuine interest in adult education and artificial intelligence, not only for specialists or project insiders. No prior knowledge of the project, of European education policy, or of AI technology is assumed. The report moves from context to evidence to action. It opens by explaining the broader context and the research approach, moves through the national and cross-country findings and ends with a concrete set of principles and recommendations for the path ahead. Readers who want the full overview are encouraged to read it from start to finish. Readers with specific interests, e.g., a particular country, a specific challenge, or recommendations, will find each section designed to stand on its own. Throughout the report, evidence is presented as honestly as possible. Where the findings are encouraging, that is said directly. Where the findings reveal difficult truths about the state of the sector, those too are presented without softening. Adult educators deserve that honesty. So do the policymakers and institutional leaders who can act on what this research reveals.

The Research Behind the Report: How We Gathered Our Evidence

2.1 The Research Questions We Set Out to Answer

Good research starts with the right questions. Before a single survey was sent, before a single interview was scheduled and before any national policy document was opened and read, the partnership behind this report sat down and asked something simple, what do we actually need to know? The answer shaped everything that followed. The research was not designed to confirm assumptions or to produce a report that simply sounded credible. It was designed to examine the situation comparatively and in enough depth to produce findings that could inform subsequent work.

Four core questions guided the entire process:

1. What is the current state of AI awareness and use among adult educators across the six partner countries?
2. What competence gaps, ethical concerns and barriers are making responsible AI adoption difficult?
3. How do policy and institutional arrangements differ across the six countries, and how effectively do they support people working in adult education?
4. And when you put all six countries side by side, what patterns appear and what do they tell us about the broader state of the sector across Europe?



These questions are not complicated. But answering them rigorously, across six different national contexts, in ways that allow for meaningful comparison and lead to concrete conclusions, required a carefully designed research architecture, a shared methodology, and a sustained commitment from all six partner organisations throughout the process.

2.2 Desk Research Across Six National Contexts

The first analytical pillar of the research was a structured review of existing knowledge in each country. Each partner organisation conducted a national desk research study, a rigorous examination of the policy frameworks, AI strategies, digital education initiatives, competence frameworks and published evidence relevant to adult education in their national context. Six national desk research reports were produced in total, covering Austria, Belgium, France, Greece, Ireland and Spain. Each report was organised around four focus areas that were agreed across the partnership from the outset. The first examined national policy, regulatory and strategic context, i.e., how national and European frameworks, including the EU AI Act and the Digital Education Action Plan, positioned AI within adult learning systems.

The second looked at institutional practices and digital readiness, i.e., the tools in use, the organisational strategies in place and the constraints limiting institutional uptake. The third investigated educator competences and AI literacy requirements, i.e., the gaps between what is formally expected of educators and what they actually know and feel confident doing. And the fourth mapped the barriers, opportunities and emerging trends that national stakeholders and researchers had identified as shaping the road ahead. What the desk research revealed, very quickly, was that the distance between national policy and everyday classroom reality is often enormous. A government strategy document does not automatically translate into a trainer at a community learning centre knowing what to do when a learner asks whether they can use a generative AI tool for their assignment. That gap, between what is written and what is lived, became one of the defining aspects of the entire study.

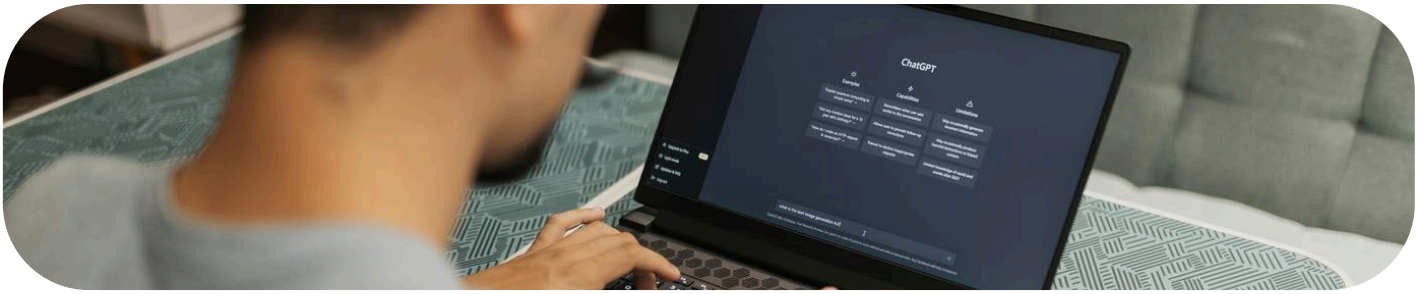
2.3 Surveys and Interviews With Educators, Managers & Policymakers

Desk research tells you what exists on paper. To understand what is actually happening in practice, you have to talk to people. That is exactly what the partnership did. The survey was developed as a shared instrument, distributed through Google Forms across all six countries and translated and contextualised for each national setting. It was drafted around five thematic areas: the professional background and digital experience of respondents; their awareness and understanding of AI concepts and applications; their actual use of AI tools in teaching and learning; the challenges, barriers, and ethical concerns they face; and their training needs and preferred learning formats. Each partner was responsible for reaching a minimum of 20 respondents. The final dataset includes 161 survey responses from adult educators, trainers, curriculum designers, guidance counsellors and digital learning specialists across the six countries.

Alongside the surveys, the partnership conducted 89 semi-structured interviews. Each interview was designed to last between 30 and 45 minutes, and was guided by a common framework developed to ensure coherence across all six countries while still leaving space for interviewees to speak in their own words, raise their own concerns, and reflect on their actual experiences. Each partner conducted close to 15 interviews, following shared ethical procedures including GDPR-compliant consent protocols, voluntary participation and secure data handling. The range of people who took part is worth mentioning. Interviewees included adult educators and trainers, vocational training professionals, institutional directors and managers, curriculum designers, digital learning specialists, policy representatives and civil society actors. Some were working in large urban institutions with dedicated digital infrastructure. Others were running small community education programmes in rural areas, largely on their own initiative and with very limited resources. That breadth was critically important to the credibility of this report's findings.

2.4 How the Evidence Was Analysed & Compared

Gathering rich evidence across six countries, in six languages, through two different research methods, produced a large and complex body of material. Making sense of it in a way that is both analytically rigorous and useful required a shared framework that all partners applied consistently from the start. Once all twelve national reports, i.e., six desk research reports and six stakeholder engagement reports, were submitted, the findings were consolidated into a structured transnational database. Every piece of evidence was coded against a common set of thematic categories: policy and regulatory context, current AI adoption and use cases, institutional readiness, educator competence gaps, ethical and data governance concerns, barriers to adoption, opportunities and enabling factors, training needs and preferred learning formats. Each coded finding was linked back to its source, meaning that every claim in this report can be traced directly to the national evidence that supports it. That transparency is deliberate. The partnership is aware that reports of this kind can sometimes feel like they are summarising what everyone knew. This one is different. The findings are based on evidence collected through a common methodology, systematically coded and reviewed by partners familiar with their national settings.



AI Act(ing): Aggregation of Research Results

Six-country synthesis of adult education readiness, AI use, barriers and considerations for skills training.

AI Act(ing) in Adult Education

Co-funded by the European Union

6 countries analysed: Austria, Belgium, France, Greece, Ireland and Spain

12 national reports aggregated into one comparative database

161 survey respondents captured educator perspectives

89 interview participants added institutional insight

Training priority scored 5/5 in every country

Main takeaway: AI use is advancing faster than institutional guidance

Stakeholder Evidence Base

250

total stakeholder inputs

161 surveys + 89 interviews

Key Insights

- Educators already use AI for lesson planning, content creation and administrative support.
- Ethics, privacy, bias and over-reliance are recurring cross-country concerns.
- The strongest shared need is modular, applied and responsible AI training.

Country Readiness Overview (Overall Readiness /5)



Cross-country Comparison Snapshot

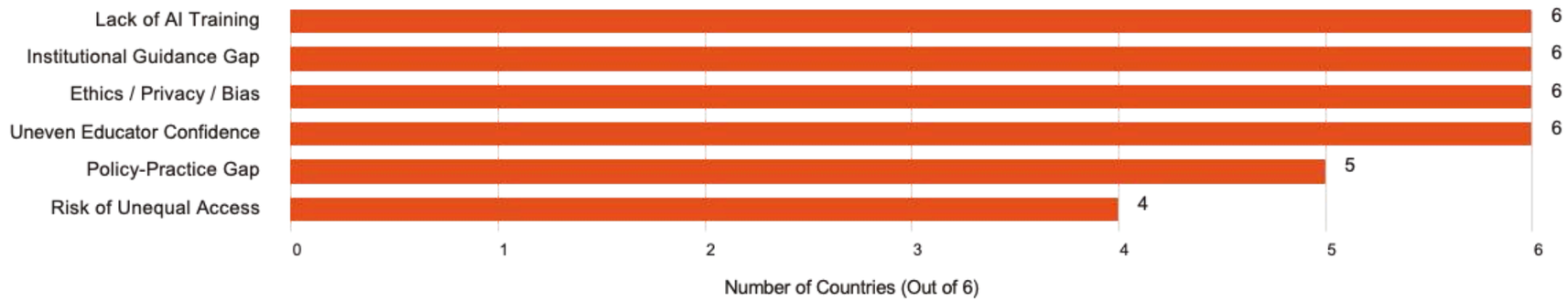
Selected Themes from the Aggregation of Results

Theme	Austria	Belgium	France	Greece	Ireland	Spain
AI Act / Regulatory Pressure	High	High	High	Medium	High	High
National Policy Maturity	High	Medium-High	High	Medium	High	High

Cross-country Challenge Profile

4 core Issues

appear in all 6 countries



Main Pedagogical Uses of AI



Preferred Training Formats

Self-Paced Online

Flexibility for busy educators

Blended / Face-to-Face

Useful for guided practice and ethical reflection

Microlearning

Short modular learning units

Recommendations for Skills Training

- Tiered AI literacy curriculum
- Responsible AI Guide
- Institutional policy templates and governance tools
- Pedagogical use cases, assessment redesign and critical evaluation
- Flexible modular delivery with peer learning and communities of practice

Across all six countries, the evidence points to the same conclusion: adult educators are already experimenting with AI, but they need clear institutional guidance, ethical safeguards and practical training to use it responsibly and effectively.

A Sector at a Crossroads: Adult Education in the Age of AI

3.1 What AI Literacy Actually Means for Educators

The phrase "AI literacy" gets used a great deal these days, and like most things that are repeated often enough, it risks losing its meaning. It becomes a vague aspiration: something educators are told they should have, without anyone taking the time to explain what it actually involves, or why it matters for someone whose job is teaching adults. In one of the most widely cited definitions in the academic literature, Long and Magerko (2020) describe AI literacy as a set of competencies that allow individuals to critically evaluate AI systems, communicate effectively about AI and use AI tools thoughtfully in the context of their everyday lives and work.

This is not about becoming a software engineer. It is not about understanding the mathematics of neural networks. It is about being informed enough to make good decisions about which tools to trust, which outputs to question and how to use AI in ways that genuinely assist learners rather than simply following the path of least resistance. For adult educators specifically, those competencies take on a particular shape and urgency. Educators are not passive users of technology. They design learning environments. They make daily decisions about how to present information, assess understanding and support learners who often come to education with a complicated relationship with learning itself. When AI enters the room, and it has already entered it, quietly and quickly, educators need more than awareness. They need judgement. They need the ability to evaluate AI-generated content critically, to understand the risks of over-reliance, to protect learner data and to model responsible digital practice for the people they teach. That is AI literacy as it comes alive in the classroom.

3.2 EU Policy Frameworks Shaping AI in Education

The European education policy has changed considerably over the past few years, although much of that change happened quietly. For most of the time that adult educators were finding their own way with AI tools, the policy world was catching up behind them. Then, in the space of a few years, it arrived all at once. Not as a suggestion. As a structure. A legal framework, a strategic plan and a set of concrete recommendations that together now define what responsible AI use in education is supposed to look like across the continent. Understanding that structure is not a specialist task but the kind of thing every adult educator and every institution working with AI deserves to know about, explained plainly and connected to the conditions of everyday teaching. Because what these policy instruments say (when you read past the regulatory language) is that the concerns educators raised throughout the research behind this report are not imagined. They are recognised at the highest levels of European policymaking. The gaps in training, the risks around learner data, the uneven access to tools and support, the need for human judgement to stay at the centre of educational decisions, all of it is in there. The question is whether the sector can close the distance between what the policies describe and what educators are actually experiencing on the ground.



3.2.1 When AI Stopped Being Optional

The most significant recent development in EU policy was the adoption of the EU AI Act, Regulation (EU) 2024/1689, which entered into force in August 2024. Before it, AI in education existed in a kind of governed-but-not-regulated space, subject to general data protection rules, characterised by professional ethics and guided by strategic frameworks, but not directly governed by legislation specific to AI itself. That changed. The framework works through a logic of proportionality. Not every use of AI in education carries the same level of risk and the rules reflect that. A tool that helps an educator draft a workshop outline or brainstorm ideas for a lesson sits at one end of the spectrum.

A system that assesses a learner's progress, recommends a learning pathway, or influences decisions about access to education sits at another. The second category does not become prohibited but it does become subject to a set of requirements that cannot be bypassed: human oversight, documentation, transparency toward learners about how AI is being used and the practical ability to challenge or correct AI-generated outputs when they get things wrong. What catches many institutions by surprise is where the responsibility sits. It does not rest only with the companies that build the tools. It also belongs to those who choose to use them with learners in genuine educational settings. The decision to deploy an AI system in a learning environment, i.e., to let it play a role in assessment, guidance, or administrative decisions affecting learners, brings with it a responsibility to ensure that the people working with that system actually understand it. Not at a technical level. At a professional one. Enough to ask the right questions, recognise when something has gone wrong, and know when human judgement needs to step in. For adult education, this is not an abstract principle but a direct challenge to the way the sector currently operates in most of the countries examined in this research. Educators are using AI tools that their institutions have not assessed, evaluated, or discussed. Decisions are being supported by outputs that nobody has been trained to check. The gap between what the law now expects and what is actually happening in practice is, in many settings, significant. Closing it is not optional but essential.

3.2.2 A Strategy That Was Already There

Before the legal framework arrived, a broader strategic vision had been taking shape, one that positioned digital transformation, and AI as part of it, as a defining challenge for European education in the 2020s. That vision was built around an argument: the digital environment is disrupting how people learn, work, communicate and participate in public life and education systems that treat this as a future problem rather than a present one are falling behind the people they are supposed to serve. For adult learners, that argument carries particular weight. Access to digital and AI-related skills is tied to employment prospects, the ability to access public services, social participation and, increasingly, personal independence.

The strategic vision recognised both sides of this: the possibility that well-designed digital and AI-supported education could make learning more flexible, more accessible and more responsive to individual needs and the authentic risk that, without deliberate attention to equity and inclusion, the same tools could deepen the gaps they claim to address. The strategy was built around two directions. One focused on the conditions needed for good digital education to happen at all: infrastructure, institutional capacity, quality of content, connectivity. The other focused on the people: developing digital and AI competences in both learners and educators, embedding them into training programmes, professional development systems, and curriculum frameworks, and ensuring they were treated as genuine professional requirements rather than optional extras. Both directions point directly at the findings of this research. The infrastructure gaps, the uneven confidence, the absence of professional development that speaks to the specific context of adult education, all of it echoes what the strategic vision identified as the core challenges years before this project began.

3.2.3 From Vision to Expectation

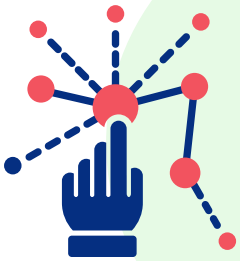
The most recent layer of the policy architecture is also the most specific. The Council Recommendation on AI in Education, 2024 addressed AI in education directly, not as part of a broader digital agenda, but as its own focus. This was a deliberate choice, and what it signals is that policymakers across member states have arrived at a common view: AI in education is no longer a niche issue for technology specialists. It is a mainstream concern that requires a concrete, coordinated response. The recommendations call for national strategies that include funding, governance structures with teeth, and concrete plans for preparing educators, not generic digital training recycled from other contexts, but preparation grounded in the actual work of teaching adults. They ask institutions to treat AI literacy not as a one-off course but as an ongoing dimension of professional life, something that develops as the technology develops and as educators accumulate experience using it thoughtfully.

Three threads run through the recommendations that connect directly to what this research found. The first is that adult educators need support designed for their context. The fragmented, flexible and multi-employer nature of adult education is different from the structures of school education, and guidance that does not account for that difference is guidance that will not be used. The second is that equity cannot be an afterthought. The risk that AI adoption deepens existing inequalities in access, quality and inclusion is named explicitly, not as a peripheral worry but as a central challenge that any responsible strategy has to address from the outset. The third is that practitioner knowledge counts. The people closest to the work, the educators using AI with learners in real settings are positioned in the recommendations not as the recipients of top-down guidance but as essential contributors to the development of good practice.

KEY EUROPEAN POLICIES ON ARTIFICIAL INTELLIGENCE AND EDUCATION

A REGULATORY AND POLICY FRAMEWORK FOR AI IN LEARNING ACROSS EUROPE





EU AI ACT REGULATION 2024/1689

The world's first comprehensive AI legal framework, in force since August 2024. It takes a risk-based approach and places direct obligations on institutions deploying AI, making responsible use a legal requirement.

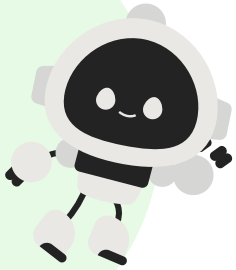
- AI in education, assessment and learner profiling requires human oversight
- Organisations must ensure staff have adequate AI literacy
- Prohibits AI that manipulates or exploits learner vulnerabilities

Learn more on artificialintelligenceact.eu

DIGITAL EDUCATION ACTION PLAN 2021-2027

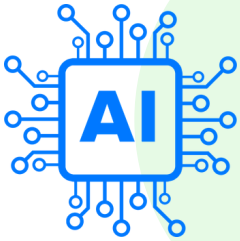
A shared EU vision for inclusive, high-quality digital education, framing AI and digital competence as essential for educators and learners across member states.

- Builds high-performing digital education ecosystems
- Enhances digital and AI competences for educators and learners
- Promotes ethical, responsible AI use in all learning contexts



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COUNCIL RECOMMENDATION ON AI IN EDUCATION, 2024

Concrete EU-level guidance for member states on integrating AI into education safely and ethically.

- Calls for national AI in education strategies with dedicated funding
- Embeds AI literacy into teacher education and professional development
- Promotes transparency, fairness and learner data protection

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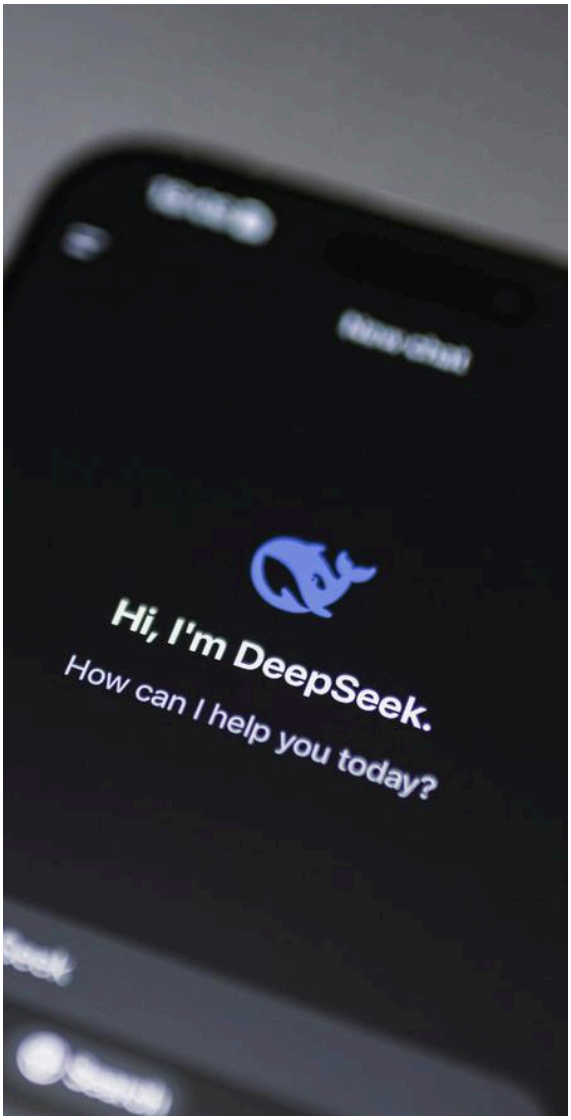


What are the key concerns emerging from AI in education?
Digital divide and equity concerns stand out strongly across our research findings. In 5 out of 6 partner countries, this issue is rated as high priority indicating that AI risks could widen existing inequalities if certain learners, educators, or providers have better access to tools, training, or support than others.

3.3 AI Tools Educators Are Using in Adult Education

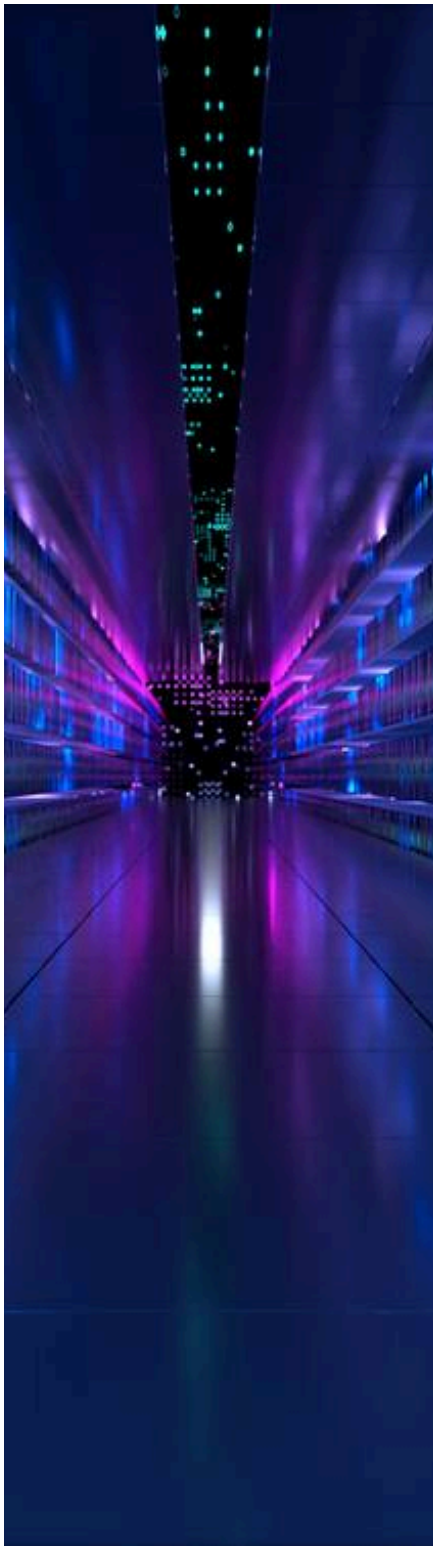
When adult educators talk about using AI, they are rarely speaking about one single tool. In practice, they are working with a growing mix of applications, some labelled as artificial intelligence and others quietly embedded into platforms they already use every day. Much of this use takes place during familiar professional tasks, including preparing lessons, translating instructions, creating quizzes and responding to learner questions. The tools may be new, but the needs they respond to are familiar. The most visible category is generative AI, especially text-based assistants such as ChatGPT, Microsoft Copilot, Google Gemini and Claude. Educators use these tools because they are flexible and easy to access. A single prompt can produce a lesson outline, simplify a complex explanation, generate discussion questions, draft case studies, suggest examples, or provide alternative ways of explaining the same concept. For adult educators, this flexibility is useful because learners often arrive with very different levels of confidence, language ability, prior education and professional experience. A trainer preparing a session for unemployed adults, migrant learners, vocational trainees or older learners may need several versions of the same material. Generative AI can help create those first drafts quickly, allowing the educator to spend more time adapting, checking and humanising the content.

A second group of tools is made up of AI functions embedded inside everyday office and productivity software. These are often less visible than standalone chatbots, but they may be more influential because educators encounter them directly inside tools they know by now. Microsoft 365, Google Workspace, Canva, Grammarly, DeepL Write and similar applications now include features that summarise text, rewrite paragraphs, generate slides, check tone, suggest layouts, correct grammar, or produce visual content. For many educators, these tools feel less like "using AI" and more like using an improved version of familiar software. This is one reason AI use can spread quickly without being formally named. An educator might use an AI writing assistant to make instructions coherent, an automatic design tool to prepare a learner worksheet, or a summarisation function to reduce a long policy document into key points for a staff meeting. These uses are not dramatic, but they are important because they reduce preparation time and support the routine work that often sits behind teaching.



Language and translation tools form another important category, especially in adult education settings where multilingual classrooms are common. Tools such as DeepL, Google Translate, Microsoft Translator and AI-supported captioning systems are used to translate instructions, prepare bilingual materials, support vocabulary development, and help learners participate when they are still developing the language of instruction. These tools can be particularly useful for migrant learners, refugees, international workers and adults returning to learning in a new linguistic environment. They may miss cultural meaning, simplify technical language too much, or produce wording that sounds correct but does not fully reflect the original message. For this reason, they should be best understood as support tools rather than final authorities.

Educators are also using AI tools to create teaching resources. Some of these are general-purpose tools, while others are designed specifically for education. Platforms such as MagicSchool, Diffit, Curipod, TeacherMatic, Quizizz AI and similar services can generate lesson plans, quizzes, rubrics, worksheets, reading passages, presentation outlines and differentiated activities. Their appeal is easy to understand. Adult educators often work with limited time and varied learner groups, so a tool that can quickly produce a first version of a resource can be valuable. In further education contexts, the Jisc National Centre for AI has highlighted TeacherMatic as an example of a platform designed to help educators generate lesson plans, quizzes, schemes of work and multiple-choice questions without needing advanced prompting expertise. These tools are not replacing the educator's role. Their value lies in giving educators a starting point. The educator still needs to check accuracy, adjust the level, remove unsuitable examples, ensure accessibility and confirm that the activity serves the learning objective.



Assessment and feedback tools are another area where educators are beginning to experiment, though often more cautiously. AI can help draft quiz questions, create marking rubrics, suggest formative feedback, identify common errors in learner writing, or generate practice activities based on learner needs. Some learning platforms and educational technology systems now include automated feedback or adaptive question banks. Used carefully, these tools can support formative assessment by giving learners more opportunities to practise and reflect before final evaluation. However, this is also one of the most sensitive areas of AI use. Feedback affects learner confidence, assessment affects progression and automated systems may misread context or reinforce bias. The European Commission's ethical guidelines underline that educators should remain able to explain, question and override AI-supported decisions in teaching and learning contexts (European Commission, 2022). Another growing category is AI for accessibility and inclusion. Educators use speech-to-text tools, text-to-speech tools, automatic captions, image description tools, readability checkers and AI-supported design tools to make learning materials easier to access. For adults with disabilities, low literacy, dyslexia, limited language proficiency or low digital confidence, these tools can remove barriers that might otherwise prevent participation. A long text can be turned into a plain-language version. A spoken explanation can be captioned. A learner who struggles with writing can use speech recognition to draft their ideas. A visual resource can be described for learners who need alternative formats. The OECD has argued that digital technologies, including AI, can support more personalised and inclusive learning when they are guided by pedagogical aims and appropriate safeguards (OECD, 2025). In adult education, this potential is significant because inclusion is not an additional concern; it is central to the purpose of the sector.

Learning management systems and adaptive learning platforms also increasingly include AI-driven features. Moodle plugins, commercial learning platforms, language learning apps and workplace training systems may use AI to recommend content, track progress, identify learners who may need support, or personalise practice activities. These tools are different from generative AI chatbots because they often operate in the background. The educator may not always see the logic behind the recommendation or prediction. This makes them useful but also more difficult to evaluate. A system that suggests extra practice for a learner may be helpful, but a system that quietly labels a learner as "at risk" can influence how that person is viewed and supported. For this reason, educators need to know when AI is being used inside a platform and what kind of learner data is being processed.

AI tool category	Examples	How educators use them
Generative AI assistants	ChatGPT, Microsoft Copilot, Google Gemini, Claude	Draft lesson ideas, simplify explanations, create examples, prepare discussion questions, summarise content and support brainstorming.
Office and productivity AI	Microsoft 365 Copilot, Google Workspace AI, Grammarly, Canva AI, DeepL Write	Improve writing, create slides, rewrite instructions, check tone, summarise notes and prepare professional documents.
Translation and language support tools	DeepL, Google Translate, Microsoft Translator, AI captioning tools	Translate materials, create bilingual instructions, support multilingual learners and make content easier to understand.
Teaching resource generators	MagicSchool, Diffit, Curipod, TeacherMatic, Quizizz AI	Create worksheets, quizzes, rubrics, lesson plans, reading texts and interactive classroom activities.
Assessment and feedback tools	Quizizz AI, rubric generators, LMS feedback tools, automated quiz tools	Draft quizzes, create marking criteria, generate formative feedback and identify common learner errors.
Accessibility and inclusion tools	Speech-to-text, text-to-speech, automatic captions, readability checkers, image description tools	Create plain-language versions, caption videos, support learners with disabilities, and provide alternative learning formats.
Learning management and adaptive platforms	Moodle AI plugins, adaptive learning platforms, language learning apps, workplace training systems	Recommend content, track progress, personalise practice and identify learners who may need additional support.
Administrative and professional support tools	Notion AI, Otter.ai, meeting summarisation tools, survey analysis tools	Draft emails, summarise meetings, prepare reports, analyse survey responses and reduce administrative workload.
Visual and multimedia AI tools	Canva AI, Adobe Firefly, DALL·E, Midjourney, Synthesia	Create posters, images, visual summaries, video scripts, presentations and explainer materials.
Research and information support tools	Elicit, Perplexity, Scite, Consensus	Explore evidence, summarise articles, prepare reading lists and gather background information for course design.

Table 1. AI Tools Commonly Used in Adult Education Practice

Source: AI Act(ing) in Adult Education, 2026

3.4 Where the Sector Actually Stands

Policy signals, however, do not automatically translate into changed practice. The honest reality of where adult education stands in relation to AI is more complicated and in many ways more interesting, than any policy document would suggest. The findings show both encouraging levels of engagement and substantial gaps in support. Importantly, adult educators across all six partner countries are not indifferent to AI. They are using it often in various ways. Generative AI tools for lesson planning, content summarisation, quiz generation and administrative tasks appear consistently across the survey and interview data (AI Act(ing) in Adult Education, 2026). In Spain, 92.8% of survey respondents reported using AI tools in their work. In Austria, 67% reported regular use. Even in Ireland, where AI familiarity was lower and confidence more uneven, the data showed growing interest and a strong stated intention to develop AI skills.

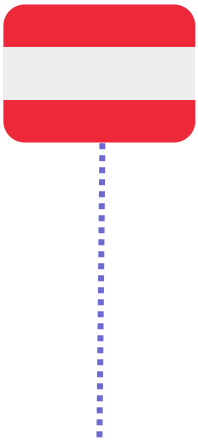
The main difficulty is not motivation, but the institutional conditions in which educators are working. Across all six countries, individual educators are experimenting with AI while their institutions are often slower to provide guidance and support. Only around half of Austrian respondents reported having at least some form of institutional guidance on AI use; in Spain, 46.4% did not even know whether such guidance existed in their organisation (AI Act(ing) in Adult Education, 2026). This kind of uncertainty is quite common in adult education. Adult education is a fragmented sector. Providers range from large national training bodies to tiny community organisations. Governance varies enormously. And AI arrived faster than institutions could absorb it. Wolters et al. (2024), in their systematic literature review of AI literacy in adult education, identify a similar pattern across European research: there is a significant gap between the pace of AI tool adoption and the availability of pedagogically sound training for adult educators. That gap is not simply a matter of content waiting to be developed. It is a gap in confidence, institutional support, ethical guidance and clarity about what responsible use actually looks like in practice.

Six Countries, Six Realities: A Closer Look at Each National Context

Every country in this study is facing the same fundamental challenge: artificial intelligence is entering adult education faster than the systems around it can respond. However, the way this challenge is experienced differs from country to country. Policy, institutional readiness, educator confidence, the tools being used and the concerns raised by practitioners all vary considerably. This section takes each of the six partner countries in turn, drawing on the national desk research reports and stakeholder consultation findings that form the empirical backbone of this study. The profiles below are not intended to be exhaustive national studies. They are evidence-based portraits, rather than technical dossiers, of what is happening on the field, what is getting in the way, and what educators in each country most urgently need.

4.1 Austria: When AI Literacy Becomes a Professional Responsibility

Austria is, in many ways, an encouraging place to begin. Among the six partner countries, it shows some of the strongest signs of active AI adoption in adult education. Survey data from Austrian stakeholders reveal that 67% of respondents are regular users of AI tools, with a further 24% using them occasionally, primarily for writing, summarising, lesson planning, content creation, and administrative work (AI Act(ing) in Adult Education, 2026). The policy context supports this evolution. Austria's national AI strategy, AIM AT 2030, explicitly positions AI literacy as a priority, and the entry into force of the EU AI Act (European Parliament and Council of the European Union, 2024) has translated what was once a professional aspiration into a compliance-relevant obligation.



In Austria, the question is no longer whether educators should engage with AI. It is whether the support structures around them are adequate for the level of engagement that is already happening. The honest answer, according to the evidence, is that they are not, yet. Approximately 50% of Austrian respondents reported having at least some institutional guidance on AI use; 17% reported having none; and 15% were simply unsure (AI Act(ing) in Adult Education, 2026).

What the interview data adds on this narrative is that AI integration in Austria often depends on motivated individuals, enthusiastic educators who figure things out themselves, rather than on systematic institutional strategies. The competence gaps that surface from Austrian data are instructive. High self-reported digital confidence coexists with documented weaknesses in responsible implementation, critical verification of AI outputs, pedagogical redesign and regulatory understanding. The most frequently reported ethical concerns are over-reliance (83%), data protection (76%), bias (72%) and transparency (63%). Consequently, Austria does not need a beginner's course. It needs an advanced, applied programme that takes educators where they are and helps them go further more critically, more responsibly, and more sustainably.

4.2 Belgium: High Engagement, Fragmented Governance

Belgium combines very high levels of AI use with a complex governance structure. Every single survey respondent from Belgium, 22 in total, reported current use of AI tools (AI Act(ing) in Adult Education, 2026). That figure stands out in a field where uptake is often patchy and reluctant. Belgian educators are not wondering whether to engage with AI. The challenge is ensuring that engagement is informed, safe and equitable. The complication in Belgium is structural. Belgium's federalised governance model, with distinct French-speaking, Flemish and German-speaking education communities, means that national AI ambitions are translated into institutional practice in very different ways. Educators are using AI before their institutions have established the rules for doing so, a pattern that Oliveira et al. (2026) identifies as one of the most significant barriers to responsible AI adoption, not because educators are doing anything wrong, but because they are being left without the frameworks they need to do it right. What Belgian stakeholders ask for is not more enthusiasm.

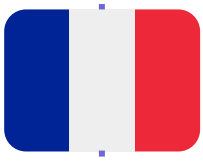


They ask for training with recognised certification, ethical safeguards translated into institutional procedures and governance tools that can be adapted across different communities and provider types. Privacy and data protection concerns feature prominently, reported by 18 of 22 respondents, alongside worries about bias, over-reliance and output reliability (AI Act(ing) in Adult Education, 2026). The multilingual reality of Belgian adult education also creates a specific need that much existing AI guidance does not address: tools and practices that work across languages and serve learners whose mother tongue may not be the language of instruction, a concern UNESCO (2025) identifies as a critical equity dimension of AI adoption in education.

4.3 France: Strong Ambitions, Uneven Everyday Practice

France occupies a distinctive position in this study. As a country, it has invested heavily and visibly in AI. France 2030, the national Digital Education Agenda and the work of the CNIL on data governance create a policy environment that is among the most developed in Europe. The EU AI Act (European Parliament and Council of the European Union, 2024) layers onto this a set of binding compliance requirements that France's education institutions are beginning to absorb. At the level of government strategy, the direction of travel is apparent. In everyday adult education practice, however, progress is much less consistent. The French findings reveal what the research database describes as a "two-tier" pattern: larger, better-resourced institutions experiment with AI using it for language support, learner analytics and adaptive platforms while smaller providers, community organisations, and non-formal learning settings often lack both the capacity and the guidance to go further (AI Act(ing) in Adult Education, 2026). This inequality of access within a single national system is not unique to France, but it is particularly visible there.

The OECD (2025) has highlighted this pattern across European education systems broadly, noting that AI adoption tends to concentrate in well-resourced institutions while rural, under-funded, and community-based providers fall further behind, a dynamic that risks translating technological progress into educational inequality if left unaddressed. UNESCO (2025) similarly warns that without deliberate inclusive design, AI in education risks deepening rather than closing existing divides. The French data add a specifically adult education dimension to this concern: only 45% of French survey respondents had received any recent technology-focused professional development and specialised AI training for adult educators specifically remains limited (AI Act(ing) in Adult Education, 2026). What French stakeholders want is a training offer that speaks to this diversity of contexts: standards-based and flexible enough to support both an urban training centre with dedicated IT infrastructure and a small regional provider trying to do more with less.



4.4 Greece: Growing Interest, Limited Structure

Greece is the country in this study where the gap between potential and practice is arguably most visible and most poignant. Around 80% of Greek survey respondents reported using AI occasionally or regularly, primarily for language and writing support, research, lesson planning and assessment design (AI Act(ing) in Adult Education, 2026). Stakeholders across the interviews, from private vocational centres to university-affiliated programmes to community educators, described AI as genuinely useful and expressed curiosity about using it more. What is missing is the scaffolding. Greece's national frameworks acknowledge digital skills broadly, but AI-specific competences in adult education are not yet defined within them. Formal AI integration remains limited, fragmented and largely confined to isolated EU-funded pilots rather than mainstreamed institutional practice. Institutional guidance remains limited. Just under a quarter of Greek respondents reported having no guidance on AI use, and a further 31% were working within systems still developing safeguards (AI Act(ing) in Adult Education, 2026).



Redecker and Punie (2017) established, through the development of the DigCompEdu framework, that digital competence development requires not only individual skill-building but also institutional environments that actively support and validate that development, a condition that remains largely absent in the Greek adult education context. The competence gaps are meaningful. General digital skills exist, but AI literacy specifically, including data protection awareness, algorithmic bias and pedagogical integration, is described as weak across the Greek evidence base. Over-reliance on AI tools is flagged as a particular risk by 40% of respondents, reflecting a concern that educators and learners may use AI outputs uncritically (AI Act(ing) in Adult Education, 2026). Long and Magerko (2020) identify critical evaluation as one of the foundational competencies of AI literacy for precisely this reason: the ability to question, verify and contextualise AI outputs is as important as the ability to produce them. Greek stakeholders asked for hands-on training based on classroom situations, with accessible explanations of ethics and regulation and a choice of delivery formats, e.g., face-to-face, blended and self-paced, that suit the diverse contexts.

LEARN MORE

Curious to learn more? Visit the AI Act(ing) in Adult Education website (https://ai-acting.eu/) to explore the project and its results. The site provides an overview of the initiative, along with key findings, resources and project outputs that reflect the work developed across the partnership in 6 EU countries.

4.5 Ireland: Strong Strategy, Patchy Implementation

Ireland is a country where the policy foundations are genuinely solid. The national AI strategy, the Further Education and Training (FET) sector's own digital priorities, and Ireland's engagement with European digital education frameworks all point in the same direction: AI is understood as an urgent challenge for the sector and national actors are taking it seriously (AI Act(ing) in Adult Education, 2026). What the Irish evidence makes equally evident, however, is that national-level policy seriousness does not automatically produce classroom-level readiness. Irish survey respondents showed generally moderate digital skills and notably lower AI awareness than most other countries in the study: a significant proportion reported no prior familiarity with AI-related terminology, limited confidence in identifying AI-enabled tools and low uptake of any form of AI or digital training (AI Act(ing) in Adult Education, 2026). The policy exists. The preparation, for many educators, does not yet match it.



This gap between strategy and practice is complemented by structural factors specific to the Irish context. Rural-urban infrastructure disparities mean that educators in less connected communities face barriers that their urban counterparts do not. The breadth of the FET sector, including community organisations, vocational providers, NGOs, guidance services and higher education continuing education, means there is no single profile of the adult educator in Ireland, and no single training approach that will work for everyone (AI Act(ing) in Adult Education, 2026). The European Commission (2026) has explicitly acknowledged this challenge in its updated ethical guidelines for educators, noting that effective training must account for very different levels of prior knowledge, institutional support and contextual complexity. What Irish stakeholders describe wanting is precisely that: modular, bite-sized training built from the ground up, allowing educators to progress at their own pace and providing compliance tools that translate national obligations into everyday decisions.

4.6 Spain: Leading Adoption, Lagging Institutional Frameworks

Spain is, by the data, the country with the most active AI adoption in this study. 92.8% of Spanish survey respondents reported using AI tools in their work, with 39.3% describing their use as regular (AI Act(ing) in Adult Education, 2026). Spain also has the strongest national policy architecture of the six countries: ENIA (the Spanish National AI Strategy), Digital Spain 2026 and the dedicated AI supervisory agency AESIA together create a governance environment that is unusually well-developed by European adult education standards. Yet the Spanish case reveals an important tension. High adoption and strong national policy do not necessarily lead to responsible, confident or institutionally supported practice. Spanish interviewees describe a telling paradox: educators use AI constantly, but often without clear institutional guidance, without confidence in their ethical decision-making, and without knowing whether what they are doing complies with the rules. 46.4% of Spanish survey respondents reported not knowing whether their organisation had any guidelines on AI use; 28.6% said no such guidelines existed (AI Act(ing) in Adult Education, 2026). In a country with one of the most sophisticated national AI governance frameworks in Europe, that figure is striking.

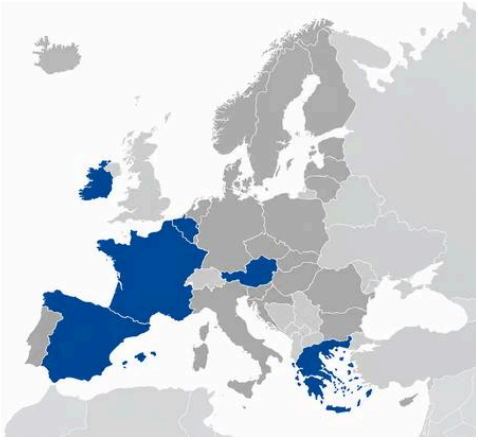


The competence profile show a similar contrast. Educators are technically capable with 53.6% rating their digital competence as advanced, but less confident about ethical application, critical evaluation and institutional rule interpretation. Lack of training (33.3%), ethical concerns (27.5%) and regulatory clarity (19.6%) dominate the list of reported barriers. Privacy and data protection are rated as a very or extreme concern by 60.6% of respondents (AI Act(ing) in Adult Education, 2026).

Academic integrity, including AI-assisted plagiarism by learners and the risk of reduced critical thinking in AI-dependent learning environments are also prominent, consistent with patterns identified by Oliveira et al. (2026) and UNESCO (2025) in the broader literature on generative AI adoption in educational settings. What Spain's educators need, as the evidence suggests, is not an introduction to AI. It is a pedagogically solid and ethically serious training programme that helps them make the step from enthusiastic use to responsible practice and that gives their institutions the governance tools to support that step from above.

What the Six Countries Tell Us Together

The six national reports point in the same general direction, even though they differ in policy context, institutional maturity and level of AI adoption. Across the partner countries, adult educators are already experimenting with AI, but the systems around them are not yet providing enough guidance, training, or governance to make that use consistently responsible and sustainable (AI Act(ing) in Adult Education, 2026). This section brings those findings together and highlights the most important tendencies that cut across the countries. It focuses on what is shared, what is still missing and what the evidence implies for the project's next steps in training, guidance and institutional support (AI Act(ing) in Adult Education, 2026). The findings show that AI use is advancing faster than institutional readiness, while the strongest shared need is support that combines AI literacy, ethical awareness and organisational guidance (AI Act(ing) in Adult Education, 2026).



5.1 The Shared Pattern

Across Austria, Belgium, France, Greece, Ireland and Spain, the same broad pattern appears again and again. Educators are experimenting with AI for lesson planning, drafting, summarisation, assessment support and administrative work, but institutional policies and responsible-use frameworks are lagging behind practice (AI Act(ing) in Adult Education, 2026). In this sense, educators are experimenting with AI, but institutional guidance, responsible-use routines and practical training are still catching up. This pattern is consistent with the wider research literature. Wolters et al. (2024), in their systematic literature review of AI literacy in adult education, reach a similar conclusion. AI tools are being adopted considerably faster than pedagogically sound training is being made available to adult educators. Likewise, the 2025 review of AI in teacher professional development reports that only a minority of studies focus on how AI supports educators themselves, rather than on classroom use alone, which suggests that professional learning has not kept pace with adoption (Tan et al., 2025). Long and Magerko (2020) help explain why this is important. If AI literacy includes the ability to critically evaluate AI systems, communicate about them and use them thoughtfully, then institutions cannot assume that tool access alone will produce competent or responsible use. Educators need support that goes beyond novelty and convenience. They need opportunities to practise judgment, verification and ethical decision-making in context.

5.2 Governance Lags Behind Use

One of the most prominent findings from the national reports is the gap between what educators are doing and what institutions have put in place to guide them. In most countries, AI use is fairly high, but formal guidance remains partial, uneven, or unclear. As a result, many educators are making decisions in a space where the rules have not yet been fully written. This creates a familiar kind of tension. People begin using tools because they are useful, but the organisation has not yet decided how to manage them. Practice moves first, and governance follows later. Sometimes it follows slowly. Sometimes it does not catch up at all. In the meantime, educators are left to interpret risks, benefits and responsibilities largely on their own, even when their decisions affect learners, data, assessment and trust. The issue, therefore, is not only whether AI is being used, but whether its use is supported by shared expectations and institutional accountability. The reports suggest that this is happening in different ways across the partner countries. For this reason, the next step is not simply to encourage further experimentation, but to turn existing practice into safer and more coordinated institutional approaches.

5.3 The Real Training Need

If there is one message that comes through even more strongly than the rest, it is this. Educators need training. Not a quick introduction. Not a tool demo. Training that helps them deal with the situations they meet in practice. Research results make it obvious that training is the strongest common need across all six countries. But the training has to be useful in actual life. Some educators need advanced applied learning. Others need confidence-building basics. Others need help understanding policy and implementation. So the challenge is not simply to offer training, but to offer the right kind of training for the right starting point. The wider research says the same thing. Training works best when it is practical, sustained and tied to teaching work. Educators value it when it helps them think about assessment, ethics and pedagogy, not just software features. They want something they can use the next day, not something they will forget.

5.4 Ethical Concerns Are Not Secondary

Another thread running through all six reports is ethics. Privacy, data protection, bias, fairness, over-reliance, transparency and integrity appear again and again. These are not side concerns but central to how educators think about AI. That makes sense. AI can save time and open up possibilities, but it can also produce unreliable or biased outputs, and it can make people depend too heavily on automation. Educators know that these risks matter because they affect learners directly. They affect trust, fairness, and the quality of learning itself. The wider policy guidance says the same thing in different words: AI in education has to be human-centred, ethical, and transparent. That means ethics cannot be something added at the end. It has to be part of the way the whole project is designed, from training to guidance to implementation. In practice, this means giving educators ways to recognise risks, question outputs and make responsible decisions before AI becomes embedded in everyday teaching and learning.

5.5 Pedagogy Must Stay Human-Centred

National reports also show that AI is being used mostly for support work rather than deeper pedagogical change. Educators are using it to plan, write, create and organise. That is useful, and in many cases it saves time. But it also means that AI is still mostly being used to improve existing routines rather than rethink learning itself. That is where the opportunity lies. AI should not just help educators do the same things faster. It should help them support adults more thoughtfully, more flexibly and more inclusively. If the focus stays only on efficiency, then AI may simply automate old habits instead of improving teaching. The next challenge is to move from using AI as a convenience tool to using it as part of a more intentional learning design. This means asking not only what AI can produce, but how it can help educators create better learning experiences for different adult learners.

5.6 Equity Runs Through Everything

The final pattern is equity. New technologies could widen existing gaps if access, infrastructure, language, confidence and provider capacity are not addressed. This is especially important in adult education, which reaches many learners who are more likely to be left behind: people with lower prior attainment, migrants, rural learners, older adults and those in under-resourced settings. If new tools are introduced without attention to these realities, the benefits may go mainly to the people and organisations that have the most support.

This would undermine one of the main promises of digital innovation: widening access and reducing barriers. But that promise only holds if inclusion is built in from the beginning. So the lesson here is simple. Inclusion should not be treated as a separate theme. It should be part of the examples, the delivery format, the guidance and the governance from the start. That means accessible language, multilingual support, low-resource options and implementation ideas that work for a wide range of adult education settings.

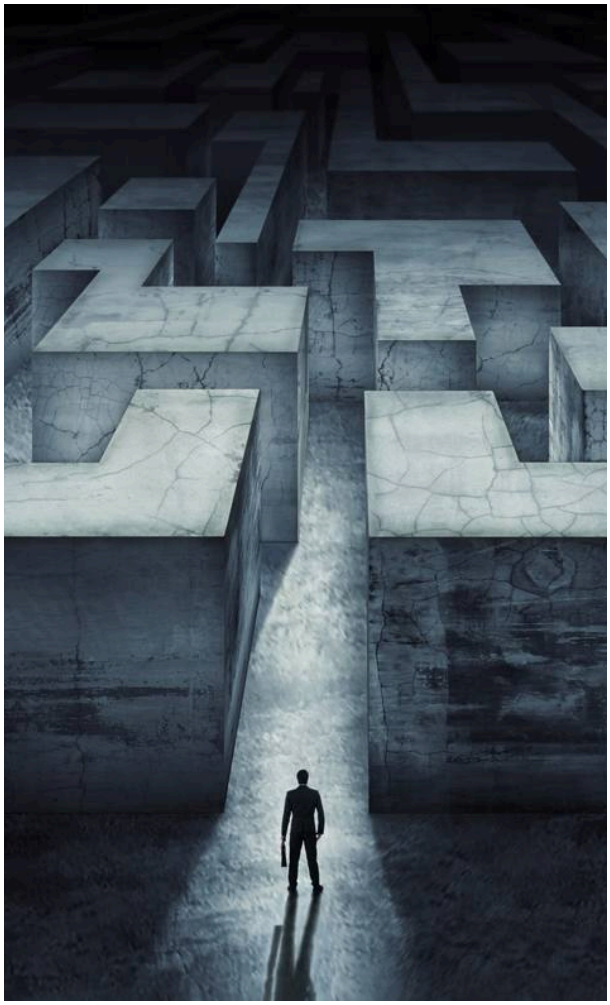


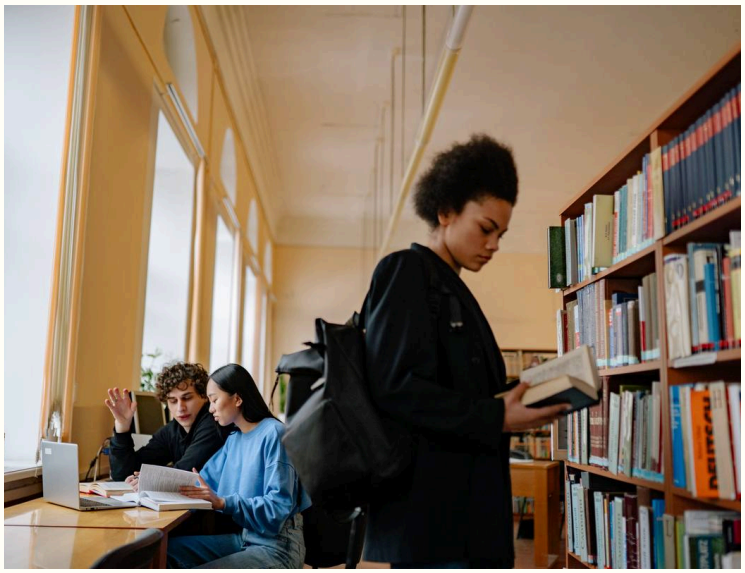
5.7 Barriers & Challenges to AI Adoption in Partner Countries

Most discussions about AI adoption in adult education tend to stay in familiar territory: lack of training, unclear policy, ethical uncertainty and institutional hesitation. Those issues are real and they have a strong place in this report. But underneath them sits another layer of barriers, the kind that are harder to spot because they are less formal, less measurable and often more personal. These are the barriers that appear in side comments, hesitant reflections, or the quiet pause before someone says what they really think. They matter just as much because they frame whether AI becomes part of practice at all, and if it does, how far that practice actually goes. One barrier that deserves much more attention is cost. Many of the AI tools educators find most useful are not truly free. They begin with a limited free version, then move quickly into paid subscriptions, premium features, or institutional licences. For a well-funded organisation, that may seem manageable. For a part-time trainer, a freelance educator, or a small community provider working from short-term project budgets, it is a very different story. In these settings, even a modest monthly subscription can become a reason not to continue using a tool, no matter how useful it first appeared.

This creates a quiet but important divide. Some educators can afford to keep experimenting until they find tools that genuinely support their work. Others stop at the point where the paywall appears. What looks from the outside like uneven motivation may in fact be uneven purchasing power. In partner countries where adult education includes many small providers and flexible employment arrangements, this is of great importance, because it means access to AI is influenced not only by skills or interest, but by whether someone can justify yet another digital expense. There is also a second layer to this problem. Subscription fatigue. Educators are expected to juggle platforms for meetings, communication, learning management, file sharing, assessment and reporting. AI tools arrive on top of all that, each with its own pricing model, login system, update cycle, and feature changes. After a while, the issue is not simply money. It is exhaustion. When every useful tool seems to come with a new monthly fee and another account to manage, adoption starts to feel less like innovation and more like maintenance.

Another barrier is more emotional and for that reason it is often left unsaid. Some educators are not afraid that AI will literally replace them tomorrow. What worries them more is something quieter: that the more capable these tools become, the easier it is for others to underestimate the human expertise behind teaching. If a system can draft a lesson outline, generate exercises, summarise a reading, or propose feedback, then the value of the educator's invisible preparation work can begin to look smaller from the outside, even when it is not. This anxiety is not irrational. Adult educators often build their professional identity around judgement, adaptation, empathy and the ability to make learning meaningful for people with very different needs and histories. When AI enters tasks that feel central to that identity, resistance is not always about rejecting technology. Sometimes it is about protecting the dignity of the role itself. An educator may hesitate to use AI in curriculum design or feedback not because the tool is useless, but because those activities feel too close to the heart of what makes the work human. If this barrier is ignored, it tends to distort adoption in subtle ways. Educators may use AI only for low-risk peripheral tasks while avoiding the areas where it could support deeper pedagogical experimentation. Institutions may then misread this limited use as lack of ambition, when in reality it reflects a deeper professional concern that has never been openly discussed. This is why conversations about AI adoption cannot focus only on competence. They also have to address identity, trust and the feeling many educators have that parts of their work are becoming visible only when a machine starts imitating them.

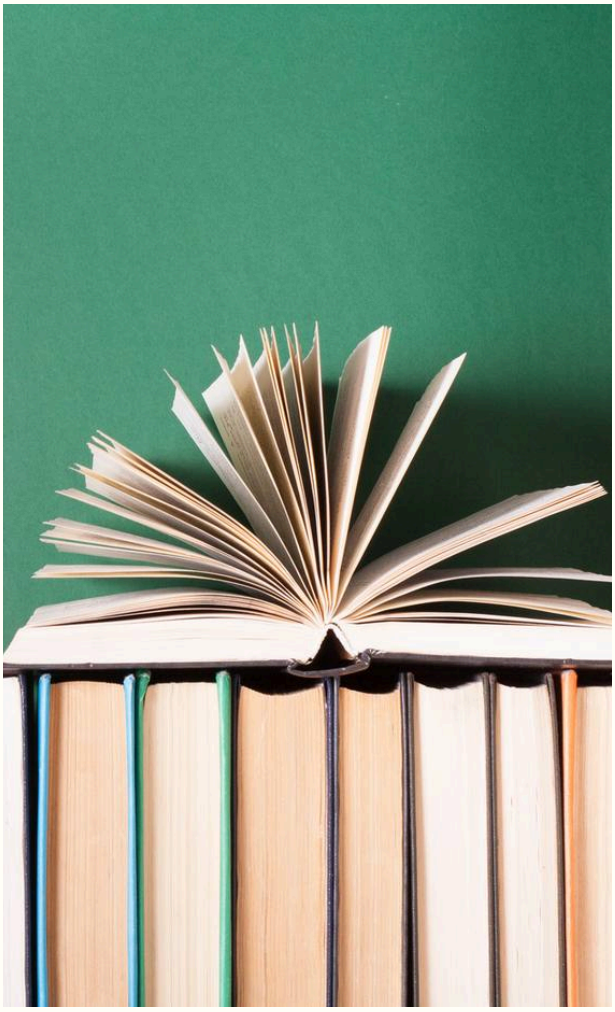




A third barrier is not refusal, but superficial success. In many cases, educators try an AI tool, get a result that is acceptable, and stop there. The tool produces a usable summary, a quick draft, or a set of ideas that is good enough for the immediate task. That feels efficient, and often it is. But over time, this creates a ceiling. AI becomes a convenience tool rather than a mean for better teaching practice. Shallow adoption can easily look like meaningful adoption from a distance. A provider may report that staff are using AI, yet what that means in practice is limited to first drafts, quick searches, or administrative shortcuts. The technology is present, but the pedagogy has not really changed. Learner support has not deepened. Assessment has not been rethought. The tool has saved time, but it has not expanded practice. The reason this happens is understandable. Adult educators are busy, and a result that is 70 percent right in thirty seconds is often more attractive than a result that could become 95 percent right after careful prompting, checking, and adaptation. Without time, peer exchange and concrete examples of richer use, most people settle naturally at the level that gets the job done.

A final barrier becomes particularly evident in a transnational partnership: the assumption that one AI tool delivers the same experience everywhere. In real life, it often does not. The same platform may behave differently depending on language, country, institutional restrictions, or data protection settings. A feature available in one context may be limited in another. A tool that runs smoothly in English may produce weaker results in Greek or work unevenly across multilingual learning settings. This creates friction for cross-country collaboration. Shared recommendations do not always transfer neatly from one partner country to another. An approach that feels modest in Austria or Ireland may become more complicated in Greece, Belgium, France, or Spain once language, local practices, or organisational restrictions enter the picture. That inconsistency can weaken trust. Educators start to wonder whether the problem is the tool, the context, or their own lack of skill and that uncertainty can slow adoption even when interest is high. Responsible AI adoption in partner countries cannot be built only around generic guidance or one-size-fits-all tool suggestions. Geography, language, regulation and institutional culture all leave their mark on what educators actually encounter when they sit down to use AI in learning environments. Any shared framework worth building has to take that variation seriously from the start.

These barriers, i.e., financial pressure, professional identity anxiety, surface-level use and cross-border inconsistency, do not cancel out the progress happening across partner countries. But they do slow it down, divert it and prevent it from going as deep as the sector actually needs. Keeping them visible, naming them honestly and building responses that address the human reality of the work, not just the technical dimension of the tools, is how adult education moves forward with AI in a way that holds together across different countries, different contexts and different people.



Best Practices and Training Initiatives Across Partner Countries

Across the partner countries, the story of AI in adult education is not the story of one global model. It is a story of different systems trying to respond to the same pressure. Educators are meeting AI in their daily work. Sometimes it appears as a chatbot used to prepare a lesson. Sometimes it is hidden inside an office tool, a translation platform, a careers service, or a digital learning environment. In some countries, governments have built strong policy frameworks around this change. In others, the work is still at an early stage, carried forward by motivated institutions, small training initiatives, or individual educators who are trying to understand what responsible use should look like. What can be seen across Austria, Belgium, France, Greece, Ireland and Spain is a slow movement from curiosity to responsibility. At first, AI entered adult education through experimentation. Educators tested tools because they saved time, helped with language, supported planning, or made difficult tasks easier. Now the conversation is becoming more serious. Training is no longer only about learning how to write a good prompt or generate a worksheet. It is also about understanding privacy, learner rights, bias, assessment, transparency and the educator's role when a machine produces part of the work. The most useful initiatives are therefore not the ones that present AI as a shortcut. They are the ones that help educators make better decisions.



6.1 National and Sector-Level Initiatives: Giving Educators a Place to Start

In Austria, AI literacy is being placed inside a wider national effort to strengthen digital competence. The Digital Competence Offensive and the "Digital Überall" workshops offer accessible training for the wider public, including themes linked to artificial intelligence, online safety and everyday digital participation. This is a helpful starting point because many adult educators are also working with learners who need basic digital confidence before they can engage with more advanced tools. The Austrian example recognises that AI literacy does not begin with expert knowledge. It begins with giving people the confidence to understand what they are using and why. Austria has also gone further by creating training that speaks directly to adult education. The EB MOOC 2025, "KI-Workflows: Didaktik trifft Recht", brought together two areas that are often treated separately: teaching practice and law. This is a useful combination. An educator can learn how to use AI for lesson planning, but they also need to understand what happens when learner data, assessment, authorship or transparency are involved. The BIFEB course on artificial intelligence in adult education takes this further by offering a structured professional development pathway for adult educators. This gives the topic a more serious place in the profession. It shows that AI literacy should not depend only on private experimentation after working hours.

Ireland tells a slightly different story. Its further education and training system has started to work with AI through micro-qualifications. These short, recognised learning opportunities fit well with adult education because they can be taken alongside work, family responsibilities and other commitments. The AI micro-qualifications developed under the Skills to Advance initiative give learners and workers a way to build knowledge step by step, without needing to commit to a long programme from the beginning. This approach is useful for educators too. Many adult educators do not need one large course that tries to cover everything at once. They need smaller learning blocks that help them build confidence gradually. Ireland also brings AI into a broader conversation about work and skills. This is important because many adult learners come to education for professional reasons: to retrain, to keep their job, to find a new one, or to understand changes in their sector. AI training in adult education therefore has to do more than explain technology. It has to help educators prepare learners for workplaces where AI is becoming part of everyday practice. At the same time, Irish policy discussions have placed strong emphasis on trust, fairness and access. That balance is important. AI should not be taught only as a productivity tool. It should also be taught as something people need to question, understand and use carefully.

Spain offers one of the strongest examples of national preparation around AI governance. The creation of AESIA, the Spanish Agency for the Supervision of Artificial Intelligence, gives the country a body responsible for coordinating AI oversight. Spain has also worked with regulatory sandboxes, allowing organisations to test AI systems in controlled conditions. For adult education providers, this sends an important message: innovation should not happen in a vacuum. New tools can be tested, but they should be tested with attention to risk, transparency and human rights. This approach helps move the discussion away from excitement alone and toward responsible experimentation. Spain has also developed guidance for educators through INTEF. Although much of this guidance is written for education more broadly, it offers useful foundations for adult education. It encourages teachers to think about AI not only as a tool for producing content, but as something that changes planning, learning, assessment and professional responsibility. This is particularly relevant in adult education, where learners may have very different experiences, needs and levels of digital confidence. The Spanish case shows that guidance is most useful when it helps educators connect national rules with classroom decisions.

France brings another important lesson. The country has invested heavily in AI through France 2030 and has placed skills and training at the centre of its national approach. At the same time, France has a strong data protection culture, with CNIL offering guidance on AI and GDPR compliance. This combination is valuable for adult education. Many adult learners are in situations where decisions about learning, employment, skills or certification can have consequences. If AI is used to guide, assess or monitor them, then data protection and human oversight cannot be treated as technical details. They are part of the trust relationship between learner and educator.

Belgium's experience is more complex because responsibility for education and training is divided across linguistic communities and regions. This can make national coordination harder, but it also means that different parts of the system have developed their own responses. Employment and training actors such as VDAB, together with regional initiatives such as DigitalWallonia4.ai, show how AI learning can be connected to workforce development and upskilling (see. Short introductory courses, awareness activities and funding mechanisms can help workers and educators take first steps into AI. The challenge is to make sure these opportunities do not remain scattered, and that adult educators across different communities have access to similar levels of support.

Greece is still building its foundations. The national digital transformation agenda gives attention to digital skills, public services and education, but AI-specific training in adult education is not yet as developed as in some other partner countries. This should not be seen only as a weakness. It also means there is still time to build the right kind of support before AI becomes deeply embedded without guidance. For Greece, training should begin with familiar tasks such as preparing materials, supporting learners, checking AI-generated content, protecting data and deciding when a tool should not be used. In this context, best practice means beginning carefully and making sure educators are not pushed faster than the system can support.

6.2 Institutional and Pedagogical Practice: What Educators Are Already Trying

At institutional level, practice is often much more informal than national policy would suggest. In many places, educators have started using AI before their organisations have written rules. They use it because it helps with the work they have to do. It can draft a text, simplify a paragraph, translate instructions, suggest activities, create quiz questions or summarise a long document. These are not dramatic uses, but they respond to pressure. Adult educators often work with limited time and very diverse learner groups. A tool that helps prepare a first draft can make a difference, as long as the educator remains the person who checks, adapts and decides.

In Austria, generative AI is used for writing, summarising, lesson preparation and assessment item creation. These uses fit naturally into the daily rhythm of adult education. A trainer may need to prepare several versions of the same explanation for learners with different levels of language or confidence. AI can help produce options quickly, but the educator still has to make the final version suitable. The AMS Berufsinfomat, developed by the Austrian Public Employment Service, is also an interesting example because it shows AI being used in guidance, not only teaching. Adult education often sits close to employment services, and career guidance is part of many learners' journey. AI can support that work, but only if its advice is accurate and open to human review.

In Belgium, larger providers have been able to experiment with more advanced uses. Organisations such as VDAB and Bruxelles Formation have worked with adaptive learning platforms, chatbots, learner analytics and tools that connect

training to labour market needs. These examples show how AI can support more than content creation. It can help institutions follow learner progress, offer timely support or guide people toward suitable pathways. But they also reveal a risk. Larger institutions usually have more staff, infrastructure and technical support. Smaller adult education providers may not have the same capacity. A good practice in one institution can become unrealistic for another unless it is adapted to different levels of resources. France faces a similar divide. Better-resourced institutions are more likely to test adaptive platforms, data tools and automated feedback systems. Smaller providers, especially those working in community or non-formal settings, may find it harder to do the same. This creates an important question for adult education. AI should not become another advantage for institutions that have the strongest digital capacity. If its benefits reach only the most prepared providers, the learners who most need support may be left behind. For this reason, French practice points to the need for simple tools, guidance and support models that can work outside large institutions.

Spain shows what happens when educators move faster than institutions. Many educators are using generative AI informally, often for planning, drafting and administrative tasks. This creates energy, but also uncertainty. People may use the tools regularly without knowing whether their organisation allows it, whether learner data can be entered, or how AI-generated work should be acknowledged. This is why training in Spain needs to move beyond tool demonstrations. Educators need help turning everyday use into responsible practice. They need to know not only how to ask AI for a lesson plan, but how to judge whether the result is fair, accurate and useful for their learners. Ireland appears to be at an earlier stage when it comes to documented classroom use of AI in FET and adult education. That may sound like a limitation, but it could also be an advantage. If the sector builds training and guidance before informal habits become fixed, it can avoid some of the confusion seen elsewhere. Ireland's micro-qualification model could support this by giving educators structured and recognised ways to learn about AI. The next step would be to make sure these programmes include adult education examples, not only general workplace or technical content.

In Greece, the use of AI in adult education is still uneven. Some educators and institutions are beginning to explore digital and AI-related tools, but the overall state of affairs remains fragmented. This makes training especially important. Educators need examples that feel close to their own work. A course that begins with abstract definitions may not help someone who wants to know whether they can use AI to adapt a reading text, translate instructions, or support a learner with low confidence. Training should therefore begin with familiar teaching tasks and then gradually add the ethical and legal questions that come with them. Across all countries, one lesson is consistent: educators do not need AI training that feels detached from their work. They need training built around situations they recognise. How can AI help prepare a lesson for mixed-level learners? How can it support translation without losing meaning? Can it help create feedback without weakening the educator's role? What should never be entered into an AI tool? How can assessment be redesigned when learners also have access to generative AI? These are the questions that make training useful.

6.3 Qualitative Insights from Stakeholders: Voices from the Field

Across the stakeholder interviews, AI is described less as a future technology and more as something that has already found its way into everyday adult education. It appears in lesson planning, writing support, translation, administration, research, and even informal conversations after training sessions. In Austria, one interviewee captured this clearly: "Even when a session is not about AI, the topic comes up at the latest during the Q&A." This small comment says a lot. Educators may not always start the day intending to discuss AI, but learners, colleagues and institutions are bringing it into the room. Another Austrian stakeholder pointed to how fragile this progress can be, explaining that "the integration and development of AI strategies currently often depend on one person who is either innovation-minded or has been assigned that role." This shows how dependent progress can be on individual initiative. AI is present in conversations, classrooms and planning work, but often because one motivated person is carrying the work forward rather than because the institution has developed a coordinated approach. The result is a patchy situation where some educators are moving quickly, while others are still waiting for guidance, permission or support.

The Greek interviews add another strong message: educators do not want impressive demonstrations; they want to learn how to do things themselves. One participant said, "I have a general idea of how to use it, but I've been to seminars that just showed a presentation of what it can do. They didn't show me, practically, step by step, how to actually build something." This frustration is important because it shows the difference between awareness and confidence. Many educators know that AI can produce text, images, summaries or lesson ideas. What they need is the slower, more

useful part: how to choose the right tool, how to write a good prompt, how to check the result, how to adapt it for adult learners, and how to know when not to use it. Another Greek participant described AI in a balanced way, saying, "It's more like a complement to our own knowledge. It gives me an alternative when I'm not sure of something, but I wouldn't trust it as the primary source." This is not resistance to AI. It is professional caution. Educators seem willing to use AI, but they want to keep their own judgement at the centre. The same tone appears in the request for training: "Real examples. Not just here is what it can do, but here is a project that worked and here is the tool chain behind it." In other words, stakeholders are asking for training that opens the black box of practice, not training that simply presents AI as impressive or inevitable. The concerns are also very concrete. In Greece, one instructional designer put the data issue in simple terms: "AI is not the problem. The problem is the companies using the information." Others linked AI use to critical thinking, with one educator warning that students may produce complete-looking work while skipping the reasoning process. In Spain, stakeholders also stressed the importance of experience and peer learning. One interviewee said, "Teachers experiment… through examples carried out by other pioneer teachers," while another reflected that the earlier priority had been "to change the way of teaching by applying the ICT tools we had available." These voices suggest that educators are not rejecting AI. They are asking for training that is honest about risks and rooted in teaching situations.

Country	National or sector-level initiatives	Institutional and pedagogical practice
Austria	Digital Competence Offensive, "Digital Überall" workshops, EB MOOC on AI workflows, and BIFEB AI course for adult education.	Educators and providers use generative AI for lesson preparation, writing, summarising and assessment item creation; AMS Berufsinfomat shows how AI can support career guidance.
Ireland	AI micro-qualifications in Further Education and Training through Skills to Advance, offering short and recognised learning opportunities.	Documented classroom use of AI in FET is still at an early stage, but the micro-qualification model can help build structured and recognised AI learning.
Spain	AESIA, AI regulatory sandboxes, and INTEF guidance for educators provide a strong governance and guidance environment.	Educators widely use generative AI informally for planning, drafting and administration, but clearer institutional rules are still needed.
France	France 2030, national AI investment, the Digital Education Agenda and CNIL guidance place strong emphasis on AI skills, data protection and trust.	Better-resourced institutions are testing adaptive platforms, automated feedback and learner data tools, while smaller providers often face greater barriers.
Belgium	Regional AI strategies, VDAB training, DigitalWallonia4.ai and workforce upskilling initiatives support AI awareness and skills development.	Larger providers have experimented with adaptive learning platforms, chatbots, learner analytics and labour-market matching tools.
Greece	The Digital Transformation Bible and broader digital skills initiatives provide a foundation for future AI literacy work.	AI use in adult education remains uneven and fragmented, with a need for examples linked to everyday teaching tasks.

Table 2. Best Practices and Training Initiatives Across Partner Countries

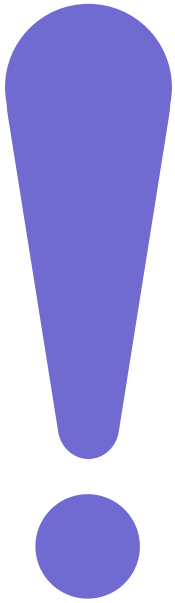
Source: AI Act(ing) in Adult Education, 2026

The Needs: What Adult Educators Are Actually Asking For

Up to this point, it is clear that AI is no longer a distant or abstract issue for adult education. National data point to a field that is changing, but changing faster than the systems around it. That is why the strongest message in the findings is not "AI is coming," but rather "AI is here and people need support to use it well". What educators seem to want most is something tangible. They are asking for training that connects directly to daily work, institutional rules that reduce uncertainty and tools that help them judge when AI is useful and when it is risky. The results do not suggest a hunger for abstract theory; they suggest a need for support that fits teaching conditions.

Top 10 AI Skills For Adult Education Staff

1. **AI Literacy:** Knowing the basics of AI, what it can do, where it can go wrong and how it might be useful in adult education. Educators do not need to become AI experts, but they should feel comfortable enough to understand the tools they are using and make sensible choices about them.
2. **Prompting Skills:** Knowing how to ask an AI tool for what you actually need, e.g., giving instructions, adding context or adjusting a prompt until the result is useful for a lesson, activity or learner group.
3. **Critical Evaluation:** Not assuming that an AI-generated answer is correct simply because it sounds convincing. Educators need to check the information, notice possible errors or bias and decide whether the result is actually suitable for their learners.
4. **Ethical AI Use:** Thinking carefully about how and when AI should be used. Learners should be treated fairly, the use of AI should be transparent where necessary and important decisions should remain in the hands of educators rather than being left to a tool.
5. **Data Protection and Privacy:** Being careful about the information entered into AI systems, especially when learner data is involved. Educators need to know what should never be shared and how to use these tools without putting personal or sensitive information at risk.
6. **Pedagogical Integration:** Using AI because it helps with teaching and learning, not simply because the tool is available. It might help with planning, feedback, accessibility, assessment or adapting materials, but the educator still needs to decide whether it actually improves the learning experience.
7. **Assessment Redesign:** Thinking differently about assessment now that learners can also use generative AI. This may mean giving more attention to how learners arrive at an answer, asking them to explain their choices or using tasks that reflect real situations rather than relying only on written outputs.
8. **Tool Judgement:** Being able to look at an AI tool and decide whether it is worth using. Educators need to consider whether it is reliable, easy to use, accessible, safe with data and appropriate for the learners and the task.
9. **Bias Awareness:** Understanding that AI can sometimes produce stereotypical, incomplete or unfair results. Educators need to notice these problems and make sure that AI-generated materials do not disadvantage or misrepresent particular learners or groups.
10. **Institutional Implementation Skills:** Knowing how AI use fits within the organisation as a whole, including understanding which tools are allowed, how data should be handled, what rules staff need to follow and who is responsible when questions or problems arise.



Source: AI Act(ing) in Adult Education, 2026

7.1 The Knowledge & Skills Educators Want To Develop

The most consistent competence need coming out of the research is tool judgement and it is worth being precise about what that means in practice. Educators are not asking for an exhaustive catalogue of every AI application on the market. They are asking for the ability to look at a tool, understand what it actually does and make a confident professional call about whether it belongs in their teaching or not. But experimentation without a framework for evaluation only goes so far. Educators want to be able to judge accuracy, fairness, consistency and suitability before using AI-generated material with learners. Getting that wrong in adult education, where learners often arrive with complicated histories and stakes riding on their learning, carries consequences that a poor quiz question or a badly translated handout does not.

Ethics, data protection and privacy run just as deep as tool judgement, and in many cases they are the same concern wearing different clothes. When an educator asks whether a particular AI tool is safe to use, they are rarely asking a technical question about server infrastructure. They are asking whether their learners' data is being stored somewhere it should not be, whether an output might carry bias that disadvantages a particular group, whether using the tool without telling learners crosses a line they are not comfortable crossing. These are ethical questions dressed up as practical ones, and they deserve to be treated as such in training. The national findings across the six partner countries also point to a set of more operational skill needs: prompting well enough to get useful outputs, verifying those outputs before trusting them, redesigning assessment tasks so that AI use by learners becomes a subject for honest conversation rather than a source of suspicion, and integrating AI into lesson design in ways that serve the learning rather than just the preparation.

Underneath all of these specific themes lies something broader. A need for professional judgement that the arrival of AI has made more visible but did not create. Adult educators have always had to make complex decisions in real time: about what a learner needs, about which resource to trust, about when to follow a plan and when to abandon it. AI adds a new layer to those decisions without replacing the underlying skill. The educators who took part in this research were not asking to be turned into technology specialists. They were asking for the kind of knowledge that would let them bring their existing professional expertise to bear on a new set of tools, knowing when those tools add genuine value, knowing how to explain that value to learners, and knowing when human judgement needs to stay firmly in charge. In adult education, meaningful AI literacy extends existing professional judgement to a new set of tools rather than sitting separately from teaching practice.

7.2 Levels, Differences and How to Design for Both

The ten skills described in the previous section give an indication of what adult educators need. But a list of skills, however accurate, can mislead if it suggests that everyone arrives at training from the same starting point. They do not. And designing AI training as if they do is one of the most reliable ways to make it less useful for almost everyone. The research data across the six partner countries makes this concrete. In Spain, 92.8% of survey respondents were using AI tools regularly. In Ireland, a significant proportion had not yet encountered basic AI terminology, let alone applied it in a classroom. In Austria, high self-reported digital confidence coexisted with documented gaps in critical evaluation and regulatory understanding. In Greece, curiosity was high but scaffolding was almost entirely absent. Belgium presented educators using AI daily in institutions that had not yet written a single acceptable-use policy. France revealed a divide within the same national system. Well-resourced urban providers were experimenting with adaptive platforms, while smaller community organisations were still working out where to begin.



This is not a problem with the educators but a tangible reality of adult education as a sector. People come to this work from different routes, carry different levels of prior digital experience, work in very different institutional conditions and have had very different opportunities (or none at all) to build AI-related knowledge in a supported way. A trainer who has been quietly testing generative AI tools for two years has different needs from a community educator who has never been given a reason, a device, or an hour of protected time to find out what any of this actually is.

7.2.1 Three Starting Points, Not One

Based on the cross-country evidence, three broad profiles emerge, not as rigid categories, but as realistic descriptions of where educators are when they walk through the door.

1. The **first group** are those who are new to AI in any deliberate sense. They may have encountered AI-generated content without knowing it, or used a translation tool without thinking of it as AI. They have not engaged with generative AI tools intentionally, they are uncertain about basic concepts, and they often carry a quiet anxiety about whether AI is something they are supposed to understand. For this group, the entry point is not tools. It is language. They need a safe space to ask the questions they have been embarrassed to ask, to understand what AI actually is and is not, and to connect the topic to work they do and understand well. Starting with technical capability would lose them immediately.
2. The **second group** are those who are experimenting. They use AI regularly (often daily) for tasks like drafting, summarising, translating or preparing materials. They have developed their own informal habits, found tools they trust, and discovered limits through their own trial and error. What they often lack is a framework for evaluating outputs, recognising ethical limits and considering how AI can contribute to teaching rather than simply save time. For this group, training that starts from basics wastes their time and, more importantly, signals that their existing knowledge was not taken seriously.
3. The **third group** are those who are operating at a sophisticated level: educators, coordinators or curriculum designers who are not only using AI but beginning to assess how it is used around them. They experiment with prompting strategies, they think about assessment integrity, they are aware of the regulatory implications and they are often the people their colleagues turn to with questions. What they need is not an introduction to AI. They need opportunities to explore pedagogical redesign, institutional governance, bias, data protection and leadership for responsible AI use in greater depth.

7.2.2 Assessment That Respects Where People Are

If training is designed across these three levels, then assessment has to follow the same logic. Asking everyone to complete the same task, at the same depth, by the same deadline, produces a measure of compliance rather than a measure of learning. What actually tells you something useful is whether an educator can demonstrate growth from wherever they started: whether the person who arrived uncertain can now describe what AI is and explain one responsible use in their own context and whether the person who arrived experienced can now critically evaluate a tool choice or redesign an assessment task with AI in mind.

This means assessment for AI literacy in adult education should be formative more than summative, reflective more than technical and based on practice rather than abstract testing. A portfolio of documented decisions, e.g., why I chose this tool, how I checked its output, what I changed before using it with learners, tells far more than a multiple-choice quiz about terminology. A short recorded reflection on an ethical dilemma encountered during teaching tells more than a written definition of bias. Self-assessment, peer review and guided scenario work are not soft alternatives to rigorous evaluation. In this field, they are the rigorous evaluation, because they test the professional judgement that responsible AI use actually requires. The point is not to lower the bar. It is to put the bar in the right place by measuring whether educators can think and act responsibly with AI in contexts that are genuinely theirs, not whether they can perform competence in a setting that has nothing to do with their daily work.

7.2.3 EU Skills Frameworks as a Foundation for AI Training Design

One of the more useful things that has happened in European education policy over the past decade is the development of a set of shared frameworks that describe, when put into practice, what skills and competences look like across different domains and at different levels of sophistication. These frameworks were not built with AI specifically in mind. But when you look at what adult educators across the six partner countries actually need in order to use AI responsibly and well, the fit is striking. The competences described in these frameworks, around digital literacy, professional judgement, entrepreneurial thinking, and skills classification, map directly onto the gaps the research behind this report identified.

Using them as a foundation for AI training design can act as a shortcut to building something that holds together across different national contexts, different learner profiles, and different levels of prior experience. Four frameworks in particular deserve attention here:

1. **DigComp**: The Digital Competence Framework for Citizens is the most directly applicable of the four. In its current version, it describes digital competence across five areas and 21 individual competences, structured across eight proficiency levels that move from basic awareness through to highly specialised practice. What makes it particularly useful for AI training design is that it does not treat all digital skills as equivalent. It distinguishes between knowing that something exists, being able to use it in familiar situations, adapting it to unfamiliar ones, and eventually being able to create new approaches and lead others.
2. **DigCompEdu:** DigComp addresses citizens in general, its companion framework. On the other side, DigCompEdu, addresses educators specifically. It describes professional digital competence across six areas, from professional engagement and the use of digital resources through to supporting learners' own digital development. For AI training design, its value lies in the fact that it keeps the teaching relationship at the centre. It does not ask educators to become technology specialists but to make better professional decisions in a digital environment, which is exactly the challenge AI presents.
3. **ESCO:** The European Skills, Competences, Qualifications and Occupations framework operates at a different level from DigComp and DigCompEdu. Rather than describing what competences look like in practice, it classifies skills and occupations within a shared European taxonomy, available across all official EU languages. For AI training design, its most relevant contribution is the ability to connect training outcomes to recognised skills descriptions that have meaning beyond the course itself.
4. **EntreComp:** The Entrepreneurship Competence Framework is the least obvious of the four when it comes to AI training design, and perhaps for that reason it is the most worth considering. It describes the competences needed to turn ideas into action: spotting opportunities, mobilising resources, dealing with uncertainty, taking initiative and reflecting critically on outcomes. None of that is specific to business or entrepreneurship in the commercial sense. All of it is relevant to what responsible, creative AI use in education actually requires.

7.2.4 From Frameworks to Design: A Few Practical Principles

There is a temptation, when frameworks enter the conversation, to treat them as paperwork. Something to reference in a project deliverable and then set aside. That would be a waste. These frameworks do work when course designers actually use them: to decide how a programme flows, how progression gets described, how participants are assessed and how what they have learned gets communicated to the world beyond the training room.

A few things follow from taking that seriously:

- **Begin with the person, not the syllabus.** The proficiency levels in DigComp and the areas in DigCompEdu give course designers something genuinely useful: a way to understand where participants are before training begins, so that learning starts from the right place. Not to sort people or label them, but to stop the common mistake of designing for a fictional average learner who does not actually exist in any classroom.
- **Build for what comes after.** The test of any AI training programme built on these frameworks is whether what participants learn on a Tuesday can still be applied the following month, in a different room, with a different group. Frameworks help with this because they describe what competent practice looks like in action, not just what was covered in a session. Skills that only work in the context where they were taught are not really skills yet.
- **Say out loud what participants have gained.** When training outcomes are described in ESCO terms, they should appear clearly in the course description, the certificate and every piece of communication with participants. Recognition that stays invisible inside a project report does not reach the people who earned it.
- **Let the frameworks talk to each other.** DigComp, DigCompEdu, ESCO and EntreComp cover different ground, but they are pointing at the same thing: the professional capacity to use AI with care, with judgement and with the learner's interest genuinely at the centre. Training that draws on more than one of them gets closer to that goal than training that picks just one and stops there.

LEARN MORE

Curious to learn more? Read the Annex of this report to explore the national and stakeholder engagement reports from the partner countries. The annex brings together the full evidence base behind the project and offers a closer look at the findings developed across the six-country partnership.



KEY EUROPEAN FRAMEWORKS FOR SKILLS AND COMPETENCE DEVELOPMENT: ESCO, DIGCOMP & ENTRECOMP

A COMMON LANGUAGE FOR SKILLS IN EUROPE





ESCO: EUROPEAN SKILLS, COMPETENCES, QUALIFICATIONS & OCCUPATIONS FRAMEWORK

The ESCO framework offers a common reference system that classifies and links skills, competences, qualifications, and occupations across Europe.

- Covers over 3,000 occupations and 13,500 skills and competences
- Available in all EU official languages.
- Supports career guidance, curriculum development, and employment services

Learn more on esco.ec.europa.eu

DIGCOMP: DIGITAL COMPETENCE FRAMEWORK FOR CITIZENS

The DigComp framework defines the digital competences essential for participation in today's digital society and economy. It structures 21 competences across 5 key areas:

1. Information and Data Literacy
2. Communication and Collaboration
3. Digital Content Creation
4. Safety
5. Problem Solving



Learn more on joint-research-centre.ec.europa.eu





ENTRECOMP: THE ENTREPRENEURSHIP COMPETENCE FRAMEWORK

The EntreComp framework outlines the competences needed to turn ideas into action, fostering entrepreneurial mindsets for social, cultural, and economic value creation. It identifies 15 competences within 3 interconnected areas:

1. Ideas and Opportunities
2. Resources
3. Into Action

Learn more on joint-research-centre.ec.europa.eu

7.3 The Formats & Conditions That Make Training Work

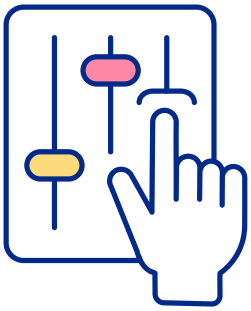
The format question is closely linked to the realities of educators' working lives. Training needs to be flexible enough to fit around busy schedules, but structured enough to provide guidance, interaction and practice. For this reason, self-paced online learning, blended or face-to-face sessions, microlearning and short modular units all have a role to play. This approach makes sense in adult education, where educators often face heavy workloads, limited time for professional development, and different levels of confidence with digital tools. A long, one-size-fits-all course would be difficult to complete and even harder to apply. By contrast, short and flexible learning allows people to return to the material, learn in small steps and connect each part to something they are doing in their own practice. Format should therefore not be treated as a simple delivery choice. Different formats serve different purposes. Self-paced modules can develop baseline knowledge, live sessions allow discussion and reflection, and microlearning supports gradual skill development. In other words, the most effective model is likely to be a combination, not a single format.



Self-Paced Online Learning



Blended / Face-to-Face



Microlearning

7.4 The Institutional Tools Organisations Need

One of the strongest themes in national results is that individual effort is not enough. Educators may be willing to experiment, but without institutional support they are left to make difficult decisions alone. That is why the findings repeatedly point toward a need for organisational tools: policies, checklists, approval procedures, consent guidance, transparency statements and implementation roadmaps. These tools are needed because they turn general principles into everyday practice. A policy or training course alone is not enough if the organisation has not defined who is responsible for what, which tools are allowed, how learner data should be handled, or what counts as acceptable use. The results suggest that many institutions are using AI while their organisational procedures remain incomplete or inconsistent. There is also a leadership dimension here. The findings imply that organisations need to do more than "allow" AI. They need to make responsibility visible, set expectations and give staff a framework they can rely on. That is what reduces uncertainty and makes responsible use more realistic. Without that, AI use becomes dependent on individual initiative, which is a weak basis for sustainable practice.

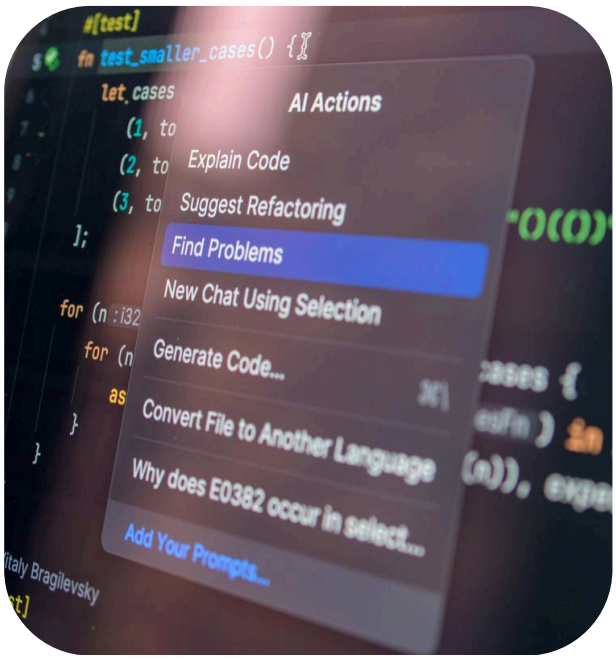
Examples Of Institutional Tools Organisations Need

1. **AI Tool Register:** A simple list of approved, rejected and under-review AI tools used by the organisation.
2. **Prompt Library:** A shared collection of tested prompts for lesson planning, assessment, feedback, accessibility and administration.
3. **AI Assessment Design Template:** A tool for creating assessments that reduce plagiarism risks and focus on authentic learner performance.
4. **AI Quality Assurance Checklist:** A tool for reviewing whether AI-supported learning materials meet educational, ethical and accessibility standards.
5. **AI Implementation Roadmap:** A step-by-step plan for introducing AI tools, training staff, reviewing risks and updating institutional practice.



Source: AI Act(ing) in Adult Education, 2026

Towards Better AI Training: Principles That Should Guide the Work Ahead



Better AI training should start from reality rather than from theory. Educators are using these tools in many ways, so training needs to meet them where they are and help them move from experimentation to confident, responsible use. The aim is not to introduce more technology for its own sake. It is to create learning that is useful, ethical, adaptable and relatable in the everyday work of adult education. It should also give educators space to reflect on their own practice, compare approaches with others and test ideas in realistic situations. Without that connection to everyday work, training risks becoming informative but difficult to apply. The following principles build on these findings.

8.1 Building On What Educators Already Know & Do

The strongest uses are in planning and writing support, while assessment and personalisation are also emerging but remain less developed. For that reason, training should not begin only with abstract definitions or technical overviews. It should begin with the tasks educators handle and show how new tools can support those tasks more safely and thoughtfully. People learn more easily when new ideas connect to familiar work. If training starts from lesson planning, content creation, feedback, assessment, or learner support, educators can immediately see how it fits their day-to-day work. This also makes it easier to move from basic use to deeper pedagogical thinking, where the value lies. In practice, training should help educators improve not only whether they use these tools, but how they use them. The goal is not "Can you make the tool work?" but "Can you make it work in a way that improves teaching, supports learners and preserves professional judgement?"

8.2 Making Ethics & Responsibility Central, Not Supplementary

Ethics cannot be treated as a side note. Privacy, data protection, bias, fairness and over-reliance are not occasional concerns but part of the basic conditions for responsible use. For that reason, ethical questions need to be considered through the whole learning process. When educators assess which tools to use, they also need to think about how learner data is handled. When they practise prompting, they need to know about bias, accuracy and reliability. When they work on assessment, they need to address integrity, transparency and the role of human judgement. Ethics should thus shape the training from beginning to end, rather than sit in one separate module. The reason is simple. If responsibility is only mentioned at the end, it can feel optional. In reality, it is central to how digital tools affect decisions, produce outputs and influence professional judgement. Training should make these issues visible from the start and help educators respond to them in ways they can readily use.

8.3 Designing For Flexibility, Inclusion & Working Conditions

The preferred formats show that the training has to fit what happens in practice. National results favour self-paced learning, blended delivery, microlearning and short units because educators need learning that can be paused, resumed and applied in small steps. This also connects to inclusion. The findings point to differences in access, infrastructure, provider capacity and confidence, which means a rigid or overly technical model would leave some people behind. A flexible approach is more likely to work across a mix of contexts, including low-resource settings and organisations with uneven digital maturity. Inclusion also means making the content usable for different kinds of learners and educators. Some need basic introductions, others need applied examples and others need support for governance and implementation. A strong design does not force everyone through the same path but gives them a framework that can adapt to where they are.

8.4 Giving Institutions The Tools To Support Their People



Responsible AI use depends on more than individual goodwill. Even when educators are willing to engage, they still need institutional structures that make safe and consistent use possible. That is why policies, approval procedures, consent guidance, checklists and implementation roadmaps matter so much. These tools are important since they answer basic but crucial questions: Who decides which tools can be used? How is learner data handled? What must be disclosed? What support is available if something goes wrong? Without answers to those questions, educators are left to improvise. Research findings also suggest that institutions should not wait for perfect certainty before acting. They need toolkits that help them move forward while keeping risks visible and manageable. That is what turns AI from an individual experiment into something the organisation can support responsibly.

Recommendations & A Way Forward

The recommendations that follow are aimed at four levels of action: (1) educators and trainers; (2) institutional leaders and managers; (3) policymakers and national agencies; and (4) the wider adult education community. Each group has a different role, but all contribute to making AI use in adult education responsible, useful and institutionally supported. Educators need training that connects with their everyday work. Institutions need structures that make responsible use easier. Policymakers need to turn broad strategies into guidance that providers can actually apply. Taken together, these recommendations focus on moving from individual experimentation towards shared, confident and accountable practice.

9.1 For Educators & Trainers

The first step is to build training around what educators do. The strongest uses of AI are in lesson planning, drafting, summarising, adapting materials and administrative support, so training should begin there and then move toward better judgement, safer practice and more thoughtful pedagogical use. That means showing educators not only how to use tools, but how to check outputs, spot weak reasoning, protect learner data and decide whether AI actually adds value in a given task. Training should also be short, and easy to return to. As mentioned, research shows a strong preference for self-paced online learning, microlearning and blended formats, which suggests that educators want learning they can fit into working weeks rather than long sessions that feel disconnected from daily practice. A good course, in other words, should feel like support for the job, not an extra job.

Concrete steps:

- Start with one task you already do, e.g., lesson planning, drafting a handout, writing feedback, and deliberately test an AI tool on it. Note what worked, what needed correcting and what you would not trust without checking first.
- Set a personal rule for output verification: before using any AI-generated content with learners, read it critically, check at least one factual claim independently and ask whether it suits your specific group.
- Join or create a small peer group (even two or three colleagues) where you share one AI experience per month: what you tried, what happened and what you would do differently.
- Keep a short running log of your AI use, e.g., tool, task, outcome, concern, so that over time you build your own evidence base.

9.2 For Institutional Leaders & Managers

Institutions need to stop leaving AI use to individual initiative. The findings show that educators are experimenting, but many are doing so without rules, approval procedures, or shared expectations, which makes responsible use harder than it should be. Leaders and managers should provide usable organisational measures, including acceptable-use policies, data-handling checklists, learner consent guidance and transparency statements. This is also where implementation is crucial. Staff need time, not just permission, to build competence and confidence and they need leadership that makes AI part of organisational planning rather than a private side project. If institutions want consistent and responsible practice, they have to support it visibly and operationally.

Concrete steps:

- Draft a one-page acceptable-use policy for AI that covers at minimum: which tools staff may use with learners, how learner data must be handled, when staff must disclose AI use to learners and who to contact with concerns. Review it annually.
- Allocate protected time for AI-related professional development: even two hours per term within contracted hours sends a signal that this is organisational business, not a personal hobby.
- Identify one or two internal AI practitioners, i.e., educators who are using AI thoughtfully, and give them a formal role in peer support, not just informal influence.
- Include AI governance as a standing item in staff meetings and quality review cycles, so that questions, incidents and good practice are shared systematically rather than staying invisible.

9.3 For Policymakers & National Agencies

Policy needs to become usable at provider level. Broad national strategies are useful, but they are not enough on their own. Educators and organisations still need guidance they can apply in classrooms, staff development and internal governance. For policymakers and national agencies, the priority should be to develop sector-specific templates, practical implementation tools and support that helps adult education providers turn policy into everyday action. This is especially needed where the distance between policy and practice remains wide. New tools are often being adopted faster than institutional guidance can respond, so national support should help reduce uncertainty through clear expectations, relevant examples and realistic implementation pathways. The goal is not to add more paperwork, but to make responsible practice easier to understand and easier to apply.

Concrete steps:

- Develop and publish ready-to-use policy templates specifically for adult education providers, e.g., acceptable-use frameworks, GDPR-compliant consent forms, staff guidance documents, that smaller organisations can adopt without needing legal expertise or dedicated IT staff.
- Commission and distribute plain-language guidance on how the EU AI Act applies specifically to adult education contexts, including worked examples of high-risk and low-risk uses, so providers are not left interpreting regulation alone.
- Create a national repository of evaluated AI tools relevant to adult education, with notes on data protection status, language support, accessibility and known limitations, updated at least annually.
- Fund dedicated AI literacy development within existing adult education quality frameworks and funding streams, so professional development is not dependent on individual project cycles but becomes a permanent feature of the sector's infrastructure.

9.4 For The Wider Adult Education Community

The wider adult education community should treat AI as a common professional issue, not an individual experiment. What the results show is a field learning in public. Some people are using AI confidently, others cautiously and many are somewhere in between. That makes peer exchange, communities of practice and shared examples especially valuable, because they let people learn from each other instead of starting from scratch. This community role matters for another reason: AI is changing quickly. Tools, expectations and risks are all moving, so training and guidance cannot stay fixed for long. The field needs a habit of updating, reflecting and sharing what works, so responsible AI use becomes part of professional culture rather than a one-time initiative.

Concrete steps:

- Create local or cross-country communities of practice where educators meet regularly to share how they are using AI, what is working, and what is causing problems.
- Share examples and materials openly, such as lesson ideas, prompt examples, checklists and short case studies that others can adapt easily.
- Collect and circulate peer experience through short webinars, podcasts, blogs, or internal newsletters so that useful practice does not stay hidden in individual classrooms.
- Keep updating guidance together, so the community reviews new tools, new risks, and new needs on a regular basis instead of treating AI as a one-time topic.

- Use common reflection questions after trying a tool, for example: What did it help with? What did it get wrong? Would I use it again? What would I change?
- Support multilingual and accessible sharing, so examples and resources are useful across different countries, sectors, and learner groups.
- Raise the collective voice of the sector, pushing for ongoing funding, shared resources and time for collaboration rather than isolated individual effort.

FINAL REMARKS: A FIELD THAT CANNOT WAIT

What stands out after reading all of this is not panic, but effort. Adult educators are already trying to make sense of AI in real working conditions, often with limited time, limited support and no roadmap. They are not waiting for the perfect moment or a perfect policy before acting. They are experimenting, adjusting and making decisions that set how AI enters adult education every day. That is why the actual issue is not whether educators are interested. They truly are. The issue is whether the systems around them are giving them enough to work with. In many places, the answer is still not enough. The evidence points to a sector where practice is moving faster than support, and where people are expected to deal with change without always being given the training, guidance, or space they need to do it well.



Adult educators are engaging with AI, but responsibility for adapting to it should not fall on individuals alone. What they need is guidance, decent training and a sense of direction from the institutions around them. They also need support that respects the reality of their work, the mixed levels of experience, the different settings, the heavy workload and the constant pressure to keep learning while helping others learn. AI will keep changing, but one thing should stay the same. The responsibility to support educators in a way that is useful, honest and connected to adult education.

THE AI ACT(ING) PARTNERSHIP:

die Berater bridges to europe
CESGA GALICIA SUPERCOMPUTING CENTER
fip Future In Perspective
ReadLab
HEADWAY
syncnify

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AI Act(ing)
in Adult Education

Desk Research

(Austria)



1. Introduction

The Austrian adult education landscape is commonly described along three forms of learning, namely formal, non-formal and informal, which are also reflected in the structure of the National Qualifications Framework (NQF) aligned with the European Qualifications Framework (EQF) (Koreimann & Hackl, 2011; Bundeskanzleramt Österreich, 2024a). Artificial Intelligence is currently among the fastest-rising continuing education topics in Austria: the Platform für berufsbezogene Erwachsenenbildung identifies AI as the topic with the greatest increase in importance (71%) (Bayer et al., 2025). At the same time, population-level readiness is limited: in a 2024 survey, 73% reported knowing little to very little about AI, and only around one quarter considered their AI knowledge to be good (Peterbauer, 2025). This gap is also visible when self-assessed competence is compared to tested knowledge: in the Digital Skills Barometer 2024 – Special Edition on AI, participants rated their knowledge of AI at 37/100, while the assessed knowledge score was 19/100 (fit4internet, 2025). The threshold between the NQF levels 3 and 4 lies at 60 points (Pfeffer et al., 2025). Evidence also suggests that AI-related competences are often developed informally rather than through structured learning offers. While the "Kompass: Künstliche Intelligenz und Kompetenz 2025" is based on an investigation in Germany, its findings are indicative for Austria: 87% report acquiring AI competences on their own, 72% through friends and 65% through family, whereas only 54% do so via professional development and 31% via school or university (Cousseran et al., 2025). Even where awareness of AI exists, around 60% describe this knowledge as vague, pointing to gaps and the need for formal education. Overall, Austria shows a clear "momentum versus caution" dynamic: AI is gaining importance rapidly, yet AI literacy remains uneven and is often built through dispersed and sometimes informal sources. Against this background, this desk research synthesises recent evidence with a specific focus on adult education and adult educators. Sources were collected from official Austrian and EU bodies as well as recent reports and studies, complemented by keyword-based searches (AI literacy, adult education, educator competences, digitalisation, EU AI Act). All sources were screened for relevance to the Austrian adult education context, credibility and recency. Findings were summarised and mapped to the four WP2 focus areas; where Austria-specific evidence was limited, selected DACH or EU-level sources were used to contextualise trends and are treated as indicative, to be validated in the stakeholder consultation phase.

2. National Policy and Strategic Context

The inclusion and design of Artificial Intelligence in Austrian adult education is primarily shaped by the national AI strategy Artificial Intelligence Mission Austria 2030 (BMK, 2021a; BMK, 2021b) and the EU AI Act. AIM AT 2030 was jointly developed by the Federal Ministry for Climate Action (BMK) and the Federal Ministry for Digital and Economic Affairs (BMDW) and presented at the European Forum Alpbach on 14 September 2021. It is described as agile, interdisciplinary and participatory (BMK, 2021a). It pursues three overarching objectives: using AI for the common good on the basis of fundamental and human rights; positioning Austria as a centre of research and innovation; and securing Austria's competitiveness as a business location (BMK, 2021a). For adult education, the key point is that the strategy explicitly links AI to the working world and to vocational adult education, emphasising re- and upskilling in areas such as AI, data use and cybersecurity (BMK, 2021a). Following the rapid acceleration of generative AI, the government further sharpened its focus towards promoting "fundamental AI knowledge in the broad population in the sense of AI Literacy" (Bundeskanzleramt Österreich, 2024b, p. 40). The Umsetzungsplan 2024 operationalises this commitment through 47 measures from all twelve federal ministries. By July 2024, 82% of the original 91 measures were in implementation or completed, and the plan explicitly includes an AI literacy focus within the Digitale Kompetenzoffensive among its priorities (Bundeskanzleramt Österreich, 2024b).

The regulatory framework for AI use in education is primarily set by the EU AI Act (Regulation (EU) 2024/1689), which was published on 12 July 2024 and entered into force on 1 August 2024 as the first comprehensive global AI regulation (Europäische Union, 2024). The Act follows a risk-based approach and designates specific educational uses as high-risk under Annex III, Point 3, including systems that govern access to education, evaluate learning outcomes or attainment levels, or monitor compliance with examination rules (Pfeffer et al., 2025). It should be noted that not all educational AI is automatically high-risk; Article 6(3) provides exemptions for systems that do not pose a significant risk of harm. Within this regulatory framework, Austria highlights the principle of Digital Humanism, aiming to safeguard human dignity and intellectual integrity in the face of technological development (BMK, 2021a).

Overall, policy creates a combination of compliance obligations – mainly driven by the AI Act – and support measures. A central obligation is the AI literacy requirement under Article 4, which became applicable on 2 February 2025: organisations using AI systems professionally must take measures "to ensure a sufficient level of AI literacy of their staff and other persons dealing with the operation and use of AI systems on their behalf" (European Commission, 2025a). This shifts AI education from a voluntary pedagogical recommendation to a legal necessity. It also creates liability exposure where harms could plausibly have been prevented through adequate competence development (Aschemann et al., 2025). In addition, staff responsible for the human oversight of high-risk AI systems must have the competence, training and authority to interpret outputs correctly and intervene where necessary (Pfeffer et al., 2025).

Complementing these obligations, Austria has established support structures. The KI-Servicestelle (AI Service Point) within the RTR (Rundfunk und Telekom Regulierungs-GmbH), established by parliamentary vote on 31 January 2024 (BGBl. I Nr. 6/2024), serves as

an information and coordination hub for citizens, organisations and public administration (Bundeskanzleramt Österreich, 2024b, p. 12). It supports organisations – particularly SMEs – in AI Act preparation and competence development and manages the eleven-member KI-Beirat (AI Advisory Board) (Graf et al., 2024). It should be noted that the KI-Servicestelle is currently an information service point, not a formal enforcement authority.

A significant recent policy development is the Austrian Government Programme 2025–2029 ("Jetzt das Richtige tun"). The programme foresees a dedicated "KI-Offensive" for schools, the explicit integration of AI into adult education, and the elevation of the KI-Servicestelle into a full KI-Behörde (AI Authority) (Regierungsprogramm, 2025). Of particular relevance for the adult education sector is the announced temporary suspension of Bildungskarenz (educational leave), which has been one of the most important funding mechanisms enabling working adults to participate in extended training programmes. Its suspension may constrain access to longer-format AI upskilling courses. The government programme also includes a "She goes AI" initiative and plans to consolidate adult education infrastructure at BIFEB (Regierungsprogramm, 2025). Furthermore, the Nationaler Bildungsbericht 2024, published in December 2024, includes a dedicated chapter on AI in education, which was debated in the Nationalrat in April 2025 (Parlament Österreich, 2025). This signals that AI in education has reached parliamentary-level attention. A broader enabling measure is the national "Digitale Kompetenzoffensive" (DKO), adopted by the Council of Ministers on 7 December 2022, within the Digital Skills Strategy Austria. It aims to strengthen digital fitness and extend AI-related competences across education (Pfeffer et al., 2025). Now carried by five ministries and operationally delivered by OeAD's Geschäftsstelle für Digitale Kompetenzen, it supports low-threshold access to foundational knowledge through initiatives such as the workshop programme "Digital Überall" (Pfeffer et al., 2025; Bundeskanzleramt Österreich, 2024b). By September 2025, approximately 43,000 participants had attended around 4,500 workshops (Bundeskanzleramt Österreich, 2025). AI is one of five main thematic areas, and the DKO's strategic documents explicitly include an AI literacy programme. In this framing, AI is positioned as a tool to support lifelong learning goals, including inclusion and personalised learning.

In addition, several free learning offers are available, including the Erwachsenenbildung Massive Open Online Course (EB MOOC). In 2025, the EB MOOC focused on "AI Workflows: Didactics Meets Law", offering five lessons with weekly webinars and 1 ECTS accreditation via WBA. To promote innovation while increasing legal certainty, Austria is also examining AI regulatory sandboxes in which innovative systems can be developed and tested under official supervision. In parallel, the development of voluntary codes of conduct is encouraged to support ethical practice and structured competence development (Pfeffer et al., 2025). Taken together, Austria's policy and regulatory context creates both momentum and caution: while national strategy and support measures promote broad AI literacy, the EU AI Act simultaneously raises the threshold for compliant use, particularly in assessment-related contexts. The Government Programme 2025–2029 signals continued political commitment, but the suspension of Bildungskarenz introduces new constraints. Against this backdrop, the following chapter focuses on how adult education institutions currently translate these expectations into practice and digital readiness.

3. Institutional Practices and Digital Readiness

The primary driver for AI adoption in Austrian adult education institutions has been the emergence of generative AI (GenAI), particularly Large Language Models (LLMs), following the "ChatGPT momentum" in late 2022 (Hefler et al., 2025). Current practice is therefore dominated by pragmatic GenAI use for text drafting, summarising, lesson preparation and assessment item creation, typically as a productivity and content-development aid rather than as a fully embedded instructional system (Meier Quevedo, 2025; Reinhard, 2025). This broader uptake is also visible in learner and professional contexts, with particularly high GenAI usage among students and pupils (75.6%) (Statistik Austria, 2025). Public administration is also piloting GenAI for internal workflows (e.g., text proposals and translations), signalling that experimentation and integration are not limited to education providers (Bundeskanzleramt Österreich, 2024b). A notable public-sector example is the AMS Berufsinfomat, launched by the Austrian Public Employment Service (AMS) in January 2024. It represents one of Europe's first deployments of a ChatGPT-based career information tool by a public employment service, directly serving adult learners and job seekers with AI-generated occupational guidance. This signals a growing institutional willingness to integrate GenAI into citizen-facing services beyond internal workflows.

At the same time, there are emerging institutional examples moving beyond ad-hoc tool use toward more structured learning design. In this vein, adult education providers such as Volkshochschule Baden report using adaptive learning platforms to tailor content and reduce over- or under-challenging learners, indicating a gradual shift toward data-informed support.

Beyond the adult education sector itself, Austria's broader digital and AI ecosystem increasingly provides enabling conditions, including coordination and infrastructure. The national AI strategy frames AI adoption as a strategic priority anchored in cross-sector capability-building (BMK, 2021a; BMK, 2021b). Initiatives such as AI Factory Austria (AI:AT) point to expanding access to compute and AI services that may facilitate partnerships relevant for educational innovation (Bundeskanzleramt Österreich, 2024b, p. 53). Institutional strategies in Austrian adult education are increasingly shaped by EU expectations for trustworthy, human-centric AI and by rising compliance pressure. A recurring strategic stance is to "augment learning, not replace it" (Wilson, 2025), positioning educators as essential for trust, pedagogical judgement and critical reflection.

Operationally, responsible integration is increasingly framed as an institutional governance and competence challenge:

- AI literacy as organisational obligation: In the context of the EU AI Act, providers increasingly interpret AI use as requiring systematic competence development and internal guidance for staff working with AI in professional settings (Pfeffer et al., 2025).
- Guidance and coordination structures: The national KI-Servicestelle (RTR) can serve as a reference point for compliance-oriented orientation relevant to adult education providers (Bundeskanzleramt Österreich, 2024b).
- Data protection risk management: Sector-focused reviews discuss privacy-preserving deployment choices (e.g., locally installed/offline options where feasible) as a practical strategy to reduce exposure of sensitive learner data and support trust-building (Graf et al., 2024).
- The commercial training market is also responding to the AI Act's compliance requirements. The WIFI KI-Akademie offers a three-tier programme (KI-Führerschein, Zertifizierter KI-Beauftragter, KI-Strategist) explicitly linked to AI Act Article 4 compliance (WKO, 2025). Additionally, Austrian Standards has introduced an ISO-certified "KI-Manager:in" qualification, serving as formal proof of AI Act compliance for organisations. These developments indicate that the market is beginning to respond to legal obligations with structured certification pathways.
- Despite growing experimentation, readiness beyond basic GenAI use remains limited. Providers report uncertainty around compliance (especially for assessment-related use cases), persistent data protection concerns, and capacity constraints, particularly among smaller organisations, which slows scaling from pilots to institutional programmes. Against this backdrop, the next section focuses on the AI literacy and competence requirements for educators and organisations.

4. Educator Competences and AI Literacy Needs

The rapid integration of Artificial Intelligence into learning and work environments requires a clear competence profile for adult educators and a strategic approach to addressing existing knowledge and confidence gaps. In this report, AI literacy is understood as more than technical proficiency: it includes pedagogical, ethical and evaluative capacities that enable responsible AI use in adult education settings (Aschemann et al., 2025; Schindler, 2025).

Requirements for AI-related competences are anchored both in European regulation and in national competence frameworks, emphasising safe, reflective and human-centric application of AI in educational contexts. The central legal driver is the European AI Act: organisations acting as deployers of AI systems must ensure that their personnel have a sufficient level of AI literacy (Aschemann et al., 2025). In practice, this includes the knowledge, skills and understanding needed to use AI systems competently, as well as awareness of associated risks and potential harms (Pfeffer et al., 2025). For educators, the required competence level must be aligned with the specific teaching context and the learners served (Aschemann, 2025). Where adult education institutions use or oversee high-risk AI systems (e.g., automated assessment), staff responsible for human oversight must be able to (a) understand system capabilities and limits, (b) detect and address anomalies, and (c) avoid automation bias, i.e., over-trusting AI outputs when making decisions based on recommendations (Pfeffer et al., 2025).

At national level, DigComp 2.3 AT sets transversal requirements relevant to applied AI, including a basic understanding of AI as a sub-area of computer science and principles of ethical AI use (Pfeffer et al., 2025). While the framework's 27 named competences do not include an explicit "AI" competence, AI is addressed through the broader ecosystem: fit4internet's CHECK KI, QUIZ KI and QUIZ KI plus assessment tools map AI knowledge across all six DigComp AT competence areas. It is worth noting that the European DigComp 3.0, published in November 2025, now integrates AI transversally across the framework, and Austria will likely need to update its national model accordingly. Complementing such frameworks, AI literacy models commonly structure competences around three dimensions: (1) foundational knowledge and understanding, (2) task-oriented application, and (3) evaluation and creation, including identifying bias and risk (Ng et al., 2021, cited in Wilhelm, 2025, pp. 88–90). The professional development market for AI is currently dynamic but largely application-focused and costly, often prioritising vocational or commercial contexts over general adult education (Hefler et al., 2025). Most non-formal AI courses are short (typically under 16 teaching units), yet 69% cost more than 50 EUR per teaching unit, which constitutes a substantial access barrier for participants outside vocationally funded settings (Hefler et al., 2025). Content is heavily oriented toward immediate use cases (42% focus on generative AI/LLMs), and only 11% target generally interested individuals outside a professional context (Hefler et al., 2025).

Despite these market limitations, several national and sector-specific formats address AI literacy needs in adult education. The state-funded Digital Competence Offensive supports low-threshold access through "Digital Überall" workshops (Pfeffer et al., 2025; Bundeskanzleramt Österreich, 2024b, p. 57). Within the sector, the 10-part self-learning series KI-Tools in der Erwachsenenbildung on erwachsenenbildung.at (2024) focuses on practical tool use alongside ethical reflection and data protection, accompanied by webinars reaching nearly 2,000 adult education professionals (Hefler et al., 2025). In addition, the EB MOOC 2025 ("AI Workflows: Didactics Meets Law") aimed to connect pedagogical practice with legal requirements, while universities contribute through workshops and certificate programmes (e.g., KI trifft Arbeit) that emphasise interdisciplinary perspectives (Hefler et al., 2025). A particularly significant sector-specific offering is the BIFEB Lehrgang "Künstliche Intelligenz in der Erwachsenenbildung", a six-

module, WBA-accredited certificate programme (8 ECTS) specifically designed for adult educators at the Bundesinstitut für Erwachsenenbildung. This represents one of the first structured, accredited AI training pathways tailored to the adult education profession in Austria (BIFEB, 2025).

Even with emerging offers, evidence points to a persistent preparedness gap: self-assessments tend to overestimate factual knowledge ("awareness gap"), and GenAI use is already widespread among learners. 75.6% of students and pupils used GenAI tools in the last three months, while structured training provision remains limited (fit4internet, 2025; Meier Quevedo, 2025; Statistik Austria, 2025). With a look towards Germany, evidence from the Robert Bosch Stiftung Schulbarometer 2025 suggests that only around 39% of teaching staff feel secure when using AI tools; a finding likely indicative of the Austrian context given comparable institutional conditions and the similarly early stage of AI integration across both countries (Robert Bosch Stiftung, 2025). This makes critical AI literacy particularly important, including countering automation bias and anthropomorphism and developing new transparency and quality criteria for AI-supported work (Aschemann et al., 2025; Märzinger, 2025; Bundeskanzleramt Österreich, 2024b). In sum, adult educators require a competence profile that combines foundational AI understanding with critical evaluation and legally compliant practice. However, current confidence and training provision remain uneven, which limits responsible scaling beyond basic tool use. Building on this, the following chapter analyses the key barriers, opportunities and emerging trends shaping AI integration in Austrian adult education.

5. Barriers, Opportunities, and Emerging Trends

The integration of AI into Austrian adult education is characterised by a tension between rapid technological innovation and systemic caution. While national policy frames AI as a lever for the common good and competitiveness under the principles of Digital Humanism (Bundeskanzleramt Österreich, 2024b), the literature shows that implementation in lifelong learning is shaped by a set of persistent structural barriers alongside clear opportunities and emerging trends.

Barriers:

- Competence and awareness gap: A core obstacle is the gap between perceived and actual AI knowledge; objective measurements often show only rudimentary AI literacy (fit4internet, 2025). Among educators, confidence remains limited – evidence from Germany suggests that only around 39% of teaching staff feel secure using AI tools, a pattern likely mirrored in Austria (Robert Bosch Stiftung, 2025) – and training provision is low (Meier Quevedo, 2025). Informal learning dominates (self-experimentation and peer exchange), which can reinforce fragmented and inconsistent understanding (Cousseran et al., 2025).
- Regulatory and legal uncertainty (AI Act/GDPR) and perceived risk: Uncertainty about compliant use cases, particularly where AI touches assessment or profiling, slows investment and scaling (Graf et al., 2024). Data protection concerns are a strong inhibitor (48% of non-users cite privacy as a reason for non-use), and broader concerns about output quality (40%), bias (37%) and legal issues (32%) remain widespread (Peterbauer, 2025). The risk of an "AI divide" (vulnerable groups being left behind) is also raised as a critical equity concern (Wilhelm, 2025).
- Financial and structural constraints: Access to high-quality training is restricted by cost to 69% of non-formal AI courses cost over 50 EUR per teaching unit (Hefler et al., 2025). Smaller providers, especially in rural settings, often lack the IT capacity and infrastructure needed for secure, integrated and data-driven implementation (Meier Quevedo, 2025). The announced temporary suspension of Bildungskarenz in the Government Programme 2025–2029 introduces an additional constraint, as it removes one of the most important funding mechanisms enabling working adults to participate in extended training programmes (Regierungsprogramm, 2025).
- Psychological acceptance barriers: "AI anxiety", meaning fear of job replacement and loss of human control, affects technology acceptance and can translate into institutional hesitancy (Peterbauer, 2025; Pfeffer et al., 2025).
- Market dynamics and dependency: Dependency on large, mostly non-European AI providers and uneven access to advanced upskilling offers can restrict equitable participation, particularly for learners without employer-sponsored training (Graf et al., 2024; Hefler et al., 2025).

Potentials:

- Against these constraints, AI also offers clear potential to address long-standing adult education challenges:
- Personalisation and adaptivity: AI-supported systems can enable individualised learning paths that adapt to pace, prior knowledge and needs, reducing under- and over-challenge (Payer & Worgatsch, 2025; BMK, 2021b).
- Inclusion and accessibility: Translation, speech-to-text and image description tools can reduce barriers for learners with disabilities or language needs and strengthen participation (Pfeffer et al., 2025).
- Empowerment of educators: Automation of administrative tasks and support in creating learning materials (e.g., summaries, quiz items) can free time for learner support and higher-level pedagogy (Payer & Worgatsch, 2025; Bundesministerium für Bildung, Wissenschaft und Forschung, 2023).
- Educational outreach: Low-threshold initiatives such as "Digital Überall" can reach groups that are currently underrepresented in lifelong learning and create entry points for further participation (Hefler et al., 2025).

- Social-partner and regional funding instruments: Initiatives such as the AK Wien Digi-Bonus (150 EUR for digital and AI courses) and WAFF funding programmes for AI innovations represent emerging counterweights to the cost barrier, particularly in urban areas.

Emerging Trends:

- Finally, the literature points to several trends likely to shape AI's role in lifelong learning:
- Human-in-the-loop and Digital Humanism: Strong consensus that AI should function as support ("co-pilot"), while teaching remains anchored in human relationships, empathy and ethical judgement (Wilson, 2025).
- Rising "prompt literacy": The ability to steer AI via precise prompts and critically evaluate outputs is increasingly framed as a foundational competence (Wilhelm, Schindler, 2025).
- Technological sovereignty and local models: Growing interest in on-premises/on-device and open-source solutions to strengthen data sovereignty and security (Graf et al., 2024).
- Hybrid AI systems: Expectations that combining machine learning with rule-based (symbolic) logic may increase explainability and trustworthiness (Graf et al., 2024).
- Mainstreaming and multiplier models: A shift toward embedding AI competence as a cross-cutting task, supported by multipliers (e.g., "AI ambassadors") and communities of practice (Hefler et al., 2025).
- Growing sectoral networking: Events such as the EPALE conference "AI Meets Adult Learning" (9 April 2025, Wiener Urania) and the accompanying publication signal increasing cross-institutional exchange and visibility of AI in adult education discourse (EPALE, 2025).
- Overall, Austria's adult education sector is moving toward wider AI use, but the pace of responsible scaling will depend on whether competence development, compliance clarity, and equitable access can keep up with technological momentum.

6. Implications for the AAA Project

Based on the aggregated findings, the AI Act(ing) in Adult Education outputs should be designed as a practical competence and governance package that helps adult educators and providers move from pragmatic tool use toward responsible, scalable implementation. As context, the EU Education and Training Monitor 2025 for Austria notes that adult learning participation (52.2% in 2022) remains well below the European 2030 target of 62%, underscoring the urgency of accessible and effective training approaches (European Commission, 2025b).

Core Implications:

- Fundamental AI literacy (foundation layer): The outputs should close the knowledge–awareness gap by explaining core AI concepts in an adult-education-relevant way (how GenAI works at a high level, typical limitations, why hallucinations occur, and what "good use" looks like). To ensure longevity, the focus should be on transferable principles (e.g., prompting basics as a method, not tool-specific tutorials) so that materials do not become obsolete as tools evolve. In addition, common myths should be explicitly addressed to reduce AI anxiety and unrealistic expectations.
- Critical AI literacy (quality and ethics layer): Beyond basic use, the outputs should strengthen critical evaluation skills: identifying bias, recognising uncertainty, and applying source- and output-checking routines. The role of human oversight ("human-in-the-loop") should be framed as a pedagogical and ethical safeguard, including how to teach critical reflection and prevent uncritical trust in AI outputs.
- Legal compliance toolkit (AI Act + GDPR-ready practice): The EU AI Act requirements should be translated into accessible, practice-oriented guidance for adult educators and providers. This should include: key obligations, role concepts (e.g., deployer), what changes for high-risk use cases (especially assessment-related scenarios), and practical "do's and don'ts". Data protection and intellectual property should be integrated as standard decision points (what can/cannot be entered, how to handle sensitive learner data, and transparency expectations). The evolving policy framework – including the Government Programme 2025–2029 provisions and the planned elevation of the KI-Servicestelle to a full KI-Behörde – should be monitored and reflected in updates.
- Policy and guideline templates (institutional governance): As providers increasingly create AI usage policies, the project should offer a structured template package (policy skeleton + checklist + minimum standards). The goal is to support credible, well-founded institutional guidance rather than ad-hoc documents. Templates should cover: acceptable use, transparency requirements, data handling, quality assurance, responsibilities, escalation paths, and update routines.
- Practical teaching scenarios and best practices (implementation layer): The outputs should provide concrete, pedagogically grounded examples of how to integrate AI transparently into adult learning (e.g., material creation, feedback support, differentiation), including how to communicate AI use to learners and how to protect human dignity and intellectual integrity. Examples should model future-oriented practice (what might be realistic in 3–5+ years) while staying anchored in today's constraints (compliance, capacity, trust).

In addition to the core outputs described above, the findings from Chapters 2–5 indicate several further elements that could be included to ensure practical applicability, legal robustness, and scalability:

- Risk-based use-case classification tool: As the EU AI Act triggers different obligations depending on the context of use, particularly in assessment- and profiling-adjacent scenarios, the project could provide a simple decision tree or use-case matrix. This tool should distinguish, for example, between low-risk classroom support and potentially high-risk educational applications and specify the required safeguards per category (e.g., human oversight, documentation, transparency, data minimisation). This directly addresses institutional uncertainty regarding compliance.
- Tool-selection and data-handling checklist: Given the prominence of privacy and data protection concerns, the project could include a practical checklist to support safe tool selection and use. This checklist should clarify which inputs are permitted (e.g., no personal or sensitive learner data), when privacy-preserving deployment options (e.g., local/offline solutions where feasible) are recommended, and which minimum requirements should be considered when selecting vendors/tools (e.g., data processing terms, storage location, retention, opt-out options, logging).
- Train-the-trainer and multiplier approach: Since AI competences are often developed informally and training provision remains limited, scalable impact requires a multiplier model. The outputs could therefore include guidance for "AI ambassadors" or internal champions, short facilitation guides for peer learning, and a community-of-practice format (exchange of examples, Q&A, and good practice sharing). This supports mainstreaming AI competence across organisations despite limited capacity.
- Modular learning pathway and micro-credential logic: To match adult education realities (short formats, uneven starting levels, limited time), the outputs should be structured as modular learning units that can be used independently or combined into a pathway. A feasible structure includes: (A) Foundations (AI literacy), (B) Critical evaluation (bias, quality, checking routines), (C) Compliance basics (AI Act + GDPR practice), and (D) Teaching scenarios (pedagogical integration), complemented where appropriate by short self-checks to build confidence.
- Quality assurance routine for AI-supported learning materials: A recurring challenge is not the use of AI itself, but ensuring quality, accountability, and transparency. The project could provide a simple QA routine, including verification checklists (sources, factual accuracy, bias checks), transparent documentation of AI use (e.g., disclosure statements), and guidance on documenting prompts/inputs where appropriate. This strengthens trust and reduces the risk of uncritical adoption.
- Equity and inclusion lens: In light of concerns about an "AI divide", the outputs could include guidance on inclusion-oriented implementation. This should cover accessibility-enhancing use cases (e.g., translation, speech-to-text) and their limits, strategies to avoid excluding learners with lower digital skills, and recommendations for low-threshold entry points and support measures.
- Change-management and communication package: Adoption is slowed by AI anxiety, uncertainty, and uneven organisational readiness. Therefore, the project could include communication templates for staff and learners, "myths vs realities" one-pagers, and a recommended rollout logic (pilot → review → scale). This increases the likelihood that outputs are implemented consistently rather than remaining theoretical resources.

Overall, these additional elements ensure that the AAA project not only builds AI literacy but also enables adult education providers to implement AI responsibly and consistently through clear decision support, practical tools, and scalable organisational guidance.

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AI Act(ing)
in Adult Education

Stakeholder Involvement

(Austria)



1. Introduction

This report presents the findings of the national stakeholder engagement activities conducted in Austria as part of Work Package 2 (WP2) of the AI Act(ing) in Adult Education (AAA) project. Whereas the desk research (see National Desk Research Report) provides a structural and policy-level overview of how AI is addressed within the Austrian adult education system, the stakeholder engagement component offers direct insights from practitioners, experts, and institutional actors who are facing the realities of AI integration in teaching, learning, and organisational management. The stakeholder engagement comprised two complementary methods: a quantitative survey targeting adult educators and a series of semi-structured interviews with professionals from across the adult education ecosystem. Combined, these methods ensure a triangulated understanding of the sector's readiness for responsible AI integration. The findings directly inform the design of the AAA training programme and the Guide to Responsible AI Use in Adult Education, which constitute the project's core outputs under Work Packages 3 and 4. The following sections present the methodology, key findings from the survey and interviews, an integrated analysis of convergences and divergences across both data sources, and concluding recommendations for the AAA project.

2. Methodology

2.1 Survey Administration

The survey was developed and administered through a Google Forms questionnaire in German, structured around five thematic sections: (1) professional background and digital experience, (2) AI awareness and understanding, (3) use of AI in pedagogy and practice, (4) ethical perceptions and attitudes, and (5) training needs and capacity gaps. The questionnaire included both closed (Likert-scale, multiple-choice) and open-ended items. The survey can be accessed via: https://forms.gle/J8ej4rS2yNE1eDmD8. Distribution was conducted through the partner organisation's professional network, including direct outreach to adult educators, institutional contacts, and sector associations. The survey was open from 21 January to 7 March 2026. A total of 46 responses were collected. The majority of respondents (n=29, 63%) are based in Austria, with additional responses from Germany (n=15, 33%), Switzerland (n=1), and Argentina (n=1). While the primary focus of this national report is on the Austrian context, all 46 responses are included in the analysis, as the DACH respondents operate within comparable institutional and regulatory frameworks. Where relevant, differences between Austrian and non-Austrian respondents are noted. The target of a minimum of 20 responses per partner has been met.

2.2 Interview Process

A total of 13 semi-structured interviews were conducted with 16 stakeholders between January and February 2026. Two interviews involved multiple participants: an interview with three members of a university-based Erasmus+ research team (REIN: Mark Reinhard, Luisa Baum, Alexander Nguyen Thanh), and the interview with the AI Service Desk of the Austrian Regulatory Authority for Broadcasting and Telecommunications (Rundfunk und Telekom Regulierungs-GmbH – "RTR"). . There was also another interview including two people, but the stakeholder who had participated in an interview could not be included in the analysis, as no signed GDPR consent form was received despite follow-up. All interviews were conducted by René Foidl, using a mix of online (video conferencing) and in-person formats, with an average duration of approximately 30–45 minutes. Interviewees were identified through targeted research on LinkedIn and Google searches for professionals with relevant expertise in adult education, AI, digital transformation, and educational policy. Of the 29 individuals contacted, four declined, 13 agreed to participate, and one did not respond after initial confirmation. One participant (REIN) invited additional team members, and the interview with the RTR consisted of two people resulting in 16 stakeholders across 13 sessions. As mentioned, one stakeholder is not included due to a missing consent form. The target of 15 interviewees per partner has been met. All interviewees included in this report provided signed GDPR-compliant consent forms in accordance with the project's ethical standards. One interviewee (RTR) provided an alternative written confirmation in line with institutional protocols. The interviews followed the common semi-structured guide provided in the WP2 Research Guidelines, organised around four thematic areas: (1) professional role and institutional context, (2) current practices and organisational readiness, (3) perceptions of challenges, opportunities, and professional needs, and (4) recommendations for capacity building and sector development.

The stakeholder profiles cover a broad cross-section of the adult education ecosystem:

Category	Code	Name	Profile
Senior EB expert / academia	ASC	Birgit Aschemann	Erwachsenenbildnerin, Psychologin und Medienpädagogin; Erfahrung in der Konzeption und Durchführung von MOOCs und Weiterbildungen für Lehrende; pädagogische Leitung CONEDU sowie Projekt FAIR; EPALE, WBA, universitäre Lehre; 30+ Jahre in der EB
Senior EB expert /	STE	Michael Steiner	PH-Koordinator für Digitale Kompetenz

academia			und Informatische Grundbildung; langjährige Expertise; Teil von curricularen Gremien; Didaktik, KI-Kompetenzmodelle
Erasmus+ research team (3 persons)	REIN (MR, LB, ANT)	Mark Reinhard, Luisa Baum, Alexander Nguyen Thanh	Wissenschaftliche Mitarbeiter:innen am Zentrum für Wissenstransfer und Weiterbildung der Johannes Gutenberg-Universität Mainz; DaF/DaZ, KI in Lehre, Assessment und Forschung; Erasmus+ Projekte „AI in Higher Education“ und „AI in Adult Education and Self-Learning“
Trainer / Manager	KR	Katja Ratheiser	Leiterin der Arbeitsgruppe Digitale Bildung des Forums Katholischer Erwachsenenbildung in Österreich; Koordination österreichweiter Initiativen zur digitalen Transformation in der Erwachsenenbildung; KI-Praxisleitfaden
Practitioner / trainer	GG	Florian Goldgruber	Schulleitung Mittelschule Guntramsdorf; KI-Coach; Teacher Training an PH Wien und PH NÖ
Practitioner / trainer	EP	Elisabeth Pölzleitner	Projektmitarbeiterin AI Lang – AI for Language Education; Pädagogische Hochschule Steiermark; KI-Trainerin
Organisation / management	FREI	Wilfried Frei	Bildungswissenschaftler, Unternehmensberater für Businesscoaching und Kompetenzassessments; langjähriger Trainer, Moderator, Teamentwickler und Universitätslektor; Leitung CONEDU
Organisation / management	PR	Philipp Röhnser	Leitung digitale Medien in EB/Beratungsunternehmen
Organisation / management	NM	Martin Neubauer	Institutsleitung WIFI Steiermark; KI-Führerschein; VR/AR in EB
Technology / business	CW	Christoph Wirl	Gründer und Geschäftsführer Superintelligenz GmbH; KI-Beratung; Redakteur in Erwachsenenbildung
Technology / business	GP	Gunther Pany	Erwachsenenbildner; KI-Entwickler (docsense.at); geschlossene KI-Systeme für Unternehmen
Policy / regulation	RTR	(anonymisiert, 2 Personen)	AI Service Desk of the Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR); AI-Act-Compliance
Platform / network	NP	Daniel Noppinger	Plattform für berufsbezogene Erwachsenenbildung

3. Survey Findings

3.1 Professional Background and Digital Experience

The respondent group is predominantly active in adult education and training (n=32, 70%), followed by programme coordination (n=7, 15%) and institutional leadership (n=3, 7%). The sample is highly educated: 54% hold a master’s degree and 11% a doctoral degree. The age distribution is relatively balanced, with the 35–44 group (30%) and 18–34 group (28%) most represented, followed by 55–64 (24%) and 45–54 (15%). The institutional landscape is diverse: private adult education providers account for the largest share (39%), followed by higher education institutions (22%), NGOs and community organisations (13%), and public adult education centres (11%). Self-reported digital competence is high: 61% describe themselves as advanced and 13% at expert level, while only 7% report basic digital skills. 87% have participated in AI or digital skills training in the past two years, with the clear majority (80%) focusing specifically on AI.

3.2 AI Awareness and Understanding

Familiarity with AI concepts is substantial: 43% rate themselves as very familiar and 35% as moderately familiar with AI-related concepts such as machine learning, automation, and generative AI. Only 2% report no familiarity at all. However, the understanding of AI in adult education specifically reveals more nuance in the open responses, where several respondents note that practical application knowledge lags behind conceptual awareness. Knowledge of AI applications currently used in education is more evenly distributed: 39% report moderate familiarity, 28% only some familiarity, and 26% strong familiarity, while 7% report no familiarity at all.

3.3 Use of AI in Pedagogy and Practice

AI tool usage is widespread: 67% report regular use and 24% occasional use, with only 4% reporting no interest. The most widely used tools are GPT-based language and writing assistants (89%), followed by virtual assistants or chatbots (63%), automated quiz or assessment generators (50%), and adaptive learning platforms (30%). Data-driven learner analytics tools are used by only 15%. The primary purposes for AI use are information search and summarisation (87%), lesson planning and content creation (80%), administrative tasks (61%), individualised learning support (52%), and assessment design or feedback (46%). These figures confirm that current AI usage is strongly productivity-oriented, concentrated on content generation and workflow efficiency rather than on transformative pedagogical applications. Reported challenges include ethical concerns (67%), unclear regulations or guidelines (61%), lack of institutional support (33%), lack of training (33%), and technical barriers (20%). Only 4% report having encountered no challenges at all.

Table 1. AI tools used by respondents (multiple responses possible, n=46)

AI tool category	n	%
Language/writing assistants (GPT-based)	41	89%
Virtual assistants / chatbots	29	63%
Automated quiz/assessment generators	23	50%
Adaptive learning platforms	14	30%
Data-driven learner analytics	7	15%

Table 2. Purposes of AI tool use (multiple responses possible, n=46)

Purpose	n	%
Information search and summarisation	40	87%
Lesson planning / content creation	37	80%
Administrative tasks	28	61%
Individualised learning support	24	52%
Assessment design / feedback	21	46%

These findings confirm the desk research observation that current AI use in Austrian adult education is primarily productivity-oriented, centred on content generation and administrative efficiency rather than embedded pedagogical systems.

3.4 Ethical Perceptions and Attitudes

Data privacy is a significant concern: 35% are very concerned and 9% extremely concerned about data protection when using AI tools in education, while 28% are somewhat concerned and 26% moderately concerned. Only 2% report no concern. The most frequently cited ethical risks are over-reliance on automated systems (83%), data protection and data issues (76%), bias or unfair outcomes (72%), and lack of transparency (63%). Loss of educator autonomy is cited by 24%. Confidence in responsible AI use shows a notable spread: 37% feel very confident and 13% completely confident, but 35% are only moderately confident and 15% somewhat confident. This means that while a slim majority feels at least very confident, a substantial proportion of the sample – 50% – reports only moderate or limited confidence in their ability to use AI responsibly. Regarding institutional guidelines, 22% report comprehensive guidelines at their institution, 28% report limited guidelines, 17% indicate guidelines are under development, 17% report no guidelines at all, and 15% are unsure. In sum, approximately 50% of respondents report at least some form of institutional guidance on ethical AI use.

Table 3. Ethical risks associated with AI in adult education (multiple responses, n=46)

Ethical risk	n	%
Over-reliance on automated systems	38	83%
Data protection and data issues	35	76%
Bias or unfair outcomes	33	72%
Lack of transparency	29	63%
Loss of educator autonomy	11	24%

3.5 Training Needs and Capacity Gaps

The most frequently identified training needs are technical skills for AI implementation (67%), AI regulation and institutional policy (48%), pedagogical applications of AI (46%), and ethical and responsible AI use (37%). Only 17% identify basic AI understanding as a primary need, suggesting that the target group has moved beyond introductory awareness and requires higher-level, applied training. Preferred training formats are self-paced online modules (63%), live online workshops (50%), short microlearning units (46%), blended learning (37%), peer learning or communities of practice (35%), and in-person workshops (24%). This preference pattern strongly supports the AAA project's planned delivery approach of modular, digitally accessible training content. AI is considered essential (43%) or very important (46%) for respondents' professional roles in the next 3–5 years – a combined 89%. Key motivators for AI training participation are practical relevance for teaching (65%), access to user-friendly tools (59%), time availability (59%), recognition or certification (57%), and institutional support (52%).

Table 4. Training needs reported by respondents (multiple responses, n=46)

Training area	n	%
Technical skills for AI implementation	31	67%
AI regulation and institutional policy	22	48%
Pedagogical applications of AI	21	46%
Ethical and responsible AI use	17	37%
Basic AI understanding	8	17%

Table 5. Preferred training formats (multiple responses, n=46)

Format	n	%
Self-paced online modules	29	63%
Live online workshops	23	50%
Short microlearning units	21	46%
Blended learning	17	37%
Peer learning / communities of practice	16	35%
In-person workshops	11	24%

3.6 Open Responses: Experiences and Concerns

The open-ended items yielded rich qualitative data that contextualises the quantitative findings. Positive experiences centre on efficiency gains: AI saves time in preparation, research, and drafting, helps adapt content to different proficiency levels, and supports the structuring of ideas and concepts. Several respondents describe AI as a significant relief in their daily work, particularly for administrative and content-creation tasks. Critical concerns, however, are equally prominent. Respondents repeatedly note the unreliability of AI-generated content: one respondent states that AI always provides an answer, but often it is wrong or only partially correct. Data protection, the environmental footprint of AI infrastructure, and the sustainability of current AI business models are raised as systemic concerns. One respondent notes that currently no AI provider operates profitably, linking the financial sustainability of AI services to long-term educational planning. Several respondents express unease about the shift from active

knowledge construction to passive product consumption, noting a perceived loss of the feeling of having created something oneself. The most frequently cited ethical considerations in the open responses are bias, transparency of training data, intellectual property, data protection, and the need for critical source verification.

4. Interview Insights

The 13 interviews with 16 stakeholders yielded rich qualitative data that complements and deepens the survey findings. The following synthesis is organised along the four thematic areas of the WP2 interview framework. Direct quotes are attributed using interview codes as listed in the stakeholder table above.

4.1 Professional Roles and Institutional Context

Interviewees occupy diverse positions within the adult education ecosystem, from senior experts with decades of sector experience (ASC, STE) to technology entrepreneurs (GP, CW), trainers at pedagogical universities (GG, KR), a representative of the national AI Service Desk (RTR), and institutional leaders responsible for organisational AI strategies (FREI, NM, PR). This diversity ensures that findings reflect multiple levels of the system. A cross-cutting observation is that AI has become an inescapable topic across all institutional contexts: “Even when a session is not about AI, the topic comes up at the latest during the Q&A” (KR). At the same time, the degree of strategic engagement varies considerably. The development of AI strategies frequently depends on a single innovation-minded individual rather than on systematic institutional processes: “The integration and development of AI strategies currently often depend on one person who is either innovation-minded or has been assigned that role” (FREI). This fragility has implications for sustainability and institutional resilience. Several interviewees position adult education’s role in the AI transition as fundamentally societal: “Adult education has the aspiration to reflect on what is happening in the world and society, in order to empower individuals to shape their own lives through knowledge” (ASC). This perspective frames AI literacy not merely as a technical skill but as a dimension of civic education and personal agency.

4.2 Current Practices and Organisational Readiness

Across all interviews, there is broad consensus that current AI use in adult education remains predominantly at the substitution level. Educators use AI for tasks they previously performed without it – drafting texts, generating quiz questions, summarising sources, translating materials – but have not yet fundamentally redesigned teaching or assessment as a result. STE frames this through the SAMR model: “Currently, we are primarily in the substitution phase. The tools perform the same tasks as before, only faster. Integration at the level of modification or redefinition is still rare.” The dominant tools across all interviewees are ChatGPT and, increasingly, Perplexity and specialised assistants. However, tool choice is rarely institutionally guided: “Teachers use what they personally discover” (GG). Several interviewees describe a shadow-use phenomenon, where educators use AI tools privately but do not disclose this in institutional settings due to uncertainty about regulations or social acceptability: “People are using it but don’t talk about it” (FREI). Organisational readiness varies markedly. Larger institutions like the WIFI network have begun developing dedicated AI tools (e.g., the WIFI-GPT interface) and structured training offers (KI-Führerschein), driven partly by employer demand: “The pressure from the market is enormous – companies want their employees to be AI-competent” (NM). At the other end of the spectrum, smaller providers and community-based organisations have barely begun to address AI strategically: “Many organisations are still in a wait-and-see mode” (NP). The interview data suggests a three-tier landscape: a small group of actively engaged users, a larger group of curious experimenters, and a substantial group of avoiders or sceptics: “There were people who said: I’ll sit this out and it will go away again – that thinking is only now slowly fading” (KR).

The representative from the AI Service Desk (RTR) provides a regulatory perspective. The most frequent inquiries from the education sector concern how extensively staff need to be trained, whether formal certifications are required, and how to determine whether a use case constitutes high-risk. Key guidance offered: “The recommendation of the AI Service Desk is to document in personnel records who received which training and when. This is especially important for high-risk contexts” (RTR). Regarding high-risk in education: “High-risk in the education system means, for example, that AI systems decide which courses are recommended to someone, who may take which courses, and AI systems that correct tests and suggest grades – thus deciding about a person’s educational pathway” (RTR). When in doubt about transparency: “If you feel uncertain whether AI created content should be labelled, the recommendation is to label it. That also builds trust” (RTR).

4.3 Challenges, Opportunities, and Professional Needs

Challenges

Five clusters of challenges emerged consistently across interviews:

- **Competence and confidence gap:** Interviewees consistently describe a three-tier landscape: “There are few who engage with AI deeply, work with it, and know it well. There are many who have tried AI. And there are some for whom AI is something they wouldn’t dare approach without support” (REIN-MR). Educators often feel overwhelmed: “People were already feeling overwhelmed with digital tools. Now AI is added. I call it the AI tool jungle” (REIN-ANT). There is a risk of “skill-skipping,” where learners bypass the learning process itself (REIN-LB), and a persistent gap between basic tool use

and the more advanced practice of building custom chatbots or agents: "The use of AI has changed a bit in recent years. But I have the sense that self-built chatbots, agents – more advanced use – is still something special for many" (ASC).

- **Regulatory and legal uncertainty:** "A concern that keeps coming up is whether one is even allowed to use AI" (EP). Interviewees describe existing guidelines as sometimes counterproductive: organisations, uncertain about obligations, adopt an overly cautious stance that paralyses innovation rather than enabling responsible experimentation. "Organisationally, there is a need to gain control over a process that is already happening, precisely because one wants to meet one's responsibilities and legal regulations" (FREI). GP adds the dimension of technical data governance: "The distinction between open and closed AI systems will be decisive for data security and competitiveness."
- **Speed of development vs. organisational pace:** "At the organisational level, we have the problem that AI development moves so fast – organisational development takes three years or so. But that is constantly being torpedoed" (STE). Even personally engaged professionals experience fatigue: "This pace of AI development sits on our necks" (FREI). One consultant is blunt: "In Austria, many have unfortunately missed the chance to experiment in recent years, and for that it is now too late" (CW).
- **Quality and reliability:** "The difference between human-contextualised information with real sources and generated information assembled on the basis of probabilities continues to be misunderstood" (ASC). The proliferation of AI-generated content raises concerns about truth and verification: "Distinguishing AI videos from real videos is becoming increasingly difficult" (REIN-MR). Several interviewees call for realistic representations of AI: "We must convey realistic images of AI and must not fall into extremes – neither AI as a cure-all nor AI as an end-times scenario" (REIN-LB).
- **Infrastructure and access:** The technology entrepreneur (GP) emphasises that "the biggest challenge in Austria is that most companies are currently hardly in a position to implement AI profitably. The main reason is not the technology itself, but the absence of orderly data structures." Smaller providers lack IT capacity, budgets, and infrastructure. The cost of premium tools and training reinforces existing inequalities.

Opportunities

Despite these challenges, interviewees identify substantial potential:

- **Personalisation and adaptive learning:** It is well known, that different people learn differently. Through AI, didactics can be better adapted. Content can be transformed into different formats tailored to specific needs. The WIFI is already experimenting with AI-generated podcasts, question catalogues, and summaries from course materials, and envisions augmented reality combined with AI as the next evolutionary step in adult education.
- **New pedagogical formats and metacognitive gains:** "The advantage of using AI is that learners learn two things: first, to formulate clearly, and second, they actually learn an enormous amount about their subject, because they learn to engage with the topic and describe precisely what they want" (STE). Prompting as a metacompetence: "In using AI, it is important to learn to make one's own thinking explicit and one's thought processes clear, so that the AI does what I want it to do. In this sense, competent AI use is also a metacompetence" (FREI).
- **Rethinking learning itself:** "AI can help us reframe learning. Learning is not just schooling or work. Learning happens informally and is often a process" (KR). Several interviewees see the AI moment as an opportunity to shift from product-oriented to process-oriented assessment: "Today, it makes more sense to look at the process rather than the product. Portfolio tasks or creation journals, in which reflections, conclusions, and feedback are recorded, are well suited" (STE). A provocative reframing: "When we talk about future skills, we can also talk about past skills. Maybe we no longer need all skills. The question is: which ones do we drop?" (KR).
- **Societal and critical engagement:** "We also need to engage with the phenomenon of AI at the level of society. The entire internet is changing. The character of published information is changing. If we understand education as something that helps us orient ourselves in our world and lead a good and meaningful life, then we must engage with this" (ASC).

Professional needs

Interviewees consistently call for:

- **Practice-first, legally grounded training:** "Most current trainings spend hours talking about problems. Far more important would be to cover legal and ethical aspects and then go straight into practice – teaching how I can use AI for my purposes and needs" (EP).
- **Transferable principles, not tool shows:** "Much of what you learn about AI today will be outdated tomorrow. A tool show has correspondingly little value" (CW). Focus should be on what endures: prompting as method, critical evaluation routines, compliance logic.
- **A standardised AI curriculum for adult education:** "It needs a concept where everyone who provides training knows what belongs in an AI training session. For ethics or child protection training, it's clear what must be covered. For AI, that doesn't exist yet. An AI curriculum, so to speak" (GG).
- **Multipliers, peer exchange, and user case labs:** "Educators need something like multipliers who act as experts for a given location, whom you can turn to, who train others and carry knowledge into the organisation" (GG). A concrete format: "A user case lab, where people bring their application cases and work through them together with AI experts" (REIN-MR).

Exchange spaces are essential: "People need a way to discuss their AI use and thereby engage more deeply with the topic" (REIN-LB).

- **Application-connected learning:** "What matters is connected learning (Anschlusslernen) – asking what you need right now. Because if I don't need something right now, I'll forget it soon. The application possibilities must be the focus" (KR).

4.4 Recommendations from Stakeholders

Interviewees offered the following recommendations for capacity building and sector development:

- **Organisational framework first:** "To bring everyone on board and introduce AI in a structured way, the framework must come from the organisation" (NM). This includes providing approved tools, clear guidelines, and ensuring all staff share a common baseline: "You bring staff on board best by providing training and knowing that all staff have the same foundation" (NM).
- **Role-model transparency:** "As adult educators, we are called upon to be role models. When we generate something with AI, we should note it – and even better, explain our approach. That has a modelling effect and supports others" (KR).
- **Iterative quality improvement:** "We can show additional possibilities. If I've created something with AI, I can always go one step further: I can ask whether all learning types are served, where resistance might arise, or whether the input is too long or complex" (KR).
- **European tool ecosystem:** "In Austria, we need approval of a few good tools that are preferably European. That is how we build trust" (EP). The call for data-sovereign, privacy-preserving solutions resonates across multiple interviews (GP, CW, RTR).
- **Distinguish open and closed systems:** "The distinction between open and closed AI systems will be decisive for data security and competitiveness" (GP). Adult education providers should consider closed, privacy-compliant systems for sensitive data contexts.
- **RAG and context-specific AI:** "In adult education too, we will need systems where the organisation defines the specific context in which AI is deployed. The strategic question is whether to rely on large general-purpose AI or to invest in contextualised systems" (FREI).
- **Maintain human agency:** "AI may well be a voice in the discourse, but certainly not the voice that tells us where to go and what to do. Human agency must remain a central component of adult education" (ASC). "Learning is relationship-based learning. And that is something artificial intelligence cannot replace" (STE). "Didactics will continue to rest with humans" (KR).
- **Playful, empowering approaches for learners:** "A good strategy for teaching learners AI competences is to approach it playfully and give them the opportunity to have created something cool at the end that they are proud of" (EP).

5. Integrated Analysis: Convergences and Divergences

5.1 Convergences

Survey and interview data reinforce each other across several key dimensions. First, both sources confirm that AI use is already widespread but predominantly productivity-oriented: the survey's finding that 89% use GPT-based language tools aligns with the interview observation that most usage remains at the substitution level of the SAMR model. Second, both data streams highlight a persistent gap between awareness and applied competence: survey respondents rate their AI familiarity as high (78% very or moderately familiar), yet 50% feel only moderately or somewhat confident in responsible use, mirroring the interview accounts of widespread uncertainty about legal compliance, quality assurance, and the three-tier competence landscape described by REIN-MR. Third, data protection and ethical concerns are the most salient inhibitors in both the survey (76–83% cite data issues and over-reliance) and the interviews, where regulatory uncertainty, and shadow usage illustrate how compliance pressure can paralyse rather than enable. Fourth, there is strong agreement on training priorities: both sources identify technical implementation skills, regulatory knowledge, and pedagogical application as the top needs, with a shared preference for practice-oriented, modular, and digitally delivered formats.

5.2 Divergences

Several noteworthy divergences emerge. The survey sample skews toward digitally competent and AI-engaged professionals (87% have received recent AI training, 67% use AI regularly), which likely reflects a self-selection bias toward early adopters. Interview data paints a more differentiated picture, describing a substantial segment of the educator population that avoids AI altogether or uses it only superficially. The interview observation that "there were people who said: I'll sit this out and it will go away again – that thinking is only now slowly fading" (KR) has no equivalent in the survey data. This suggests that the survey may underestimate the scale of the competence gap in the broader educator population. While the survey identifies "loss of educator autonomy" as a relatively minor concern (24%), interviews reveal deeper anxieties about professional identity and existential questions. CW raises the provocative question of whether content trainings led by humans will still be needed in future, when AI can already create learning programmes in minutes. ASC asks: "How much do we let a calculating machine do for us, and how much do we give up? Where do I say no?" The quantitative framing of the survey may not fully capture these affective dimensions.

A further divergence concerns the pace of institutional response. The survey shows that 50% of respondents report at least some institutional AI guidelines. However, interviews reveal that many of these guidelines are perceived as superficial, rapidly outdated, or primarily defensive in nature. The interview data suggests that organisational development operates on fundamentally different timescales than AI development (STE), creating a structural mismatch that guidelines alone cannot resolve.

5.3 Cross-Cutting Issues and Implications for the AAA Project

Three cross-cutting issues emerge as particularly significant for the Austrian context and carry direct implications for the design of the AAA training programme and the Guide to Responsible AI Use in Adult Education:

- **Tension between regulatory compliance and innovation:** The EU AI Act creates clear obligations, but the practical translation of these requirements into adult education contexts remains unclear for most stakeholders. The AAA outputs should provide concrete compliance tools (decision trees, checklists, use-case classifications) that reduce the paralysing "better safe than sorry" dynamic.
- **Organisational rather than individual solutions:** Both data sources suggest that AI integration cannot be left to individual initiative but requires institutional frameworks, approved tools, shared baselines, and designated support structures. The AAA Guide should include policy templates and governance models that organisations can adapt.
- **Risk of an AI divide:** Between well-resourced and underserved providers, between digitally confident and resistant staff, and between learners with and without access to AI tools. The AAA training should be designed for accessibility (no-cost, modular, self-paced) and include specific guidance on inclusion-oriented AI implementation.

6. Conclusions and Recommendations

The stakeholder engagement activities confirm and enrich the findings of the national desk research. Austrian adult education is in a phase of active but uneven AI adoption, characterised by widespread experimentation at the tool level alongside persistent uncertainty about quality, compliance, and pedagogy. The following conclusions and recommendations emerge for the AAA project, with direct implications for the design of the AAA training programme and the Guide to Responsible AI Use in Adult Education.

Most critical national needs and priorities:

- **Closing the awareness–competence gap:** While AI awareness is high, applied competence, confidence, and legally compliant practice remain uneven. The most urgent need is not basic AI understanding (only 17% request this) but practical implementation skills (67%), regulatory knowledge (48%), and pedagogical application (46%).
- **From tool use to didactic integration:** Current AI use is overwhelmingly at the substitution level. The sector needs support in moving toward higher-order integration: new task formats, assessment redesign, and AI-enhanced learning processes. STE's five-dimensional framework (learning with, despite, about, through, and without AI) offers a useful orientation.
- **Organisational governance and compliance clarity:** Institutional guidelines are absent, limited, or perceived as defensive in the majority of organisations. There is strong demand for actionable governance templates and clear AI Act compliance tools..

Implications for adult educators, institutions, and policymakers:

- **Educators need practice-first training** that combines short legal and ethical framing with immediate hands-on application. The "Anschlusslernen" principle (KR) – learning connected to current needs – should guide design.
- **Institutions must provide the organisational framework** (approved tools, guidelines, shared baseline competences) rather than leaving AI integration to individual initiative. The multiplier model (GG, STE, REIN) offers a scalable approach.
- **Policymakers should ensure that compliance guidance** (e.g., from the KI-Servicestelle) is translated into sector-specific, actionable formats for adult education providers.

Recommendations for the AAA training programme and the Guide:

- **Structure training as modular units** combinable into a learning pathway: (A) AI Foundations, (B) Critical Evaluation, (C) Compliance Basics (AI Act + GDPR), (D) Pedagogical Scenarios.
- **Include a risk-based use-case classification tool** (decision tree) to help providers determine their obligations under the AI Act, based on the RTR guidance.
- **Provide a model AI usage policy template** (policy skeleton + checklist + minimum standards) that institutions can adapt, covering acceptable use, data handling, transparency, documentation, quality assurance, responsibilities, and update routines.
- **Embed transparency and role-modelling as core principles:** if educators use AI, they should disclose and explain their approach (KR).
- **Address the affective dimension:** include "myths vs. realities" materials, change-management guidance, and strategies for building trust and reducing AI anxiety.

- **Prioritise transferable principles** (prompting as method, evaluation routines, critical thinking, compliance logic) over tool-specific tutorials (CW).
- **Design for accessibility:** self-paced online modules and microlearning units as primary formats, complemented by peer-learning and community-of-practice components. All materials should be available at no cost.

Areas requiring further investigation in the transnational analysis:

- The perspective of adult learners themselves is underrepresented in the current stakeholder engagement. The transnational analysis should consider how learner experiences and expectations can be integrated.
- The emerging market for AI compliance certifications (WIFI KI-Führerschein, Austrian Standards KI-Manager:in, BIFEB Lehrgang) and its relationship to the AAA project's outputs should be examined to ensure complementarity rather than duplication.
- The question of whether the "three-tier" competence landscape identified in interviews (engaged users / experimenters / avoiders) is consistent across partner countries would help calibrate the level and differentiation of the AAA training programme.

AI Act(ing)
in Adult Education

Desk Research

(France)



1. Introduction

Adult education in France occupies a distinctive position within Europe's lifelong learning landscape. With an adult participation rate of 49.2% as of 2022, France surpasses the European Union average and demonstrates substantial policy commitment to continuous learning (Education and Training Monitor, 2025). However, this quantitative achievement obscures emerging challenges related to digital transformation and the integration of emerging technologies into adult learning provision. The French adult education system comprises multiple governance structures, funding mechanisms, and institutional arrangements, reflecting a complex ecosystem that incorporates public vocational training centres, private training organisations, non-governmental providers, and employer-sponsored learning initiatives. The present desk research examines how artificial intelligence is positioned within this multifaceted landscape and identifies the policy, institutional, and professional dimensions that currently shape (or constrain) AI integration within French adult education. This review draws exclusively upon documented policy frameworks, governmental strategy documents, regulatory guidance, European Commission analyses, Cedefop vocational education reports, and peer-reviewed academic sources, restricting its scope to evidence available in the public domain. The research is organised around four analytical focus areas: national policy and regulatory context; institutional practices and digital readiness; educator competences and documented frameworks; and barriers, opportunities, and emerging trends as identified in policy literature and strategic assessments.

2. National Policy and Strategic Context

Strategic Positioning of AI within France's Education System

France has established a comprehensive national framework for artificial intelligence development, positioning the technology as central to economic competitiveness and social resilience. The government's France 2030 investment programme commits €2.22 billion to AI development across the economy, with a strategic emphasis on human capital formation (French Government, 2024). Notably, 56% of public funding (approximately €1.24 billion) is allocated directly to education and skills development, 33.5% to innovation and economic measures, and 10.5% to scientific research and knowledge transfer. This allocation structure reflects official recognition that AI capability building depends fundamentally upon educator preparation and institutional readiness. The Digital Education Agenda 2023–2027 provides the operational framework for technology integration in French education. The agenda prioritises three interconnected objectives: strengthening digital competences among educators across all educational levels; developing more flexible and inclusive learning pathways through technology-enabled provision; and building institutional capacity for responsible data governance and ethical AI deployment (Digital Education Agenda, 2025). The framework explicitly addresses the AI Act's compliance requirements and emphasises alignment with European Union digital transformation priorities, including the Digital Europe Programme and the European Skills Agenda.

Regulatory Framework and EU AI Act Implementation

The European Union AI Act (Regulation (EU) 2024/1689) establishes a risk-based regulatory regime that significantly affects how educational institutions develop, deploy, and oversee AI systems. France, as an EU member state, commenced implementation of the Act's core obligations on 2 February 2025. The initial compliance phase established prohibitions on certain high-risk and manipulative AI applications, introduced a mandatory requirement for organisations to ensure "sufficient level of AI literacy" among staff and personnel operating AI systems, and created compliance documentation obligations for providers and deployers (EU AI Act, 2024; Council of the European Union, 2025). The full regulatory regime takes effect on 2 August 2026, creating an operational deadline for educational institutions to complete risk assessments, implement governance structures, and document their AI systems' compliance status. For educational providers, this extended timeline provides an opportunity to conduct institutional assessments, audit current AI applications, and develop implementation strategies aligned with both French data protection law and the EU framework.

GDPR and CNIL Regulatory Guidance

France's Commission Nationale de l'Informatique et des Libertés (CNIL), the independent data protection authority established under the General Data Protection Regulation, has issued guidance specifically addressing AI deployment in educational contexts. In February 2023, CNIL published initial recommendations on AI in schools and educational institutions, subsequently updated in July 2025 with supplementary guidance on AI development and GDPR compliance (CNIL, 2025). This guidance addresses several issues of direct relevance to adult education provision:

1. **Data Protection Assessments:** CNIL recommends that institutions deploying AI systems conduct Data Protection Impact Assessments (DPIAs) before implementation. For systems categorised as high-risk under the AI Act or systems processing personal data for novel purposes, a DPIA is mandatory. The authority notes that educational applications processing learner data through AI systems typically meet the criteria for mandatory DPIA completion (CNIL, July 2025 recommendations).
2. **Legal Basis for Data Processing:** The CNIL guidance clarifies that educational institutions must establish a lawful basis for processing learner data through AI systems. Particularly relevant to adult education is the tension between obtaining informed consent (difficult at scale) and establishing legitimate institutional interest. The authority does not mandate prior consent for all AI training data collection but requires institutions to implement technical and organisational measures (such as filtering

mechanisms, opt-out procedures, and anonymisation where feasible) to minimise personal data processing and respect learner rights (CNIL Recommendations on Legitimate Interest, June 2025).

3. **Algorithmic Transparency and Human Oversight:** CNIL emphasises that educational AI systems must maintain human decision-making capacity. Automated decisions affecting learners, such as algorithmic tracking of progress, recommendation of learning pathways, or performance assessment, require human review and contestation mechanisms. The authority recommends that educators maintain oversight capacity and understand the functioning of AI tools they deploy (CNIL, July 2025).
4. **Practical Implementation Tools:** CNIL has developed operational tools to support compliance, including the PANAME project (a partnership with ANSSI, France's cybersecurity agency, and research teams) to build software libraries enabling institutions to determine whether deployed models actually process personal data. This represents an effort to translate abstract regulatory principles into practical, verifiable procedures that smaller institutions can implement.

Positioning of Adult Education within National Policy

Adult education policy in France operates within multiple frameworks that do not always explicitly address AI integration. The system reflects historical governance structures whereby continuing vocational education and training (CVET) falls under the Ministry of Labour, while initial education and school-based provision remain under the Ministry of National Education. This institutional separation influences how AI strategy filters into adult education versus school-based provision. The Compte Personnel d'Activité (CPA) and Compte Personnel de Formation (CPF) represent the primary policy mechanisms through which French adults access training opportunities. The CPF, reformed in 2018 and substantially revised in subsequent years, provides individual training credits to workers and jobseekers, enabling them to fund learning programmes registered with France Compétences, the agency that regulates the training market and certifies training providers under the Qualiopi quality label (Cedefop, 2025). The CPF system serves approximately 30 million individuals but has also faced challenges related to market oversaturation and quality assurance, particularly regarding the vetting of online training offerings. Within this system, AI-related training provision exists but remains fragmented and unevenly distributed. The CPF platform hosts courses addressing digital skills, including some focused on AI awareness or specific AI tools, but no systematic, mandatory framework exists requiring adult education providers or learners to engage with AI literacy as a policy priority. This contrasts with emerging initiatives in school education, where platforms such as PIX (Plateforme d'évaluation et de certification des compétences numériques) integrate AI literacy pathways for 15–18 year-old learners beginning in the 2025 academic year (Nucamp, 2025; Eurydice, 2025).

European Skills Agenda and Adult Learning Integration

The European Skills Agenda, established in 2020 and reaffirmed in 2023, sets four quantitative targets for adult learning participation by 2025: upskilling and reskilling at least 32% of adults; raising low-qualified adults' participation by 67%; increasing jobseekers' recent learning experience by 82%; and expanding basic digital skills among one quarter of the adult population (European Commission, 2020; Taurelli, 2021). France has integrated these targets into its broader lifelong learning commitments, though achievement rates and implementation strategies vary across sectors and regions (Education and Training Monitor, 2025). The Skills Agenda's emphasis on digital competence development creates a policy context favouring investment in adult digital literacy. However, the translation of this principle into specific AI literacy frameworks remains incomplete. The European Digital Competence Framework (DigComp 3.0) provides a common language for describing digital skills across Europe, covering five competence areas (information and data literacy, communication and collaboration, digital content creation, safety, and problem-solving) with eight proficiency levels (Joint Research Centre, 2022). France has adapted this framework through its digital skills reference system (replacing the earlier B2i framework), yet adaptation to specific AI competences for adult educators remains nascent rather than institutionalised.

3. Institutional Practices and Digital Readiness

Current State of AI Adoption in Adult Education Institutions

Empirical evidence regarding AI deployment across French adult education institutions remains limited and fragmented, reflecting the nascent stage of technology integration. Available documentation suggests a two-tier pattern: larger institutions and well-resourced centres progress towards AI experimentation, whilst smaller and under-resourced providers maintain conventional digital infrastructure focused on learning management systems, video conferencing, and online course delivery. Universities offering adult education and continuing education programmes represent the most advanced sector for AI experimentation. Many French universities have implemented learning management systems (such as Moodle or proprietary platforms) with adaptive learning components, automated feedback mechanisms, and data analytics tools for identifying learner risk factors or engagement patterns. These systems typically incorporate elements that might be classified as AI-adjacent (algorithmic recommendations, pattern recognition in learning data) rather than sophisticated artificial intelligence, though some universities have explored more advanced applications including intelligent tutoring systems and adaptive assessment tools (Nucamp, 2025).

Vocational training centres within the formal system show mixed adoption patterns. The Cedefop 2025 policy brief on France's vocational education and training system documents efforts to modernise provision through hybrid learning formats, but does not report systematic AI integration within CVET curricula or teaching methodologies (Cedefop, 2025). Where technology adoption is

documented, it tends to address administrative functions (scheduling, attendance tracking, outcome reporting) rather than pedagogical AI applications. Non-formal adult education providers, including private training organisations, civil society groups, and community learning centres, remain substantially underrepresented in available research on AI readiness. The diversity of this sector, combined with varying institutional capacity and resource availability, suggests that technology integration patterns are highly variable. Some specialised training providers (particularly those focused on digital skills or technology-related professions) may incorporate AI tools into curricula; however, providers addressing literacy, numeracy, language learning, or social inclusion are less likely to have systematised AI adoption.

Institutional Infrastructure and Technical Capacity

The French adult education infrastructure reflects long-standing regional variation in provision and investment. France's governance of continuing VET operates through a "four-party system" involving the State, regional authorities, employers and their organisations (through compulsory training contributions and the OPCO—Opérateurs de compétences), and social partners (trade unions and professional associations) (Cedefop, 2025; ReferNet, 2023). This complex governance structure influences institutional capacity for technology adoption, as funding and strategic direction flow through multiple channels with sometimes competing priorities. Cedefop documentation notes that France has made significant investments in modernising VET delivery through technological infrastructure, including hybrid learning formats and digital platforms. However, this investment has focused primarily on accessibility and flexibility of provision rather than on AI-specific capabilities. The m@gistère platform, operated by the Ministry of National Education, provides online training courses for educators in the public system, but its scope and content relating to AI remain limited (Cedefop, 2025). Smaller adult education organisations frequently report infrastructure constraints that impede technology adoption more broadly. Limited information technology support, aging systems, insufficient bandwidth in some regions, and competing budget priorities directed towards direct service delivery constrain the institutional capacity to evaluate, pilot, or sustain AI tools. These constraints are documented in broader European assessments of digital readiness in adult education (ITCILO, 2021) and are confirmed by French research on rural digital exclusion and uneven technology infrastructure across territories (Labo Société Numérique, 2022–2025).

Regulatory Compliance and Quality Assurance Frameworks

The Qualiopi quality label, introduced in 2021 as part of France's continuing VET reform, establishes criteria that training providers must meet to receive public and CPF funding. The seven quality criteria cover trainer qualifications, learning design, learner support, learner outcomes, equal access, responsiveness to learner needs, and governance (France Compétences, 2021). Notably, the criteria do not explicitly address AI deployment, data protection compliance, or AI literacy among trainers and managers. This gap is significant: as adult education institutions begin to deploy AI tools, they may do so without systematic evaluation against governance or ethical frameworks, since formal quality assurance mechanisms do not yet encompass AI-specific requirements.

The CNIL's July 2025 guidance and the EU AI Act's January 2025 entry into force effectively establish a new compliance layer that sits alongside (but is not yet integrated into) existing quality assurance frameworks for adult education provision. Institutions must navigate both the established Qualiopi criteria (which assess training quality, learner outcomes, and accessibility) and emerging AI Act compliance obligations simultaneously, without yet having integrated guidance on how these frameworks interact or reinforce one another.

4. Educator Competences and AI Literacy Frameworks

National Competence Frameworks for Educators

France maintains established frameworks for defining educator competence in initial education but lacks a coherent, mandatory AI literacy framework specifically for adult educators. The broader context includes:

Digital Competence Frameworks: The European Digital Competence Framework (DigComp 3.0) provides a reference point and is adapted in French policy contexts, particularly through the digital skills reference system used in schools. However, no equivalent framework specifically addresses AI competence for adult educators. The DigComp framework identifies five competence areas and eight proficiency levels, spanning information and data literacy, communication and collaboration, digital content creation, safety, and problem-solving. Within this taxonomy, AI literacy might be positioned as a component of multiple competence areas (particularly information and data literacy, and problem-solving) rather than as a distinct, identifiable strand (Joint Research Centre, 2022).

Teacher and Trainer Competence Standards: The Ministry of National Education maintains a professional competence framework for school teachers, updated through regular ministerial master plans that specify technical, pedagogical, and transversal skill requirements. A three-year plan establishes specifications guiding annual national, regional, and local training provision (Cedefop, 2025). This framework has been progressively updated to address digital and technology-related competences, yet specific AI literacy requirements for educators remain implicit rather than explicitly mandated.

For continuing vocational training (CVET) trainers, competence expectations are less centrally prescribed. Cedefop documentation notes that professional development of CVET instructors is a quality criterion required for training provider accreditation but does not mandate specific competence frameworks or AI literacy requirements (Cedefop, 2025). Rather, training providers are responsible for determining their staff's professional development needs and ensuring participation in continuing education. The

types of development available include pedagogy adapted to adult education, training design and delivery, and competence development, but specific AI-related offerings are not mandated or systematically inventoried.

Professional Development and Training Provision

Access to AI-related professional development for adult educators in France remains fragmented and predominantly market-driven rather than institutionally mandated. Several channels exist:

1. **Formal Continuing Professional Development:** The reformed continuing training system (2018 onwards) creates pathways for educators to access training through:
2. The **Compte Personnel de Formation** (CPF), by which educators can fund self-directed learning in AI, digital skills, or related areas from their individual training credits
3. **Employer-sponsored training**, wherein larger training organisations may fund staff development in emerging technologies
4. **University-based continuing education departments**, which offer certificate programmes and open courses; some universities in France offer specialist training in AI for educational contexts
5. Professional associations and sector bodies, which occasionally organise workshops or conferences addressing educational technology
6. **Online and Self-Directed Learning**: Accessible platforms including Coursera, LinkedIn Learning, Udemy, and others offer AI and machine learning courses, some designed explicitly for non-technical professionals or educators. However, uptake among French adult educators has not been systematically measured, and quality, relevance, and pedagogical applicability of such offerings to adult education contexts remain uncertain.
7. **Limited Institutional Support:** Unlike the school system, where the m@gistère platform provides centralised access to professional development, dedicated platforms addressing AI literacy for adult educators do not appear to be widely available. The Nucamp 2025 guide to AI in French education identifies 15-week practical programmes such as "AI Essentials for Work" that teach prompt engineering and workplace AI use, but these are positioned towards professionals generally rather than specifically designed for adult educators or training providers.
8. **Absence of Mandatory Frameworks:** Neither the French Ministry of Labour (responsible for continuing VET policy) nor France Compétences (the VET regulator) has issued mandatory requirements for adult educators to complete AI literacy training. Participation in AI-related professional development remains entirely voluntary and self-directed.

Gap Between Documented Competence Needs and Available Provision

The EU AI Act's February 2025 requirement that organisations ensure "sufficient AI literacy" among staff creates a new, legally-binding competence expectation. However, this legal requirement has not yet been operationalised into concrete, validated training standards or curricula specifically for adult educators. The gap between regulatory obligation and available provision is significant. CNIL's 2025 guidance emphasises that educators must understand the functioning of AI tools they deploy, maintain oversight capacity, and understand data protection implications of AI systems. These represent documented competence needs stemming from regulatory and ethical requirements. Yet the guidance does not specify what training, duration, or proficiency level constitutes adequate "AI literacy" for educators. This ambiguity places institutions in a position of having to interpret and operationalise their compliance obligations independently, without consistent benchmarks or validated assessment criteria.

Cedefop's ongoing research on digital competence validation identifies DigComp and the French PIX platform as key reference tools for assessing and certifying digital skills. However, neither DigComp nor PIX currently includes specific AI literacy assessments tailored to adult educators. The PIX platform, introduced in schools beginning 2025-26, focuses on learner digital skills rather than educator competences (Nucamp, 2025; Eurydice, 2025).

5. Barriers, Opportunities, and Emerging Trends

Structural Barriers to AI Integration in Adult Education

1. **Fragmentation of Governance and Funding:** The French adult education system's complexity with separate governance for initial VET (under the Ministry of Education) and continuing VET (under the Ministry of Labour), combined with regional funding responsibilities and employer contributions—creates coordination challenges for implementing coherent AI integration strategies. Policy initiatives addressing AI in education often originate from central government or EU bodies but require implementation through multiple, semi-independent channels, reducing consistency of adoption and support (OECD, 2025; Cedefop, 2025).
2. **Resource Constraints and Unequal Institutional Capacity:** Smaller adult education organisations operate with limited budgets and staff dedicated to training design and delivery. Investment in evaluating, piloting, or implementing AI systems represents a discretionary expense that many providers cannot readily absorb. The two-tier landscape (wherein larger, well-resourced institutions progress toward AI experimentation whilst smaller providers maintain conventional provision) risks widening disparities in learning environment quality and technological capacity (Cedefop, 2025; ITCILO, 2021).
3. **Absence of Integrated Quality and Compliance Frameworks:** Current quality assurance mechanisms (the Qualiopi label) do not explicitly address AI deployment or compliance with the AI Act. Adult education providers must navigate AI Act compliance

obligations independently, without integration into established quality frameworks or supportive regulatory guidance tailored to educational contexts. This represents a notable gap compared to healthcare or financial services sectors, which have received sector-specific AI governance guidance (CNIL, July 2025).

4. **Limited Evidence and Practice Guidance:** The research base on AI application within adult education remains limited. Few documented case studies describe how specific AI tools affect adult learner outcomes, what implementation challenges arise, or how best to integrate AI pedagogically into adult teaching practices. This evidence gap creates uncertainty for institutional decision-makers considering AI adoption.
5. **Data Protection and Ethical Concerns:** CNIL's July 2025 guidance emphasises requirements for Data Protection Impact Assessments, lawful bases for data processing, and measures to protect learner privacy when deploying AI. These compliance obligations are legitimate and necessary but also represent implementation challenges for institutions lacking data protection expertise. Some adult education organisations may rationally choose not to adopt AI tools until clarity on compliance emerges and support mechanisms are established.

Documented Opportunities for AI Integration

1. **Personalisation and Adaptive Learning:** Policy literature and educational technology research consistently identify personalisation as a significant potential advantage of AI-supported learning environments. For adult education, where learners bring diverse educational backgrounds, learning objectives, and constraints (including time limitations due to work and family responsibilities), adaptive systems could enable more flexible, responsive provision. Documented applications include adaptive content sequencing, algorithmic identification of learning difficulties, and personalised progress tracking (Nucamp, 2025; ITCILO, 2021).
2. **Accessibility and Inclusion:** AI-driven tools addressing accessibility represent particular opportunities for adult education populations, including migrants, individuals with disabilities, and speakers of non-official languages. Automated captioning, multilingual translation, voice recognition, and customised interface design can lower barriers to learning participation. Adult education institutions serving linguistically diverse populations or learners with accessibility needs could utilise these capabilities to enhance inclusion (ITCILO, 2021; European Skills Agenda, 2020).
3. **Administrative Efficiency and Learner Support:** AI applications in scheduling, attendance tracking, resource allocation, and administrative documentation could reduce institutional staff burden and free resources for direct pedagogical engagement with learners. Predictive analytics identifying learners at risk of dropout enable proactive support interventions. Automated assessment of certain learning tasks could provide faster feedback to learners and reduce grading burden on educators (Nucamp, 2025).
4. **24/7 Learner Support and Scalability:** Chatbot and virtual assistant technologies enable provision of learner support outside standard working hours, addressing constraints faced by adult learners combining education with employment. These systems can handle routine queries, direct learners to resources, and escalate complex issues to human staff, potentially extending institutional capacity to support remote and asynchronous learning (ITCILO, 2021).
5. **Labour Market Alignment:** The European Skills Agenda and France's lifelong learning priorities emphasise preparing adults for evolving labour market demands. AI tools can support continuous monitoring of skills demand signals, enabling training providers to adapt curricula and course offerings responsively. AI-supported skills assessment and matching systems could improve alignment between learner capabilities and employment opportunities (European Skills Agenda, 2020).

Emerging Trends and Future Developments

1. **Regulatory Clarity and Compliance Support:** The January 2025 entry into force of the EU AI Act is creating immediate pressure on educational institutions to audit systems, assess compliance, and implement governance structures. As February 2026 and August 2026 compliance deadlines approach, a cascade of compliance guidance, certification standards, and operational tools is likely to emerge. France's PANAME project represents one such initiative; similar support mechanisms may develop at European or national levels (CNIL, July 2025; EU AI Act, 2024).
2. **Integration of AI Literacy into Educator Preparation:** The regulatory requirement for organisations to ensure staff AI literacy, combined with emerging professional development supply, suggests that AI literacy training for educators will become more systematically available and potentially more widely accessed. Universities, CPF-registered providers, and professional associations will likely develop and market educator-focused AI literacy courses. Validation and quality assurance of such offerings remains to be established.
3. **Sectoral Guidance and Context-Specific Frameworks:** As experience accumulates, sector-specific guidance for adult education is likely to emerge, building upon CNIL's general recommendations and potentially integrating AI considerations into the Qualiopi quality criteria or equivalent frameworks. This would represent maturation from current ad-hoc compliance to systematic, validated approaches recognised within sector governance.
4. **Increased Learner Exposure to AI Tools:** As AI tools become more commonplace in workplaces and personal life, learner expectations regarding technology-enabled learning will likely increase. Adult learners, particularly younger cohorts, will bring experience with AI applications (including generative AI tools) into learning environments, potentially creating pressure on institutions to address AI competence within curricula and to deploy AI-supported learning tools themselves.

6. Implications for the AAA Project

Mapping National Needs and Project Alignment

This desk research identifies several strategic implications for the AAA project's work in France:

1. **Urgent Policy-Practice Gap:** Adult education institutions in France are subject to the EU AI Act compliance obligations (with full compliance required by August 2026) yet lack integrated frameworks, training provision, or regulatory support specifically calibrated to adult education contexts. The gap between regulatory requirement and available institutional and professional support represents a critical need that the AAA project can address.
2. **Fragmentation of Provision and Need for Coordination:** The absence of centralised professional development frameworks for adult educators' AI literacy, combined with the fragmented governance of French adult education, creates risk of inconsistent, uneven preparation. Project outputs addressing this fragmentation, including validated training materials and guidance documents, can provide common reference points across the diverse institutional landscape.
3. **Educator Competence Development as Central Priority:** The documented absence of systematic AI literacy training for adult educators, combined with the regulatory requirement to ensure staff competence, positions educator preparation as a central project priority. The AAA training course and associated materials should explicitly address the competence gaps created by this absence.
4. **Contextualisation to Adult Education Specificity:** Available guidance on AI in education often addresses schools or higher education; less attention addresses the particular characteristics of adult learning contexts. Adult learners' diverse backgrounds, life circumstances, prior educational experience, learning goals, and time constraints create distinct pedagogical considerations that should inform AAA project design.

Priority Topics for Stakeholder Consultation

The desk research surfaces several topics worthy of deeper investigation through stakeholder consultations:

1. How are larger French adult education institutions currently deploying or planning to deploy AI tools, and what governance structures are they establishing for compliance?
2. What resource constraints and institutional barriers do smaller providers identify as impeding AI literacy development and system implementation?
3. How do adult education managers and policymakers interpret their obligations under the EU AI Act, and what support would facilitate compliance?
4. What professional development formats, duration, and content would be most accessible and effective for adult educators with varying digital competence levels?
5. How do different sectors within French adult education (vocational, community-based, employer-sponsored, civil society) conceptualise AI's potential and risks?
6. What existing practice, if any, addresses data protection, algorithmic fairness, and learner autonomy in current adult education provision, and how might these practices extend to AI systems?

Recommendations for Project Implementation

Based on documented national context, the following recommendations emerge:

1. **Prioritise Accessibility and Practicality:** Project training materials should be designed for educators with variable digital competence, avoiding unnecessary technical jargon and emphasising practical application within adult teaching contexts.
2. **Integrate Regulatory Compliance:** Project outputs should explicitly address the EU AI Act, GDPR, CNIL guidance, and Qualiopi quality criteria, helping educators understand their compliance obligations and providing practical strategies for meeting them.
3. **Address Governance and Organisational Issues:** Recognising that individual educator preparation, whilst necessary, is insufficient without institutional support, project outputs should address institutional readiness, governance structures, data protection procedures, and resource planning required for responsible AI integration.
4. **Emphasise Equity and Inclusion:** The adult education sector serves populations at risk of exclusion (migrants, low-skilled workers, older learners, individuals with disabilities). Project guidance should prioritise how AI integration can enhance rather than undermine accessibility and inclusion for these populations.
5. **Support Evidence Development:** The limited research base on AI in adult education represents a constraint on institutional decision-making. Project activities should contribute to documenting practices, challenges, and outcomes, building the evidence base that currently exists only minimally in the French context.

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AI Act(ing)
in Adult Education

Stakeholder Involvement

(France)



1. Introduction

This report presents the findings from stakeholder engagement activities conducted in France as part of Work Package 2 (Research and Needs Analysis) of the AI Act(ing) in Adult Education (AAA) project. The engagement process included both a structured online survey distributed to educational practitioners and a series of semi-structured interviews conducted with key stakeholders from the French adult education sector. These activities were undertaken between December 2025 and January 2026, generating substantive evidence regarding educators' professional competencies, institutional readiness, and the systemic conditions that characterise the integration of computational technologies within adult learning environments across France. The French context presents distinctive characteristics worthy of examination. The country's commitment to lifelong learning is reflected in its regulatory framework, yet the sector continues to face significant transitions related to digital transformation. The stakeholder consultation sought to capture both the perspectives of practitioners working directly with adult learners and those in positions of institutional and policy responsibility, thereby creating a comprehensive understanding of the national landscape.

2. Methodology

2.1 Survey Component

An online survey instrument was deployed via Google Forms to reach practising educators, curriculum designers, programme coordinators, institutional managers, and policy officers across the French adult education sector. The survey comprised five thematic sections addressing professional background, familiarity with emerging technologies, practical applications in educational settings, ethical considerations, and areas of professional development needed.

Survey Participation: 21 responses were collected from educators representing diverse institutional contexts, including public adult education centres, private providers, community-based organisations, higher education institutions, and vocational training facilities.

Respondent Profile: Participants displayed considerable variation in age (35-64 years predominating), educational qualification (Master's degrees most frequent), and digital experience. Approximately 45% had engaged with technology-focused professional development in the preceding two years, though specialised training remained limited.

2.2 Interview Component

15 semi-structured interviews were conducted with stakeholders occupying varied roles within the French adult education ecosystem. Participants included institutional leaders, subject matter experts from educational institutions, representatives of policymaking bodies, digital specialists, and practitioners from community-based organisations. Interviews typically lasted 30-40 minutes and followed a flexible protocol permitting exploration of emerging themes whilst maintaining consistency of inquiry across the sample. The interview schedule addressed six core thematic areas: institutional capacity and technological readiness; current practices and existing challenges; perceptions of professional development requirements; ethical and regulatory considerations; perspectives on future trajectories; and strategic recommendations for advancing the sector.

3. Survey Findings

3.1 Professional Background and Digital Experience

The survey respondents demonstrated considerable professional heterogeneity. Adult educators and trainers constituted the largest cohort (50%), followed by programme coordinators (25%), curriculum designers (15%), and institutional managers (10%). Institutional affiliations reflected the diversity of the sector: public adult education centres (35%), private providers (25%), NGOs and community organisations (20%), higher education institutions (15%), and vocational training centres (5%). Regarding digital capability, respondents self-reported their experience on a five-point scale. A plurality (40%) characterised their familiarity with digital tools as intermediate, with 25% identifying as advanced users and 20% as operating at a basic level. Only 15% claimed expert-level experience. This distribution suggests that whilst considerable adoption of digital technologies has occurred, consolidation of expertise across the sector remains uneven. Professional development engagement was notably modest: only 45% reported participation in technology-related training within the preceding two years, with just 15% having received specialised instruction focused on computational technologies. This pattern indicates a substantive gap between the pace of technological change and the frequency with which practitioners access formalised learning opportunities to develop new competencies.

3.2 Conceptual Understanding and Awareness

When asked to articulate their understanding of computational technologies in adult education settings, respondents advanced diverse conceptualisations, often reflecting their particular professional roles. Several educators framed the concept around learning personalisation, describing technologies as mechanisms enabling adaptation of educational content to individual learner profiles and professional trajectories. Others emphasised support functions, characterising technologies as tools facilitating administrative efficiency or enabling more flexible modes of learner engagement. One recurring theme concerned the potential for technologies to strengthen learner autonomy and self-direction, with several respondents viewing these tools as capable of supporting adults in managing their own learning pathways in response to evolving professional requirements. Conversely, some participants expressed caution regarding excessive reliance on technological solutions, advocating for the preservation of human-

centred pedagogical relationships. When assessed on a five-point familiarity scale regarding specific technological concepts (such as machine learning, data analysis, and automated systems), respondents revealed uneven knowledge distribution. Approximately 35% indicated moderate familiarity, 30% reported slight familiarity, and 20% claimed expert-level understanding. Notably, 15% acknowledged minimal familiarity with these concepts. Confidence in distinguishing between different categories of technological tools was somewhat lower, with only 25% expressing full confidence and 40% reporting moderate confidence in their ability to differentiate between various technological applications.

3.3 Current Adoption and Pedagogical Applications

The survey revealed variable adoption of specific technological tools across the respondent group. Most frequently utilised were language and writing support applications (65% of respondents), followed by automated assessment and quiz generation tools (50%), and data-driven analysis platforms for tracking learner progress (45%). Somewhat less common were adaptive learning platforms (35%) and virtual assistants or conversational interfaces (30%). Notably, 20% of respondents reported no engagement with any such technologies in their professional practice. When interrogated regarding specific pedagogical applications, responses concentrated upon four principal functions: lesson planning and content creation (70% of users), assessment design and feedback provision (60%), individualised learning support (55%), and administrative task automation (50%). Information organisation and content summarisation represented less frequently cited applications (40%).

Positive Experiences

Respondents who reported positive experiences highlighted several beneficial applications. One educator noted the utility of automated quiz generation for creating personalised practice materials, reporting enhanced learner engagement as a consequence. Another described time-saving benefits when employing language support tools for text refinement and grammatical correction, observing that this freed capacity for more substantive pedagogical work. A third respondent noted the value of data-analysis platforms in monitoring learner progress patterns, enabling more targeted interventions. One participant described experience with adaptive learning platforms as particularly effective in maintaining learner motivation through progressive difficulty calibration.

Limitations and Constraints

Respondents also articulated significant reservations and encountered practical difficulties. Several noted that whilst automated tools expedited certain tasks, they frequently produced generic or insufficiently contextualised outputs, particularly in professional or specialised domains. One educator observed that writing support tools occasionally missed culturally-specific nuances, particularly regarding idiomatic expressions or contextual appropriateness in professional French. Another reported frustration with quiz generation tools that produced inadequate depth or conceptual accuracy for advanced learner cohorts. Concerns regarding pedagogical integrity emerged frequently: respondents expressed apprehension that over-reliance upon automated support might attenuate the qualitative depth of educator-learner relationships or reduce the responsiveness of teaching to individual learner circumstances. One practitioner noted that excessive automation might inadvertently signal to learners that standardised, technology-mediated solutions supersede personalised human attention, a concern contradictory to adult learning principles.

3.4 Barriers to Adoption

The survey explicitly queried the obstacles respondents encountered or anticipated when contemplating the use of such technologies. The most frequently cited barrier was insufficient training or professional development opportunity (75% of respondents), suggesting that lack of educator competence represents a critical impediment. Limited institutional support or resource allocation was identified by 60% of respondents, indicating that strategic commitment and infrastructure provisioning remain inconsistent across sectors. Technical barriers, including infrastructure limitations, integration challenges with existing systems, or user-interface complexity, were cited by 50% of respondents. Ethical and data protection concerns were raised by 55%, reflecting significant unease regarding confidentiality, consent, and responsible use principles. Regulatory uncertainty (confusion regarding applicable legislation, institutional governance frameworks, and policy guidance) was mentioned by 45%, suggesting that legal and compliance frameworks remain insufficiently clear to practitioners. Notably, only 15% of respondents reported encountering no obstacles, and 10% indicated a complete absence of interest in adopting such technologies in future practice.

3.5 Ethical Perspectives and Concerns

Respondents demonstrated considerable awareness of ethical dimensions. When asked to identify the primary ethical risks associated with technologies in adult education, four concerns emerged with particular force:

- **Data Protection and Privacy** (cited by 85%): Stakeholders expressed substantial anxiety regarding the collection, retention, and use of learner data, particularly sensitive information concerning learning behaviours, achievement, and professional aspirations. The tension between beneficial data-driven personalisation and potential surveillance was frequently articulated.

- **Algorithmic Bias and Unfair Outcomes** (cited by 70%): Respondents highlighted the risk that automated systems might perpetuate or amplify existing social inequalities, particularly affecting older learners, individuals from economically disadvantaged backgrounds, or those with atypical educational trajectories. One respondent specifically mentioned concern that age-related stereotypes might be embedded in systems ostensibly designed to personalise learning.
- **Loss of Educator Autonomy and Professional Agency** (cited by 65%): Practitioners voiced concern that increasing technological mediation of educational decisions might incrementally displace professional judgment, leading to situations where pedagogical choices are circumscribed by technological constraints or algorithmic recommendations presented as necessity rather than option.
- **Lack of Transparency in Automated Decision-Making** (cited by 60%): Several respondents emphasised the importance of understanding how technologies generate recommendations or assessments, noting that opacity in this domain undermines trust and the capacity for educators to exercise critical judgment regarding technology-mediated suggestions.

When asked to rate their confidence in their capacity to employ such technologies responsibly, respondents were more cautious than might be anticipated from those already using such tools. Only 20% expressed full confidence, whilst 35% reported moderate confidence. Notably, 30% acknowledged limited confidence, and 15% expressed explicit uncertainty about their capacity for responsible use, a finding suggesting that perceived competence and actual practice may diverge.

3.6 Institutional Safeguards

Respondents were asked whether their employing institutions provided explicit guidance or governance frameworks for the responsible use of emerging technologies. The findings were insightful: only 10% reported that their institution maintained comprehensive guidelines; 25% indicated limited guidelines were in place; 35% reported that guidance frameworks were under development; 25% stated that no formal safeguards existed; and 5% acknowledged uncertainty regarding institutional policy. This distribution reveals a critical gap: whilst educators increasingly confront decisions regarding technology adoption, the majority lack explicit institutional guidance to inform those decisions. The absence of formalised governance frameworks likely exacerbates individual uncertainty and may encourage ad hoc decision-making insufficiently attentive to ethical dimensions.

3.7 Professional Development Needs and Preferences

When asked to identify areas where professional development would be beneficial, respondents identified multiple needs. Basic conceptual understanding of technological principles and applications was cited by 80% of respondents. Pedagogical applications (how to integrate such technologies into coherent teaching strategies) were selected by 75%. Ethical and responsible use frameworks were prioritised by 70%, suggesting that practitioners recognise ethics as integral to competent practice rather than peripheral. Technical implementation skills were identified by 60%, whilst regulatory and policy literacy was selected by 50%. Notably, 10% of respondents indicated no perceived need for additional professional development, a small minority suggesting that most practitioners acknowledge competence gaps. Regarding preferred learning formats, online self-paced modules were selected by 40% of respondents, presumably reflecting the practical constraints facing busy practitioners. Live online workshops appealed to 45%, suggesting value in synchronous interaction and dialogue. Face-to-face workshops were preferred by 35%, indicating that some practitioners value the relational and embodied dimensions of in-person learning. Blended approaches combining multiple modalities were attractive to 50%, suggesting that heterogeneous learning preferences warrant multifaceted provision. Peer learning and communities of practice attracted 40% of respondents, indicating appreciation for collegial knowledge development. Regarding incentives for engagement with professional development, 60% emphasised the importance of practical relevance to their teaching responsibilities. Institutional support and resource allocation were cited by 55%, suggesting that educators seek organisational commitment as validation of the importance of developing new competencies. Recognition or formal certification was valued by 40%. Access to user-friendly, functional tools was emphasised by 50%, indicating that professional development divorced from effective instruments for application holds limited appeal.

4. Interview Findings

4.1 Institutional Capacity and Digital Readiness

Interviews with educators and managers revealed considerable variation in technological investment and readiness across French institutions. Several respondents representing larger, publicly-funded adult education centres reported substantial digital infrastructure, including learning management systems, data analytics capabilities, and technology support services. One director of a major public centre noted recent institutional investment in cloud-based infrastructure and was implementing systematic approaches to technology integration across curricula. However, a director of a smaller NGO-based organisation serving economically disadvantaged adult populations described severely constrained resources, minimal technical infrastructure, and reliance upon volunteers with limited digital expertise. This respondent articulated the perspective that many small, community-based providers lack the capacity to consider technology adoption systematically and consequently make ad hoc decisions driven by immediate pressures rather than strategic planning. Several institutional leaders expressed ambivalence regarding rapid technology adoption. One programme coordinator remarked that whilst technologies offered potential advantages, their institution prioritised face-to-face relational pedagogy, viewing technology as supplementary rather than transformative. Another manager

expressed concern that technology-driven efficiency narratives might inadvertently erode the holistic, person-centred approach characterising quality adult education practice. A policy-oriented respondent representing a regional educational authority noted that French policy frameworks, whilst increasingly emphasising digital transformation, remain insufficiently specific regarding adult education contexts. This respondent highlighted a gap between the national digital strategy and sector-specific implementation guidance, creating confusion regarding priorities and resource allocation.

4.2 Pedagogical Practices and Practitioner Perspectives

Interviews with practising educators and curriculum specialists revealed nuanced perspectives regarding technology integration. One experienced trainer working in professional upskilling contexts described selective technology adoption, utilising data-analysis tools to identify learner capability gaps but maintaining reliance upon human interaction for sensitive feedback or complex conceptual development. This respondent articulated a distinction between administrative or relatively straightforward knowledge transmission functions (where technology could add value) and the deeper pedagogical work of supporting meaning-making and critical reflection (where human presence remained irreplaceable). Another educator working with adult learners pursuing social reintegration described explicit resistance to technology as a primary mediator of learning, viewing such tools as potentially alienating for individuals already experiencing social marginalisation. This respondent argued that over-technologisation might reproduce inequalities by privileging individuals with greater digital familiarity. Conversely, a curriculum designer in a vocational training centre described enthusiasm for adaptive learning platforms, noting that such tools enabled tailored progression pathways reflecting individual learner pacing and enabling self-direction, qualities particularly valued in adult learners who bring diverse life experience and autonomous learning capacities to educational settings. A representative of a community-based literacy programme noted particular complexity in considering technology adoption: their learner population included significant numbers with limited prior educational experience and variable digital familiarity. Introducing technology-mediated learning required careful attention to ensuring that such tools enhanced rather than compromised accessibility and inclusion.

4.3 Professional Competencies and Development

Interviews confirmed findings from the survey regarding substantial competence gaps. One experienced educator acknowledged that her familiarity with emerging technologies derived from personal initiative and experimentation rather than formal institutional or professional development. She noted reliance upon online tutorials and peer learning to develop working knowledge, and expressed frustration that her institution provided no formalised pathway for competence development. Multiple respondents articulated what might be termed the "knowledge-practice gap": whilst they possessed abstract awareness that emerging technologies existed and had educational potential, they lacked concrete knowledge regarding how to evaluate specific tools, integrate them into coherent pedagogical strategies, or anticipate and manage implementation challenges.

A policy officer noted that national professional standards for adult educators, whilst increasingly referencing digital competence, remained insufficiently specific regarding what competencies were essential and what constituted adequate proficiency. This respondent suggested that clearer standards, coupled with accessible professional development pathways, were necessary prerequisites to widespread competence development. Several respondents expressed concern regarding generational aspects of technology adoption. One senior educator remarked that older practitioners, despite decades of pedagogical expertise, often felt disadvantaged by the assumption that technology affinity was natural in younger cohorts. This respondent advocated for a professional development approaching to technology competence as a learnable skill rather than an inherent capacity, thereby reducing status anxieties that might inhibit older educators' engagement.

4.4 Ethical and Data Governance Concerns

Interview discussions revealed profound ethical concerns extending beyond those captured in the survey. Several respondents articulated anxiety regarding the philosophical implications of technology-mediated education, questioning whether personalisation through algorithmic recommendation represented genuine pedagogical tailoring or merely efficiency-driven standardisation disguised as customisation. A specialist in adult education ethics emphasised the importance of examining power relationships embedded in educational technologies. She noted that technologies ostensibly designed to serve learner interests might embed assumptions reflecting designers' rather than learners' values, and that adult educators required ethical frameworks enabling critical examination of such embedded values. Data governance emerged as particularly complex. One institutional manager explained that her centre had adopted a learning analytics platform but subsequently discovered ambiguity regarding learner consent, data retention protocols, and secondary uses of collected information. She reported that institutional policy development regarding these matters had been reactive rather than proactive, addressing concerns only after implementation difficulties arose. Multiple respondents emphasised the importance of transparency and learner agency regarding data use. One educator argued passionately that adult learners deserved an explicit understanding of what data concerning them was collected, how such data was utilised, and what protections safeguarded their information. She contended that current practices often fell short of this standard, presenting learners with consent forms inadequate to genuine informed choice. A representative of a data protection authority highlighted tension between the beneficial personalisation that data analytics enabled and the surveillance implications of continuous data collection in educational settings. This respondent advocated for robust governance frameworks, establishing clear boundaries regarding permissible data practices.

4.5 Regulatory and Policy Context

Interviews with policy-oriented respondents revealed evolving regulatory landscapes creating both opportunity and uncertainty. Several noted that the European Union's proposed regulations governing algorithmic systems in high-stakes decision-making contexts (such as education) were still in development, leaving organisations uncertain regarding future compliance requirements. One policy officer reflected upon the particular applicability of European privacy regulations to educational technology contexts, noting that whilst the General Data Protection Regulation established important principles, sector-specific guidance for educational institutions remained limited. A representative of a national educational ministry noted ambition to advance digital literacy and technology-enabled learning, but acknowledged insufficient resources for comprehensive sector-wide support. This respondent expressed concern that national policy might inadvertently advantage larger institutions with greater capacity to navigate technology adoption, potentially widening the already-present disparities between well-resourced and under-resourced providers.

4.6 Future Trajectories and Strategic Recommendations

Interviews concluded with a discussion of anticipated developments and strategic priorities. Respondents articulated varied expectations regarding technology's role in adult education over the medium term (3-5 years). Most anticipated continued but selective technology adoption, with technologies playing a more significant role in administrative and personalisation functions while practitioners and institutions maintained considerable discretion regarding the extent and manner of implementation. Several respondents emphasised the importance of maintaining human-centredness as a guiding principle for technology adoption. One experienced educator articulated the view that technologies should be evaluated and deployed according to criteria of pedagogical appropriateness and learner benefit, rather than adopted for their own sake or driven by technological capability.

Respondents identified several strategic priorities for advancing the sector responsibly:

- **Competence Development:** There was substantial consensus that systematic investment in educator professional development was essential. Multiple respondents advocated for national frameworks identifying core competencies regarding technology literacy and ethical technology use, coupled with accessible, well-resourced professional development pathways. Several noted the importance of addressing not only technical skills but also pedagogical and ethical dimensions of technology integration.
- **Governance and Policy Clarity:** Respondents emphasised the necessity of clearer institutional and policy frameworks regarding technology use, data governance, learner protection, and ethical standards. Multiple respondents noted that the absence of clear guidance created anxiety and encouraged ad hoc decision-making. One respondent explicitly advocated for national or sectoral guidelines establishing standards for responsible technology use.
- **Equitable Access to Resources:** Concern was expressed regarding disparities between well-resourced and under-resourced institutions. Several respondents advocated for mechanisms ensuring that smaller, community-based providers received support enabling technology adoption commensurate with their capacity and aligned with their mission, rather than experiencing pressure to adopt technologies inappropriate to their contexts.
- **Learner Engagement and Agency:** Multiple respondents emphasised the importance of engaging learners themselves in decisions regarding technology adoption. One educator advocated for mechanisms enabling learner voice in evaluating whether proposed technological interventions genuinely served learner interests and preferences. Several respondents noted that adult learners frequently possessed substantial experience with technologies and valuable perspectives regarding their educational utility.
- **Critical Perspectives on Technology:** Several respondents advocated for professional development and institutional cultures enabling critical examination of technology, including frank discussion of limitations and potential harms. One educator expressed concern that uncritical enthusiasm for emerging technologies might obscure legitimate pedagogical reservations or eclipse alternative approaches. She argued for cultures of technology use characterised by critical engagement rather than technological enthusiasm.

5. Integrated Analysis and Synthesis

5.1 Professional Competence and Capacity Gaps

The evidence from both survey and interviews demonstrates substantial and multifaceted competence gaps across the French adult education sector. Whilst most practitioners acknowledge awareness that technologies are increasingly prevalent and potentially pedagogically relevant, only a minority possess confident, consolidated competence regarding specific tools, their appropriate application, or ethical frameworks for their use. This gap manifests at multiple levels. At the conceptual level, approximately 50% of survey respondents characterised their familiarity with core technological concepts as minimal to moderate, whilst 85% acknowledged limited confidence in distinguishing between different types of technological tools. At the practical level, application of technologies in teaching remains limited, with 20% of respondents reporting no engagement with technologies and many others reporting cautious, selective use. Professional development represents an evident critical need. The substantial majority of respondents identified areas where they would value competence development, with particular emphasis upon pedagogical applications and ethical frameworks rather than purely technical skills. However, current access to professional development is

limited: only 45% reported engaging with technology-focused professional development in the preceding two years, and specifically targeted learning regarding emerging technologies remains scarce. Interview respondents consistently indicated that whatever competence they had developed resulted from personal initiative, peer learning, and online self-study rather than systematic, institutional, or national professional development pathways. This pattern is unsustainable as technologies evolve and expectations regarding educator competence increase.

5.2 Institutional Readiness and Support

The survey and interviews reveal considerable variation in institutional capacity and commitment to technology integration. Larger, publicly-funded institutions typically possess more developed digital infrastructure, dedicated technology support services, and strategic planning processes addressing technology adoption. Smaller organisations, particularly those serving marginalised populations with limited resources, frequently lack both infrastructure and expertise to engage systematically with technology. Critically, most institutions lack formalised governance frameworks regarding technology use, data protection, ethical standards, and responsible innovation. Only 10% of survey respondents reported working in institutions with comprehensive guidelines; the majority operate in contexts characterised by either minimal guidance or guidance currently under development. This absence of clear governance contributes to the ad hoc decision-making and ethical ambiguity that several interview respondents identified as problematic. Institutional cultures also vary. Some leaders view technology as integral to contemporary education and invest accordingly. Others maintain more circumspect positions, regarding technology as supplementary and potentially problematic if it undermines relational, human-centred pedagogy. These differing orientations are legitimate and reflect genuine pedagogical choices; however, the sectoral discourse would benefit from explicit engagement with these choices rather than allowing them to emerge implicitly through resource allocation decisions and practitioner initiative.

5.3 Ethical and Data Governance Concerns

Both survey and interview data reveal substantial ethical concerns regarding technology use in adult education. These concerns encompass data protection and privacy, algorithmic bias, potential erosion of educator and learner autonomy, and lack of transparency in technology-driven decision-making. These are not marginal concerns held by sceptics; they emerge across the respondent population and are articulated with particular sophistication by those with most direct responsibility for ethical governance. A concerning gap exists between ethical awareness and institutional capacity for ethical governance. Practitioners recognise ethical dimensions and express ethical concerns, but most operate in institutional contexts lacking clear governance frameworks, explicit ethical standards, or systematic mechanisms for ethical review of technology adoption decisions. Several interview respondents emphasised the particular importance of data governance in adult education contexts. Adult learners, by virtue of their life experience, often bring heightened sensitivity to power relationships and respect for privacy. Educational technologies collecting and utilising learner data represent potential infringements of this expectation, particularly where consent is inadequately informed, or data uses extend beyond initially intended purposes. Several respondents argued that ethical adult education practice requires explicit attention to these concerns and transparent communication regarding data practices with learners.

5.4 Sector Fragmentation and Inequality

The French adult education sector comprises diverse organisational types—public centres, private providers, NGOs, community organisations, and enterprises—serving heterogeneous learner populations and operating with vastly different resource bases. This diversity is a strength, enabling sector responsiveness to local needs and marginalised populations. However, it creates a risk that technology adoption will be uneven, potentially advancing opportunities for well-resourced learners whilst leaving others further behind. Several respondents explicitly noted this concern. One community-based educator working with vulnerable populations expressed worry that technology adoption narratives might inadvertently devalue relational, community-embedded approaches to learning that her organisation prioritised. She feared that emphasis upon technology-enabled learning efficiency might marginalise organisations whose fundamental contribution lies in providing safe, inclusive, human-centred environments. This concern reflects important equity dimensions: uneven technology adoption might widen disparities between different sectors, with larger institutions and advantaged learner populations accessing more sophisticated personalisation and support, whilst under-resourced organisations and marginalised learners experience relative disadvantage. Strategic planning should explicitly attend to ensuring that technology adoption, when pursued, contributes to rather than undermines educational equity.

6. Implications and Recommendations for the AAA Project

The evidence from stakeholder engagement in France suggests several implications for the project's subsequent phases:

6.1 Training Course Development

The substantial competence gaps identified suggest that the proposed training course should address not only technical skills but also pedagogical and ethical dimensions. Practitioners require assistance in thinking through how specific tools might serve pedagogical purposes in their particular contexts, and equally require robust ethical frameworks enabling critical evaluation of technology use. The training course should explicitly address competence development for educators at varied levels of existing

familiarity with technologies, avoiding assumptions regarding prior knowledge. Several respondents noted anxiety arising from perceived technology expertise among younger colleagues, suggesting that training approaches normalising technology learning as a developable skill might reduce status anxieties and broaden participation.

6.2 Guidance on Responsible Technology Use

The absence of clear institutional guidance regarding responsible technology use emerged as a critical need. The project's proposed Guide to Responsible Technology Use in Adult Education should provide practical frameworks addressing data governance, ethical evaluation of technologies, learner protection, and responsible innovation. Such guidance might usefully address not only how to use technologies responsibly, but equally when not to adopt technologies and how to maintain pedagogically appropriate alternatives.

6.3 Engagement of Diverse Sector Actors

The evidence suggests the importance of engaging not only front-line educators but equally institutional leaders, policy actors, and community-based organisations. Different actors require different support: institutional leaders require governance frameworks and strategic planning guidance; educators require practical pedagogical and ethical guidance and professional development; policy actors require evidence regarding sector needs and capacity; community-based organisations require assurance that technology adoption pathways exist, compatible with their missions and constraints.

6.4 Attention to Equity

Strategic attention should be paid to ensuring that technology integration pathways do not exacerbate existing sectoral inequalities. This may require deliberate support for under-resourced organisations and attention to how technology adoption affects educational experiences for marginalised learners. The principle that technology should serve pedagogy rather than driving it becomes particularly important in less well-resourced contexts where pressures toward technology adoption might otherwise be resisted.

6.5 Learner Engagement

The evidence suggests value in engaging adult learners themselves in dialogues regarding technology use. Many respondents noted that learners often possess substantial technology experience and valuable perspectives regarding educational utility. Engaging learner voice might both improve technology adoption decisions and affirm adult learners' agency and expertise.

7. Conclusions and Summary

The French stakeholder engagement process has generated substantive evidence regarding the current state of technology integration, practitioner competence and needs, institutional capacity, and ethical concerns within the adult education sector. This evidence confirms that whilst technological transformation is occurring, such transformation remains incomplete and uneven. Most practitioners acknowledge awareness of technologies' potential relevance but lack confident competence regarding specific tools, appropriate applications, and ethical frameworks. Institutional capacity and support for technology integration vary considerably, with concerning gaps in governance and ethical frameworks even in well-resourced organisations. Practitioners express sophisticated ethical concerns extending beyond simple data protection anxieties to encompass questions regarding technology's role in preserving or eroding human relationships central to adult education, potential amplification of inequalities, and the importance of maintaining educator and learner autonomy in technology-mediated contexts. These concerns deserve to be taken seriously and addressed directly rather than dismissed as scepticism or resistance to inevitable change. The evidence suggests that responsible technology integration in the French adult education sector requires systematic investment in educator professional development, clarification of ethical and governance frameworks, explicit attention to equity in technology adoption, and a maintained commitment to human-centred pedagogy as a guiding principle. The AAA project's training course and guidance materials can make significant contributions to advancing the sector in these directions, provided that such materials explicitly address pedagogical and ethical dimensions alongside technical considerations and acknowledge legitimate concerns regarding technology's role in education.

8. ANNEX

8.1 Survey Results

The complete survey data and responses can be accessed via the following link:

https://docs.google.com/spreadsheets/d/1Zt06o0MPPKHfobcuj5D3LrvG2fLQAHROQJjlRpWRzBY/edit?resourcekey&usp=forms_web_b&urp=initialLink#gid=785286492

8.2 Interview Metadata

Interview Respondent Profiles

Name	Role / Position	Institution / Organisation Type	Interview Mode	Duration	Date
Marie Dubois	Director, Digital Strategy	Public Adult Education Centre (Paris)	Online	40 min	08.01.2026
Philippe Leclerc	Senior Educator, Professional Upskilling	Public Adult Education Centre (Paris)	Online	35 min	12.01.2026
Sophie Bernard	Curriculum Designer	Private Adult Education Provider (Nice)	In-person	30 min	15.01.2026
Jean-Claude Martin	Programme Coordinator	Vocational Training Centre	Online	25 min	16.01.2026
Nathalie Girard	Community Literacy Programme Director	NGO / Community Organisation	In-person	20 min	20.01.2026
Robert Fontaine	Institutional Manager, Technology Infrastructure	Public Adult Education Centre (Nice)	Online	30 min	22.01.2026
Isabelle Rousseau	Adult Educator, Social Reintegration	NGO / Community Organisation	In-person	30 min	27.01.2026
François Mercier	Policy Officer, Regional Education Authority	Regional Government Office	Online	20 min	29.01.2026
Céline Moreau	Data Protection Specialist	Data Protection Authority	Online	35 min	03.02.2026
Antoine Dupont	Digital Learning Specialist	Higher Education Institution (Adult Education Dept)	In-person	40 min	05.02.2026
Valérie Leconte	Trainer, Professional Development	Private Training Provider	Online	30 min	09.02.2026
Michel Bonnet	Adult Educator, Basic Skills	Public Adult Education Centre (Nice)	In-person	20 min	12.02.2026
Luc Arnaud	Specialist, Adult Education Ethics	University Research Centre	Online	15 min	15.02.2026
Gaëlle Fontaine	Manager, Technology Implementation Support	Public Adult Education Centre (Paris)	Online	30 min	18.02.2026
Dominique Levasseur	Policy Officer, National Education Ministry	National Ministry	Online	25 min	24.02.2026

THEMATIC DOMAIN 1: Professional Role and Institutional Context

Participating professionals occupy diverse positions across the French adult education ecosystem, from strategic leaders managing digital transformation at large public centres to educators working directly with vulnerable learner populations in community settings. Strategic leaders position themselves as driving technology integration and infrastructure investment, responsible for translating EU digital directives into institutional practice. Educators adopt varied approaches. Some selectively evaluating tools for pedagogical appropriateness before integration, while others prioritising relational pedagogy as core to their role. Specialists, including data protection officers, ethicists, and digital learning consultants, examine philosophical and regulatory dimensions, ensuring technology serves genuine pedagogical purposes and maintains transparency.

Institutional priorities and strategies vary dramatically by organisational size and type:

- **Large Public Centres:** Strategic priorities include learner personalisation, operational efficiency, expanded geographic access, and EU digital literacy alignment. These institutions invest substantially in cloud infrastructure, learning management systems, and data analytics capabilities, with systematic technology planning integrated across curricula.
- **Mid-Size and Vocational Providers:** Technology adoption approaches tend to be reactive rather than strategic, with decisions driven by immediate operational needs rather than a coherent long-term vision. Resource constraints limit institutional planning capacity.

- **Community-Based Organisations:** Relational, community-embedded pedagogical approaches remain prioritised; technology is viewed as supplementary to human connection and evaluated primarily for whether it supports accessibility and inclusion.
- **National Policy Level:** Digital transformation policy frameworks emphasise digital literacy development but remain insufficiently specific to adult education contexts.

Institutional stances toward technology adoption reflect legitimate pedagogical and operational choices. Larger public centres embrace technology as integral to education's future and sectoral competitiveness. Selective implementers acknowledge potential benefits but maintain careful evaluation, distinguishing between administrative functions where automation adds value and pedagogical decision-making where human judgment should remain central. Organisations serving vulnerable populations maintain circumspect positions, expressing concern that uncritical technology enthusiasm could undermine relational dimensions essential to quality adult education. Some smaller institutions maintain uncertain, reactive stances lacking a clear institutional philosophy regarding technology. Across all institutions, respondents emphasise that institutional choice should legitimately include deliberate decisions not to adopt particular technologies or maintaining human-centred approaches where technology adoption would compromise core pedagogical values.

THEMATIC DOMAIN 2: Current Practices and Organisational Readiness

Current technology implementation across participating institutions reflects selective, pragmatic adoption rather than comprehensive transformation. Large centres operationally employ learning management systems, language and writing support applications, automated assessment generation tools, and data analytics platforms for learner progress monitoring. Mid-size institutions utilise similar applications but less comprehensively, often for particular courses or populations. Community-based organisations maintain minimal direct teaching engagement with technology, preferring to reserve technologies for administrative functions and accessibility features. Emerging technologies such as virtual assistants and chatbots remain experimental and minimally integrated. Across all institutions, technology adoption reflects a pragmatic response to identified specific needs rather than wholesale pedagogical redesign.

Organisational readiness for responsible AI integration demonstrates significant disparities. Infrastructure adequacy varies sharply: large centres possess cloud systems, learning management platforms, and data storage capacity; mid-size institutions function with basic infrastructure but lacking comprehensive systems; smaller organisations operate with minimal technical capacity, some facing broadband access or reliability challenges. Infrastructure remains insufficient across most institutions for ambitious technology implementation. More critically, governance preparedness reveals substantial gaps. Large centres possess some governance guidelines addressing data handling and technology use, but acknowledge these remain incomplete. Mid-size and small institutions generally lack formal policies specifically addressing AI ethics, data governance, or responsible technology adoption. Data governance policies are particularly underdeveloped across all institution types; institutions frequently discover ambiguities regarding learner consent, data retention, and secondary data uses only after technology implementation. Institutional policy development has been reactive rather than proactive—responding to emerging issues rather than anticipating and addressing them beforehand.

Staff competence and institutional support structures reveal significant capacity limitations. Educators across all institutions possess basic to intermediate digital literacy, developed primarily through personal initiative rather than systematic professional development. Few practitioners have received formal training specifically addressing technology's pedagogical or ethical dimensions. Institutional support structures concentrate in large centres with dedicated technology support services and regular professional development opportunities. Mid-size institutions provide limited support; small organisations offer minimal or no structured professional development. This pattern leaves most practitioners developing competence haphazardly rather than systematically, creating uneven readiness across the sector. Respondents consistently note that professional development access is insufficient and inconsistently available.

<u>Educator adoption of technologies follows three general patterns:</u>

- **Strategic Adopters:** Carefully evaluate tools before integration, questioning whether technologies genuinely serve identified pedagogical needs and ensuring implementation aligns with coherent teaching strategies. These educators experiment cautiously, often in limited contexts first.
- **Pragmatic Adopters:** Implement tools where immediate benefits are evident—automated quiz generation saving preparation time, language support enhancing learner writing, and data analytics identifying struggling learners. These educators adopt opportunistically based on specific challenges.
- **Cautious/Minimal Adopters:** Maintain limited technology experimentation, prioritising relational pedagogy and questioning whether technologies genuinely enhance learning. These educators adopt selectively, if at all.

Critically, adoption emerges primarily through individual educator initiative rather than coordinated institutional implementation,

creating uneven implementation and inconsistent quality across institutions.

THEMATIC DOMAIN 3: Perceptions of Challenges, Opportunities, and Professional Needs

Respondents identify multiple interconnected barriers impeding responsible technology adoption. Knowledge and competence gaps emerge as fundamental obstacles: educators acknowledge technologies' existence and recognise general potential but lack concrete expertise for evaluating specific tools, assessing pedagogical appropriateness, and managing implementation. Insufficient access to professional development, particularly training addressing pedagogical and ethical dimensions rather than purely technical skills, represents a critical barrier. Educators cannot reliably distinguish between different tool types, evaluate embedded assumptions in systems, or troubleshoot problems. Institutional and resource constraints substantially limit adoption capacity. Well-resourced large centres can invest in infrastructure and professional development; small organisations cannot. Resource scarcity forces ad hoc decisions driven by immediate pressures. Respondents express significant concern that institutional inequality will widen educational disparities, with advantaged providers increasingly capable of sophisticated technology implementation whilst disadvantaged organisations serving vulnerable populations fall further behind.

Ethical concerns run deep across multiple dimensions:

- Data protection and privacy anxieties regarding the collection, retention, and use of sensitive learner information; tension between beneficial personalisation and surveillance implications
- Inadequately informed learner consent processes; uncertainty regarding what data is collected, how used, and what secondary uses are permitted
- Algorithmic bias concerns particularly acute regarding older learners and economically disadvantaged populations
- Loss of educator professional autonomy feared: worry that technological systems may displace human judgment in pedagogical decisions
- Lack of transparency regarding how systems generate recommendations undermines trust

Beyond data protection, practitioners articulate pedagogical integrity concerns: worry that over-reliance on automation may compromise educator-learner relationship quality, reduce responsive teaching, and erode holistic, person-centred approaches characterising quality adult education. Questions emerge regarding the authenticity of algorithmic personalisation versus efficiency-driven standardisation disguised as customisation. Regulatory and policy uncertainty creates additional implementation hesitation; European regulatory frameworks governing algorithmic systems remain under development, creating compliance uncertainty and institutional anxiety. Despite challenges, practitioners recognise substantial opportunities. Personalised learning pathways reflecting individual learner pacing appeal to those working with self-directed adult learners; adaptive platforms calibrating difficulty levels to maintain motivation are particularly valued. Enhanced learning support through continuous progress monitoring, enabling targeted intervention, aligns with the educator commitment to responsive teaching. Operational efficiency through automation of administrative and routine assessment functions frees educator time for substantive pedagogical engagement. Accessibility and inclusion improvements (enhanced access for geographically isolated learners and flexible learning modes accommodating adult learners' diverse circumstances) are recognised as significant benefits. Looking forward, respondents anticipate technologies playing increasingly central but selective roles over the 3–5 year horizon. Educators are expected to maintain considerable discretion regarding implementation extent and manner, with human-centred pedagogy remaining central. Professional expectations regarding technology competence are likely increasing across the sector. Equity implications concern respondents: disparity between well-resourced and under-resourced institutions anticipated to widen absent deliberate intervention, with technology potentially amplifying existing inequalities.

Professional development needs identified as most pressing for effective, responsible technology use rank as follows:

- **Pedagogical Application of Technologies (Highest Priority):** How to integrate technologies into coherent teaching strategies; tool evaluation frameworks assessing pedagogical appropriateness; curriculum design incorporating technology meaningfully; assessment of authentic learner benefit versus efficiency gains.
- **Ethical and Responsible Use Frameworks (High Priority):** Data governance and protection practices; ethical technology evaluation procedures; examination of power relationships and embedded values in technology design; responsible innovation approaches.
- **Conceptual Understanding of Technologies (High Priority):** Machine learning and automation principles; data analysis concepts; automated system capabilities and limitations; algorithmic bias considerations; transparency and explainability issues.
- **Technical Implementation Skills (Moderate Priority):** Tool-specific competencies; system integration and troubleshooting; basic IT literacy and problem-solving.
- **Regulatory and Policy Literacy (Moderate Priority):** EU regulatory frameworks; data protection and privacy requirements; institutional governance frameworks; compliance standards.

Respondents emphasise that these competencies should be integrated through unified professional development rather than separate modules. Technology training addressing only technical skills while ignoring pedagogical and ethical dimensions produces inadequate competence.

THEMATIC DOMAIN 4: Recommendations for Capacity Building and Sector Development

Respondents across participating institutions recommend comprehensive, multidimensional professional development integrating technical, pedagogical, and ethical competencies simultaneously. Effective training should help educators think through how tools serve pedagogical purposes whilst simultaneously evaluating ethical implications. Normalising technology competence as a learnable skill rather than an innate ability would reduce status anxieties, inhibiting older educators with substantial pedagogical expertise from engaging with technologies. Training should ground technology learning in adult education contexts and examples, demonstrate practical integration into everyday teaching, and provide institutional and policy implementation guidance. Practical relevance to teaching responsibilities is essential; training divorced from real teaching contexts holds limited appeal. Institutional support infrastructure requiring strengthening includes dedicated technology support services, regular professional development opportunities, time allocation for learning and experimentation, and recognition of technology competence in performance evaluation. Ethical review and evaluation procedures are important for frameworks assessing technologies for pedagogical appropriateness and ethical implications before adoption; systematic bias and fairness assessment procedures; transparency audits enabling educators to understand technology functioning; and regular review ensuring technologies continue serving intended purposes. Staff training and competence requirements should establish professional expectations through professional development requirements for technology users, competence standards regarding responsible use, and clear accountability structures. Learner protection standards essential include safeguards preventing algorithmic bias and discrimination, particular attention to vulnerable populations, accessibility standards ensuring inclusion, and recourse mechanisms for learner concerns. Institutional governance and oversight structures should clarify decision-making processes, include educator and learner voices in technology adoption decisions, enable regular policy review and updating, and demonstrate leadership commitment through resource allocation.

Respondents identify specific areas where the AAA project can add the greatest value:

1. **Pedagogical and Ethical Dimensions:** Technical training is widely available. Integrate competencies, emphasising how technology serves pedagogical purposes and what ethical considerations inform responsible implementation.
2. **Institutional Governance and Change Support:** Provide practical governance frameworks and implementation guidance, ethical review procedure development support, data governance policy templates, institutional policy development materials, and change management guidance.
3. **Equity and Inclusion Focus:** Ensure technology adoption supports rather than undermines educational equity. Support small, community-based organisations; provide guidance on technology for accessibility and inclusion; establish mechanisms for vulnerable learner protection; emphasise maintaining relational pedagogy alongside technology engagement.
4. **Critical Engagement with Technology:** Develop frameworks enabling critical technology examination; guide when not to adopt technologies and how to maintain pedagogically appropriate alternatives; address technology limitations and risks alongside opportunities; support institutional cultures of critical engagement rather than uncritical enthusiasm.
5. **Practical, Context-Specific Guidance:** Ground materials in adult education realities and examples; provide practical tools for technology evaluation and implementation; offer sector-specific regulatory guidance; include concrete examples of pedagogical integration across various adult education contexts.
6. **Support for Diverse Stakeholders:** Develop differentiated materials for different roles: institutional leaders (governance frameworks and strategic planning), educators (practical pedagogical and ethical guidance with professional development), policy officers (evidence regarding sector needs and capacity), community-based organisations (support ensuring technology adoption remains mission-compatible).
7. **Addressing Knowledge-Practice Gap:** Help educators move from abstract awareness to concrete competence for responsible use and evaluation; emphasise tool evaluation and integration processes; provide frameworks supporting implementation challenges.

AI Act(ing)
in Adult Education

Desk Research

(Ireland)



1. Introduction

This national desk research report examines how artificial intelligence is currently addressed within the adult education sector in Ireland, identifying national needs, challenges, and opportunities related to AI integration. The report forms part of Work Package 2 of the AI Act(ing) in Adult Education (AAA) project and provides evidence to support the development of training resources and guidance materials for adult educators. Ireland's adult education landscape is primarily delivered through 16 Education and Training Boards (ETBs) operating at local level, providing Further Education and Training (FET) programmes. SOLAS, as the national FET authority, oversees strategic direction and quality assurance. In 2024, Ireland witnessed unprecedented growth in FET participation, with over 400,000 places taken up, representing one-in-ten adults engaged in apprenticeships, construction skills schemes, or other FET activities (SOLAS, 2025). The sector has undergone significant transformation, with lifelong learning participation increasing to 16% by Q4 2024, up from 11.8% in 2022 (SOLAS, 2025). This expansion reflects growing recognition of FET as a vital pathway for upskilling, reskilling, and addressing critical skills needs in Ireland's rapidly evolving economy.

1.1 Methodology and Source Selection

This desk research focuses on the four key areas: national policy and strategic context, institutional practices and digital readiness, educator competences and AI literacy requirements, and barriers, opportunities, and emerging trends. Sources consulted include Ireland's National AI Strategy Refresh 2024, published by the Department of Enterprise, Trade and Employment; SOLAS annual reports and strategic documents; policy documents from the Department of Further and Higher Education, Research, Innovation and Science; reports from the AI Advisory Council; guidance on generative AI in higher education; and academic research from Irish universities on digital competence frameworks. All sources are dated from 2021 onwards, with primary emphasis on materials from 2023-2025 to ensure currency and relevance. The research drew on governmental publications, institutional reports, European frameworks including DigCompEdu, and peer-reviewed studies from Irish educational researchers.

2. National Policy and Strategic Context

2.1 National AI Strategies and Policies

Ireland's approach to artificial intelligence is anchored in a comprehensive national strategy that explicitly prioritises people-centred and ethical AI development. The original National AI Strategy, entitled 'AI – Here for Good', was launched in July 2021 by the Department of Enterprise, Trade and Employment (DETE, 2021). This strategy established Ireland's vision to become an international leader in leveraging AI for economic productivity, addressing societal challenges, and delivering public services through an ethical, human-centred approach. In November 2024, the government published a refreshed National AI Strategy that responds to rapid technological developments and regulatory changes since 2021 (DETE, 2024). The refreshed strategy maintains the emphasis on trustworthy, person-centred AI whilst positioning Ireland as a leader in seizing AI's economic and societal benefits. It incorporates seven strategic strands including developing AI skills and talent, building public awareness and trust, enabling AI adoption in enterprise and the public sector, supporting research and innovation, ensuring robust data infrastructure, and fostering international collaboration. A distinguishing feature of Ireland's approach is the establishment of an AI Advisory Council in January 2024 (DETE, 2024). This independent expert body advises government on AI policy and engages in extensive public outreach. In February 2025, the Council published an advice paper specifically addressing AI and education, highlighting urgent challenges and recommending coordinated national guidelines, AI literacy training for educators, and equitable access for learners (AI Advisory Council, 2025).

2.2 Adult Education and Lifelong Learning Policies

The Further Education and Training sector operates under the strategic framework 'Future FET: Transforming Learning' (2020-2024), which explicitly addresses digital transformation and inclusion (SOLAS, 2020). This strategy identified digital upskilling as essential for enabling FET to respond to critical skills needs. The successful implementation has driven unprecedented growth, with the FET learner base expanding by 25% between 2022 and 2024 (SOLAS, 2025). SOLAS is currently developing a new FET Strategy for 2025-2029, with public consultations explicitly acknowledging that AI represents one of the 'urgent challenges' facing the sector (SOLAS, 2024). The consultation document recognises that AI's impact on learning, learners, skills needed for work, and teaching methods requires sector-wide strategic response. This positions AI literacy and capability as core priorities for the next strategic period. Ireland's Literacy, Numeracy and Digital Literacy Strategy 2024-2033 represents a ten-year commitment to developing essential skills across the population (Department of Further and Higher Education, Research, Innovation and Science, 2024). The strategy explicitly identifies AI literacy as an integral component. In 2024, over €1 million was allocated to 103 innovative projects supporting adults with unmet literacy needs, including digital skills development.

2.3 Alignment with European Frameworks

Ireland's AI policies demonstrate strong alignment with European frameworks. The National AI Strategy Refresh 2024 explicitly commits Ireland to being 'a leader in the effective implementation of the EU AI Act, including through constructive participation in the EU AI Board' (DETE, 2024). This proactive stance reflects Ireland's intention to influence EU-level AI governance whilst ensuring domestic readiness. The refreshed strategy references Ireland's National Strategic Roadmap for the EU Digital Decade Policy Programme, ensuring coherence between AI initiatives and broader digital transformation objectives. Ireland's Recovery and

Resilience Plan dedicates 32% of funding to accelerating digital transformation, including support for human capital development through ICT infrastructure and broadband connectivity (Digital Skills and Jobs Platform, 2024). Irish higher education institutions have adopted the European Framework for the Digital Competence of Educators (DigCompEdu) as a reference point. However, adaptation of DigCompEdu specifically for FET and adult education contexts remains limited, representing a gap in framework implementation.

2.4 Ethical, Legal, and Governance Principles

In January 2024, the Irish government approved guidance on trustworthy AI use in the public service, establishing seven requirements: lawfulness, ethical purpose, human oversight, transparency, accuracy, data governance, and accountability (Department of Public Expenditure, NDP Delivery and Reform, 2024). These governance principles explicitly apply to education providers operating within the public sector, including ETBs and FET institutions. Data protection in educational contexts operates under GDPR alongside sector-specific guidance. However, challenges remain regarding clarity on AI-specific applications. Concerns about privacy, intellectual property, bias, and academic integrity arising from use of commercial AI tools with limited transparency persist, though sector-specific guidance remains underdeveloped compared to higher education.

3. Institutional Practices and Digital Readiness

3.1 Current AI Applications in Adult Education

Concrete evidence of AI adoption in Irish adult education institutions remains limited, suggesting implementation is at early stages. In February 2026, the Minister for Further and Higher Education launched a new suite of FET micro-qualifications in AI at Microsoft Ireland (Irish Tech News, 2026). These programmes, developed under SOLAS's Skills to Advance initiative, are designed in collaboration with industry partners including Microsoft and deliver targeted training in machine learning basics, ethical AI, data analysis, and practical use cases. The micro-qualifications are typically 50 hours in duration and lead to QQI Level 5 and 6 Special Purpose Awards. SOLAS's eCollege platform, serving as the national online learning resource, experienced 47% growth in 2024 with almost 37,000 enrolments (SOLAS, 2024). Whilst eCollege diversified its offering to include green skills and micro-credentials, specific integration of AI-enhanced learning features or AI literacy modules is not documented. The Skills to Advance initiative reported over 25,000 places taken up in 2024 in areas including digital skills and robotics, though documentation on uptake and completion rates of AI-specific micro-credentials remains limited. Examples of AI application in adult learning pedagogy—such as adaptive learning systems, automated assessment, intelligent tutoring systems, or chatbots—are not evidenced in reviewed FET documentation. This absence of documented case studies or pilot projects suggests that whilst policy frameworks encourage AI engagement, actual pedagogical implementation in adult education institutions remains nascent.

3.2 Technical Infrastructure and Digital Readiness

Ireland's digital infrastructure presents mixed readiness for AI integration. The country achieved 72.9% basic digital skills coverage in 2024, significantly exceeding the EU average of 55.6% and representing 91.1% progress toward the EU 2030 goal of 80% (Digital Skills and Jobs Platform, 2024). Ireland's percentage of ICT specialists in employment reached 6.2%, surpassing the EU average of 4.8%, indicating strong national digital capacity. However, significant infrastructure disparities exist. Nearly 30% of disadvantaged school principals reported inadequate digital resources compared to less than 20% in advantaged schools, highlighting socioeconomic digital divides that extend into adult education contexts. Rural areas and suburbs lag behind cities in connectivity and access. The concentration of AI expertise in multinational corporations and research centres does not automatically translate to capability within FET delivery organisations.

3.3 Organisational Barriers and Challenges

Several interconnected barriers constrain institutional AI readiness. Firstly, the pace and scale of change creates strain on sector capacity. The 2023 OECD Skills Strategy Review concluded that 'the scale and pace of change globally requires Ireland's skills ecosystem to undertake a step change' (OECD, 2023). For adult education institutions already managing unprecedented growth—a 25% increase in learner base from 2022 to 2024—adding AI implementation represents substantial additional demand on organisational capacity. Secondly, lack of sector-specific guidance creates uncertainty. Whilst higher education has established AI resource portals and sectoral working groups, comparable coordinated supports for FET are absent. This guidance gap leaves adult education providers without clear frameworks for AI integration, risk assessment, or compliance assurance. The dual imperative to innovate whilst ensuring compliance creates potential tension for institutions lacking experience navigating regulatory requirements whilst fostering innovation culture.

4. Educator Competences and AI Literacy Needs

4.1 National Competence Frameworks

Ireland does not currently possess a mandatory, nationally mandated competence framework specifically for adult educators that includes explicit AI-related competences. The European Framework for the Digital Competence of Educators (DigCompEdu) has been adopted as a reference point within Irish higher education, particularly through university projects focused on digital teaching and learning. However, systematic adaptation or adoption of DigCompEdu for the Further Education and Training sector is not

evidenced in reviewed documentation. SOLAS's professional development frameworks for FET practitioners focus primarily on pedagogical approaches, inclusion strategies, and sectoral quality assurance rather than explicitly detailing digital or AI competence requirements. The Ireland Literacy, Numeracy and Digital Literacy Strategy 2024-2033 commits to making 'AI literacy (including awareness of AI systems and their implications)' an integral component (Department of Further and Higher Education, Research, Innovation and Science, 2024). This represents high-level policy commitment, but operationalisation through detailed competence frameworks for educators remains to be developed.

4.2 Professional Development and Training Opportunities

Professional development opportunities specifically addressing AI literacy for adult educators appear limited and dispersed rather than systematically organised. For FET practitioners, professional development primarily occurs through SOLAS programmes and sectoral events, but detailed course catalogues do not evidence substantial AI-specific provision for educators as distinct from courses teaching learners about AI. The distinction is critical: educators require different competences—understanding how to integrate AI into pedagogy, assess AI tools ethically, and guide learner AI literacy development. Higher education demonstrates more developed provision, with institutions establishing AI resource portals providing centralised access to guidelines and open educational resources. However, these resources are not systematically accessible to FET educators, and portability of higher education approaches to adult learning contexts cannot be assumed given different pedagogical demands and learner characteristics.

4.3 Evidence of Current AI Literacy Levels and Competence Gaps

Direct evidence regarding adult educators' AI literacy levels in Ireland is extremely limited. No large-scale survey or assessment of FET practitioners' AI competences has been published. Available evidence from school settings suggests significant competence gaps exist. Research found that teachers lacked confidence in teaching AI due to self-perceived lack of foundational knowledge, despite recognising students possessed good baseline technology familiarity. Teachers identified challenges including limited access to suitable teaching materials and logistical issues. The recent introduction of EU AI Act compliance requirements creates legal obligations for mandatory AI literacy training for staff in educational settings from February 2025. Commentary noted that 'schools may face challenges in implementing mandatory AI training programmes due to limited budgets, time constraints and varying levels of digital literacy among staff' (Irish Times, 2025). These same constraints apply to adult education institutions, where budgets are equally or more constrained and staff digital literacy varies considerably. Multiple interconnected competence gaps can be identified: technical AI literacy (fundamental understanding of AI systems), pedagogical AI integration (skills for integrating AI into teaching practice), ethical awareness and critical evaluation (understanding AI's implications including bias and privacy), regulatory compliance knowledge (understanding EU AI Act requirements), assessment adaptation (designing valid assessments in AI-augmented environments), and learner AI literacy facilitation (helping adult learners develop their own AI understanding).

5. Barriers, Opportunities, and Emerging Trends

5.1 Systemic Barriers

Multiple systemic barriers constrain AI adoption in Irish adult education. Technical barriers include digital infrastructure disparities creating uneven AI access, with rural communities facing connectivity challenges despite Ireland's overall strong digital performance. Socioeconomically disadvantaged institutions report inadequate digital resources, and budget constraints limit ability to invest in AI technologies. Ethical concerns represent significant barriers. Data privacy poses challenges given GDPR requirements and sensitivity of adult learner data. Questions about data storage, usage, and access create legitimate hesitation about AI tool adoption. Algorithmic bias poses risks, particularly for diverse adult learner populations. Ireland's dual-language education system creates specific challenges, as AI tools trained predominantly on English data may disadvantage Irish-language learning. Transparency and explainability of AI decisions remain poorly understood, complicating ethical oversight. Pedagogical challenges include uncertainty about AI's pedagogical value versus risks. Concerns about academic integrity and authentic assessment in AI contexts complicate adoption. Questions about whether AI enhances or undermines learning relationships remain unresolved. Organisational barriers include fragmentation requiring coordinated national approach, lack of sector-specific guidance leaving institutions uncertain about compliance and best practices, and time constraints on already-stretched staff limiting capacity to explore AI adoption.

5.2 Identified Opportunities

Despite substantial barriers, AI presents significant opportunities. Enhanced access and flexibility could extend adult education reach to remote learners, shift workers, and those with caring responsibilities. Intelligent tutoring systems could provide 24/7 learning support. Automated translation and captioning could enhance accessibility for multilingual learners and those with hearing impairments. Personalisation opportunities include adaptive learning systems tailoring content, pace, and support to individual needs, particularly valuable for adult learners with diverse prior educational experiences. Efficiency gains through automation of administrative tasks could free educator time for higher-value pedagogical activities. Research indicates that 64% of educators view AI as potentially powerful for promoting inclusive learning, particularly supporting learners with diverse needs. Equipping adult learners with AI literacy prepares them for workplaces increasingly incorporating AI technologies. FET's focus on employment

outcomes positions it to address critical skills needs. Extending AI literacy to a broader adult population could enhance national competitiveness.

5.3 Emerging Trends

Several developments signal AI's trajectory in Irish adult education. The forthcoming FET Strategy 2025-2029 will likely establish clearer AI integration expectations. The EU AI Act's phased implementation timeline creates immediate obligations, and Ireland's commitment to leadership in AI Act implementation suggests resources and guidance may be developed to support compliance. This regulatory driver may accelerate institutional AI engagement from necessity rather than optional enhancement. Generative AI's rapid evolution continues, with tools becoming more accessible, affordable, and user-friendly, potentially lowering barriers to entry. However, this accessibility also increases risks of uncritical adoption without adequate understanding. Higher education's establishment of AI resource portals and working groups may provide models for FET sector adoption. Labour market demands drive curriculum integration, as the National Skills Bulletin 2024 identified persistent demand for digital skills alongside cross-sectoral skills including data analysis.

6. Implications for the AAA Project

6.1 Priority Training Needs

Based on identified gaps, the following training needs should be prioritised: (1) Foundational AI literacy covering what AI is and how it functions; (2) Ethical awareness and critical evaluation of AI's implications including bias, privacy, and transparency; (3) EU AI Act compliance understanding with practical guidance on regulatory requirements and risk assessment; (4) Pedagogical AI integration strategies for determining when and how AI enhances learning; (5) Assessment adaptation approaches for maintaining validity in AI-augmented environments.

6.2 Key Insights for Project Outputs

For the Transnational Needs Analysis Report, Ireland's experience highlights the challenge of policy-practice gaps: whilst national strategies extensively address AI, translation to institutional practice remains underdeveloped. This suggests that training initiatives must bridge between high-level policy aspirations and practical implementation realities. Ireland's strong national digital literacy performance masks significant internal disparities, indicating that pan-European initiatives must account for within-country variation. For the AAA AI Training Course, training must be accessible to educators with varying digital literacy levels. Content should distinguish between AI literacy for personal use versus pedagogical integration. Practical, context-specific examples from adult education settings are essential. Modular design allowing educators to focus on priority areas according to their roles would enhance usability. Recognition that training time is scarce suggests the need for bite-sized, focused modules rather than lengthy comprehensive courses. For the Guide to Responsible AI Use in Adult Education, the guide should provide practical compliance checklists addressing EU AI Act requirements. Risk assessment frameworks tailored to adult education contexts would address identified needs. Ethical decision-making tools helping educators evaluate AI tools' appropriateness for specific learning situations would be valuable. Templates for institutional policies, acceptable use guidelines, and governance structures are needed. Explicit attention to equity implications—addressing digital divides, diverse learner populations, and accessibility—is essential.

6.3 Topics for Further Investigation Through Stakeholder Consultation

Several areas require deeper exploration through stakeholder consultation:

- Educators' self-assessed confidence and actual competence levels regarding AI
- Institutional experiences with AI pilot projects not publicly documented
- Specific barriers educators face beyond policy documentation
- Educators' perceptions of AI's pedagogical value versus risks
- Institutional perspectives on resource requirements for meaningful AI integration
- Learners' experiences with AI in educational contexts
- Preferred training formats and delivery modes that would maximise accessibility

6.4 National Context Considerations

Several Ireland-specific factors should inform AAA project implementation: Ireland's decentralised FET delivery through 16 ETBs requires materials adaptable to varied local contexts. Ireland's dual-language education system creates specific challenges for AI tools predominantly trained on English data. Significant rural-urban digital divides necessitate attention to infrastructure dependencies and offline alternatives. Strong national policy emphasis on ethical, trustworthy AI creates a receptive environment for responsible AI approaches but also raises expectations for rigorous ethical frameworks. Rapid FET sector growth creates both opportunity and challenge on professional development capacity.

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AI Act(ing)
in Adult Education

Stakeholder Involvement

(Ireland)



1. Introduction

This national stakeholder engagement report forms an important part of Work Package 2, which focuses on understanding how artificial intelligence is currently being used and understood across adult education in Ireland. The purpose of this report is to bring together insights from our national survey and a series of interviews with key stakeholders, helping us build a clear picture of needs, gaps, and emerging priorities around AI in adult learning. Through the survey, we captured a broad overview of current practices in institutions, the tools being used, and levels of digital readiness. The interviews allowed us to go deeper, gathering real experiences and perspectives from educators, managers, policymakers, and digital specialists. Together, these two elements ensure that our analysis reflects what is actually happening on the ground in adult education in Ireland, rather than relying on assumptions. Stakeholder engagement feeds directly into the wider needs analysis by grounding the findings in lived practice. By examining views across four focus areas: national policy, institutional readiness, educator competences, and the opportunities and challenges surrounding AI. We can identify what support is needed and where the system is ready to move forward. These insights will guide the development of the AAA project's competence framework, training materials, and policy recommendations, ensuring they are practical, relevant, and closely aligned to the Irish national context.

2. Methodology

2.1 Survey Administration

A national online survey was carried out to gather insights directly from practitioners working across adult, vocational, and community education. In total, 22 respondents completed the survey, meeting the project's target of collecting feedback from a broad mix of instructors, tutors, guidance counsellors, curriculum developers, and digital learning specialists. 40.9% of respondents had a Bachelor's degree, while 36.3% had a Master's, Doctorate or Further Education. The survey was shared through multiple channels to reach a diverse group of adult education professionals. Participants were recruited through the Future In Perspective internal database and through direct emails to educators at Cavan Institute and the Cavan Monaghan Education and Training Board. Invitations were also sent to AONTAS – The Irish National Adult Learning Organisation, as well as each of the 16 Education and Training Boards (ETBs) nationwide, enabling the survey to circulate widely across formal, non-formal, community, and workplace learning environments. This mix of backgrounds ensured that the feedback captured a wide range of perspectives, particularly in relation to AI readiness, professional development needs, and the realities of classroom practice.

2.2 Interview Process

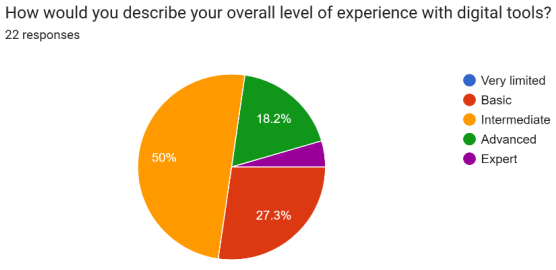
Five group interviews were conducted in-person on Tuesday 10th February 2026 in Virginia, Co. Cavan, with three participants in each session, so 15 interviewees in total. Each interview lasted around 60 minutes and was documented by the training facilitator, Sharleen O'Reilly. Participants were selected based on their substantive roles within national or regional adult education ecosystems, including directors and managers of adult education institutions, senior educators, curriculum designers, and actors from professional associations, NGOs, and community organisations. All interviews followed the common AAA interview guidelines, used the standard GDPR-compliant consent procedure, and applied the shared semi-structured interview guide organised across four thematic domains: professional role and institutional context; current practices and organisational readiness; perceptions of challenges, opportunities, and needs; and recommendations for capacity building.

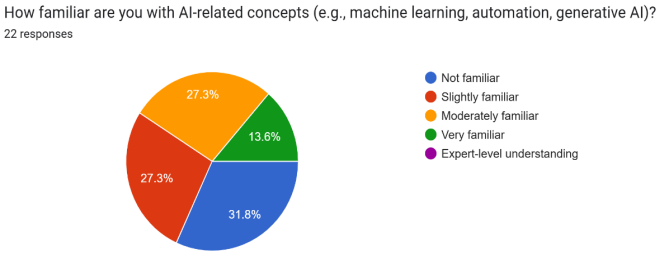
3. Survey Findings

This section summarises the survey's main quantitative and qualitative findings across five thematic areas.

1. Professional Background and Digital Experience

Respondents represented a diverse mix of roles, with most identifying as adult educators or trainers (63.6%). Others included managers/directors, literacy coordinators, volunteers, consultants, cultural organisations, health professionals, and self-employed trainers. Participants worked mainly across public adult education centres and community/NGO settings (36.4%), private training providers (13.6%), and higher education (9.1%). Digital skills were generally moderate: half rated themselves intermediate (50%), with smaller proportions identifying as basic (27.3%), advanced (18.2%), or expert (4.5%). Training uptake remains low. Over half (54.5%) have not completed digital or AI training but intend to; 27.3% have completed AI-specific training. Overall, the workforce shows developing but uneven digital competence, with clear motivation for future upskilling.



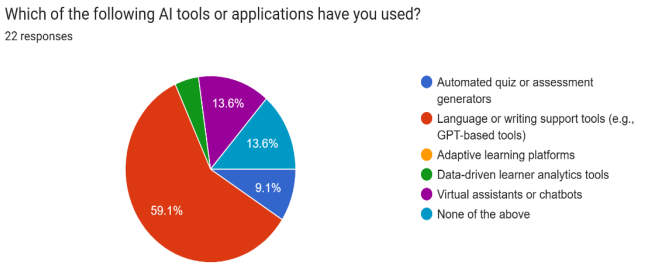


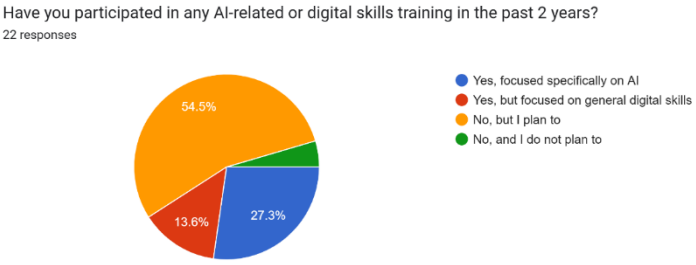
2. Awareness and Perceptions of Emerging Technologies

AI awareness is generally low. One-third of respondents (31.8%) reported no familiarity with AI terms, while only 13.6% felt very familiar and none identified as experts. Confidence in recognising whether a tool uses AI was similarly limited: 31.8% not confident and only 18.2% very confident. Awareness of AI's role in education was also low: 40.9% were only "somewhat aware," and just 4.5% "highly aware." Open-ended responses revealed two main patterns. Many saw AI as a practical aid for lesson planning, content creation, summarisation, and accessibility support. Others expressed uncertainty or confusion about AI, while several emphasised ethical considerations, such as accuracy, transparency, and responsible student use. Collectively, respondents showed interest in AI's benefits but lacked foundational AI literacy and expressed a strong need for guidance.

3. Current Practices and Technological Use

AI adoption is emerging but uneven: 27.3% use AI regularly, 40.9% occasionally, and 31.8% do not use AI but would like to. Use is concentrated around accessible, text-based tools: 59.1% use AI writing/language tools, compared with far lower uptake for chatbots

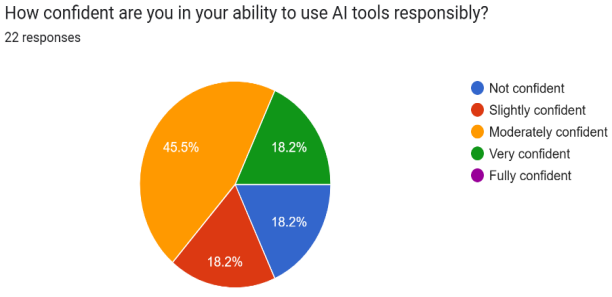


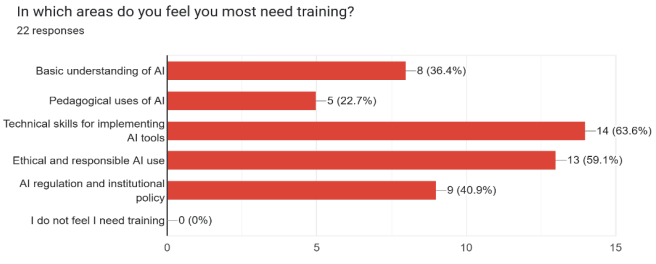


(13.6%), assessment generators (9.1%), or analytics (4.5%). AI is primarily used to save time and support educator efficiency, including lesson planning and content creation (54.5%), summarisation (54.5%), and administration (45.5%). Fewer reported using AI for assessment or personalised learning. Positive experiences included time-saving, improved resource creation, and support with large information sets. Concerns centred on accuracy, student over-reliance, technical issues, and lack of training. Main challenges included lack of training (68.2%), ethical concerns (36.4%), unclear regulations (22.7%), and technical barriers (22.7%). The findings indicate high openness but low readiness.

4. Challenges and Barriers to Adoption

Data protection was the most significant concern: 36.4% were very concerned and 31.8% moderately concerned. Ethical risks, including bias, transparency, privacy, and over-reliance on automation, were each identified by 22.7% of respondents, indicating broad uncertainty rather than a single dominant worry. Confidence in responsible AI use varied: 45.5% were very confident, while 54.5% reported only moderate, slight, or no confidence. Institutional support for AI is limited. No respondent reported having comprehensive guidelines; 22.7% had limited guidance, 13.6% said guidelines were in development, and 63.7% had none or were unaware of any. Open-ended responses highlighted concerns about data privacy, GDPR compliance, misinformation, bias, and a lack of clear procedures. These gaps create uncertainty and restrict responsible use.





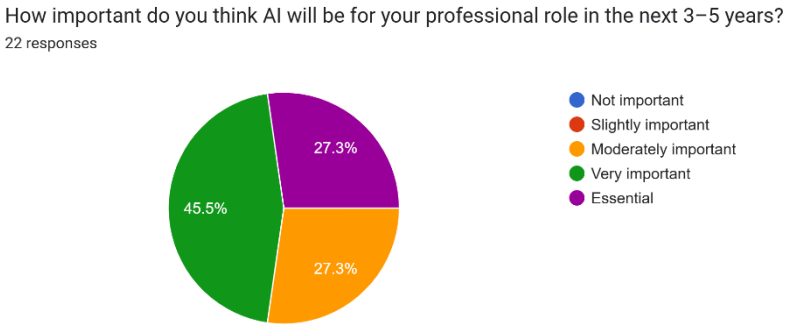
5. Training Needs, Preferred Formats, and Future Expectations

Training needs were universal. Key priorities included technical AI skills (63.6%), ethical and responsible use (59.1%), policy/regulation (40.9%), basic AI concepts (36.4%), and pedagogical integration (22.7%).

Preferred learning formats strongly favoured interactive approaches: 72.7% chose face-to-face workshops, followed by live online sessions (36.4%), blended learning (31.8%), self-paced modules (27.3%), and microlearning or peer learning (each 22.7%). Perceptions of AI's future relevance were highly positive: 27.3% believe AI will be essential in their work, 45.5% believe it will be very important, and 27.3% moderately important. Motivators for training included access to user-friendly tools (63.6%), practical relevance (59.1%), time availability (54.5%), and certification (22.7%). Open-ended responses emphasised the need for practical

examples, critical thinking skills, safe tool use, and structured introductory training. Overall, results show an adult education sector open to AI adoption but limited by low confidence, lack of training, and unclear institutional guidance. The findings reveal strong interest and optimism about AI among adult educators, balanced by low confidence, limited awareness, and the absence of institutional guidelines. Educators want practical, hands-on training supported by clear ethical and regulatory frameworks. A coordinated national approach to AI-related professional development will be essential to build confidence, promote responsible use, and support meaningful integration of emerging technologies across the adult education sector.

6. Interview Insights



Professional roles, institutional cultures, and strategic orientations.
The educators interviewed work across a wide range of areas—including STEM, health and wellbeing, nutrition and fitness, psychology, kinesiology, hospitality, arts, music, community learning, and therapeutic practice. Despite the diversity, each person emphasised the same core purpose: supporting adults to learn, progress, and build confidence in ways that are practical, accessible, and rooted in real life. Across institutions, digital transformation and AI adoption are still emerging. Most staff are exploring AI individually using tools such as ChatGPT, Gemini, Claude, transcription software, and simple creative technologies. A small number of creative or maker-based settings showed more established digital cultures, but most organisations remain in an early, exploratory phase. Educators consistently prioritised learner wellbeing, emotional safety, and engagement. Their strategic focus is shaped by real-world learner needs, limited time, and the desire to enhance teaching without compromising trust or authenticity. AI is seen as potentially helpful, but only with guidance, clarity, and confidence-building support.

Stakeholders' views on opportunities and challenges within the national adult education landscape.
Interviewees see clear opportunities for AI to support their work. Many described benefits such as reduced workload, faster idea generation, easier lesson planning, summarisation of information, and streamlined admin tasks. Creative practitioners highlighted opportunities for scaling projects, experimenting with digital tools, and using AI to improve visibility, outreach, and community engagement. At the same time, educators identified several challenges. The strongest concerns relate to confidentiality, GDPR, and safeguarding—particularly in wellbeing, therapy, and health contexts. Accuracy and AI "hallucinations" were recurring issues, with staff emphasising the need to check and verify outputs. Concerns about plagiarism and reduced authenticity of learners' work were also common. Another major challenge is the pace of AI development. Many educators feel they cannot keep up without structured support. Digital confidence varies widely, creating uneven adoption across teams. None of these challenges reflect resistance to AI—only uncertainty about how to use it safely, ethically, and appropriately.

Capacity gaps, systemic constraints, and organisational needs.
Several interviewees shared gaps emerged across all interviews:

- Foundational AI understanding: Many staff want a simple, clear introduction to what AI is and how it works.
- Safe and responsible use: GDPR, confidentiality, bias, and safeguarding are priority concerns.
- Pedagogical integration: Educators want to ensure AI-generated content is accurate, level-appropriate, and aligned with learning outcomes.
- Time and workload constraints: Many have limited capacity to explore new tools without structured support.
- Lack of organisational direction: Most institutions lack AI policies, leadership guidance, or approved-tool lists.
- Verification skills: Educators want practical ways to check accuracy and avoid misinformation.

Emerging priorities for professional development and institutional support.
Across all interviews, educators asked for practical, hands-on, beginner-friendly training that builds confidence and shows clearly how AI can support everyday teaching and administration.
Top training priorities include:

- Safe and ethical use (GDPR, confidentiality, academic integrity).
- Verifying AI outputs and recognising bias.

- Step-by-step workflows for lesson planning, content creation, assessments, admin, and outreach.
- Curriculum-aligned examples and templates.
- Micro-learning and ongoing refreshers to keep pace with change.

Support structures educators want:

- Clear organisational AI policies and expectations.
- An approved tools list.
- Leadership direction and consistent messaging.
- Time for CPD and guided practice.
- Peer learning, communities of practice, and accessible checklists and templates.

Educators are ready to use AI but need reassurance, structure, and hands-on practice to do so confidently.

Illustrative quotes (anonymised) or examples that exemplify key points.

- *"AI helps me explore ideas, but we need clearer guidance to use it safely."*
- *"I'm interested in using it—I just don't want to make a mistake with confidential information."*
- *"AI changes so fast; it's impossible to keep up without support."*
- *"It could save so much time, but only if we're taught how to use it properly."*
- *"We're all figuring this out alone—some structure would make a huge difference."*

7. Integrated Analysis: Convergences and Divergences

Areas where survey and interview findings reinforce each other.

Both data sources strongly confirm that AI adoption is emerging but uneven, with individuals taking the lead rather than institutions. The survey shows that only 27.3% use AI regularly, while interviews reveal that many staff experiment informally, often without policies or guidance. Both datasets highlight low levels of awareness and confidence. Survey respondents reported limited familiarity with AI concepts and uncertainty about identifying AI-enabled tools; interviewees echoed this, describing confusion, overwhelm, and the sense of "figuring it out alone." There is also strong alignment in recognising AI's potential to reduce workload, spark ideas, and improve teaching efficiency. Survey participants emphasised benefits in lesson planning, admin, and summarising information; interviewees consistently described these same practical advantages. Finally, both datasets underline significant ethical and data-protection concerns, especially around GDPR, misinformation, accuracy, and safeguarding. Neither group shows resistance to AI—rather, a desire for reassurance, structure, and responsible practice.

Areas where stakeholder groups differ in their perceptions or priorities.

Survey participants, representing a broader national cohort, tend to express general interest in technical and ethical upskilling, with preferences for face-to-face workshops and practical examples.
However, the in-person interviewees provided a deeper picture:

- Staff in wellbeing, therapy, and health-related roles express much stronger concerns about confidentiality and sensitive data.
- Creative practitioners emphasise AI-supported innovation, such as scaling artistic projects or experimenting with digital tools.
- Community educators stress digital confidence gaps within teams, particularly among older staff.
- Some interviewees report organisational fear or avoidance of AI, which is something less visible in the survey responses.

These insights suggest that while national trends are broadly consistent, specific sectoral contexts shape needs and priorities.

Cross-cutting issues that appear particularly significant within the national context.

Three issues stand out across both datasets:

1. A universal need for foundational AI literacy: Staff want to understand what AI is, how it works, and how it fits into their practice before they can adopt it confidently.
2. A lack of institutional readiness: Most organisations do not have policies, leadership direction, or approved tool lists. This leaves staff without clarity on what is allowed, safe, or expected.
3. The pace of AI change and the pressure on staff time: Educators consistently mentioned limited time, overwhelming updates, and the difficulty of keeping up. Without structured support, AI adoption risks being inconsistent.

These issues suggest that national capacity building must address not only technical skills but also governance, culture, and long-term support structures.

Implications for the design of the AAA training programme and practical guidance resources.

The combined findings point to several essential design principles for the AAA training programme:

- Start with the basics: Offer beginner-friendly introductions that demystify AI and build a shared baseline of understanding.
- Lead with safety: Provide clear, practical guidance on GDPR, confidentiality, safeguarding, academic integrity, and verifying AI outputs.
- Use real, task-based examples: Show how AI can support lesson planning, assessments, admin, outreach, and creative work in concrete, step-by-step ways.
- Differentiated pathways: Tailor examples for different educator roles (e.g., therapy, health, STEM, arts, community education).
- Provide reusable resources: Templates, prompts, checklists, workflows, and policy examples will support consistent practice.
- Support institutional capacity: Include model policies, leadership guidance, tool-approval frameworks, and implementation roadmaps.
- Build ongoing support: Microlearning, refreshers, communities of practice, and peer exchange will help staff keep up with rapid changes.

Overall, the integrated analysis reveals a sector that is motivated, curious, and ready to engage, provided the training is practical, accessible, ethically grounded, and aligned with real-world needs.

8. Conclusions and Recommendations

Summary of the most critical national needs and priorities identified through stakeholder engagement.

Across all data sources, several urgent needs emerged:

- Foundational AI literacy is missing, with many educators unsure what AI is, how it works, or where it fits appropriately within adult education.
- Responsible and ethical practice is a high priority. GDPR, confidentiality, safeguarding, bias, and academic integrity were recurring concerns.
- Institutional readiness is limited, with most organisations lacking AI policies, leadership direction, or approved tool lists.
- Verification skills are essential, as educators consistently emphasised concerns about inaccuracies, misinformation, and AI "hallucinations."
- Time and workload pressures limit educators' ability to keep up with rapid developments.
- Pedagogical alignment remains unclear, with staff seeking guidance on integrating AI into lesson design and assessment without undermining learning quality.

These needs are consistent across both the survey and interviews and demonstrate a strong appetite for learning—provided the support is practical and confidence-building.

Implications for adult educators, institutions, and policymakers.

For educators, the findings highlight the need for clear, hands-on guidance grounded in real examples, rather than abstract theory. For institutions, there is an urgent need to develop governance structures: policies, tool-approval processes, leadership direction, and time allocated for CPD. For policymakers, the results point to the importance of national guidelines and consistent expectations to ensure ethical, inclusive, and responsible use of AI across diverse adult-education settings.

Recommendations for capacity building, including topics to be covered in the AAA training and the *Guide to Responsible AI Use in Adult Education*.

The AAA programme should prioritise:

- AI foundations: core concepts, terminology, capabilities, and limitations.
- Ethics and safety: GDPR, confidentiality, safeguarding, academic integrity, bias, and misinformation.
- Verification and critical evaluation skills.
- Pedagogical integration: curriculum alignment, assessment integrity, and inclusive practice.
- Practical workflows: lesson planning, content creation, note-taking, admin automation, marketing/outreach.
- Role-specific examples for health, wellbeing, STEM, arts, community learning, and management.
- Reusable tools: templates, checklists, model policies, prompt libraries, and decision trees.

Suggestions for areas requiring further investigation during the transnational analysis.

- Differences in AI governance, policies, and leadership approaches across partner countries.
- Comparative models for training delivery, digital infrastructure, and staff support.
- Transnational insights on ethics, safeguarding, and GDPR-aligned practice.
- European examples of successful AI integration in adult-education contexts.
- Strategies for addressing digital inequality and varying levels of staff confidence.

AI Act(ing)
in Adult Education

Desk Research

(Spain)



1. Introduction

This national review forms a primary component of Work Package 2 (WP2): Research and Needs Analysis within the framework of the AAA Project (AI Act(ing) in Adult Education). As a Cooperation Partnership in Adult Education under the Erasmus+ program, the AAA project seeks to address the transformative impact of Artificial Intelligence on lifelong learning systems. The purpose of this report is to provide a comprehensive overview of the current state of AI integration within the Spanish adult education landscape, identifying critical gaps and strategic opportunities to ensure that upcoming project outputs are effectively aligned with national realities. The document is structured to explore the multifaceted dimensions of AI adoption in Spain, beginning with an analysis of the National Policy and Strategic Context. This includes an examination of major initiatives such as the *National Artificial Intelligence Strategy (ENIA)* and *Digital Spain 2026*, as well as Spain's pioneering role in establishing AESIA (the Spanish Agency for AI Supervision). Furthermore, the report assesses Institutional Practices and Digital Readiness, highlighting the tension between widespread informal use of generative AI and the lag in formal institutional integration.

A significant portion of this research is dedicated to Educator Competences and AI Literacy Needs. By evaluating current proficiency levels—notably the prevalence of intermediate (B1-B2) digital skills—this review identifies the urgent need for pedagogical training that moves beyond basic tool usage toward ethical and critical AI application. Finally, the report outlines the systemic barriers (such as the digital divide in vulnerable populations) and emerging trends that will guide the development of the project's intellectual outputs, including the Transnational Needs Analysis, the AI Training Course, and the Guide for Responsible AI Use. The findings presented herein were selected through a rigorous desk research process, analysing official government strategies, recent academic literature (2021–2026), and regulatory frameworks to provide a grounded, evidence-based perspective on the Spanish educational ecosystem.

2. National Policy and Strategic Context

Overview of national policies and strategies on AI, digitalisation and adult learning

Spain has developed a comprehensive policy framework to support the digital transformation of society and the integration of artificial intelligence (AI) across sectors, including education and lifelong learning. The main policy reference is the "Estrategia Nacional de Inteligencia Artificial" (ENIA) (National Artificial Intelligence Strategy), adopted in 2020 as part of the country's broader digital transformation agenda. This strategy establishes a national roadmap to promote the development and deployment of trustworthy AI through investment, talent development and governance mechanisms. The ENIA mobilised approximately €600 million in public investment and is structured around six strategic axes: research and innovation, talent and skills development, data infrastructures, integration of AI into value chains, AI adoption in public administration, and the creation of an ethical and regulatory framework for trustworthy AI. The ENIA operates within the broader framework of España Digital 2026, the national strategy guiding Spain's digital transformation. This agenda promotes the development of digital infrastructure, the digitalisation of public administration and businesses, and the strengthening of digital skills among citizens and workers. One of its central objectives is to ensure that a large majority of the population acquires at least basic digital competences, highlighting the importance of lifelong learning and workforce upskilling in a digital economy. Complementing these initiatives, the "Plan Nacional de Competencias Digitales" (National Digital Skills Plan) provides a strategic roadmap for digital literacy and training. Launched in 2021, the plan focuses on improving digital inclusion, reducing the digital gender gap and enhancing digital skills across all levels of education and the workforce. Importantly, the plan emphasises continuous training for workers and adults, reflecting the role of lifelong learning systems in supporting the transition to digital and AI-enabled labour markets. In the education and training sector, Spain has also promoted digital transformation through programmes such as "Educa en Digital" (Educate in Digital), which aims to strengthen digital infrastructure and competencies in educational institutions and foster the use of emerging technologies—including AI—for personalised learning and improved monitoring of student progress.

Alignment with European frameworks

Spain's policy framework for artificial intelligence and digital transformation is strongly aligned with the European Union's regulatory and strategic agenda. National policies on AI, digitalisation and digital skills have been designed in coordination with EU initiatives and frequently serve as mechanisms for implementing European legislation and strategic priorities. A central reference is the Estrategia Nacional de Inteligencia Artificial (ENIA), adopted in 2020 as part of the national digital transformation agenda. The ENIA explicitly aligns with European policy initiatives such as the European Commission's White Paper on Artificial Intelligence and contributes to the implementation of EU-level priorities on trustworthy AI, innovation, and human-centred technological development. Several institutional and regulatory instruments have been created to operationalise this alignment. One key example is the Royal Decree 729/2023, which established the "Agencia Española de Supervisión de la Inteligencia Artificial" (AESIA). This agency functions as Spain's national supervisory authority for AI and is responsible for coordinating the implementation and enforcement of European AI regulations within the Spanish context. It also acts as the national contact point within the European governance network established by the EU Artificial Intelligence Act (Regulation (EU) 2024/1689). (Real Decreto 729/2023, de 22 de agosto, por el que se aprueba el Estatuto de la Agencia Española de Supervisión de Inteligencia Artificial., 2023)

In addition, Spain has introduced regulatory mechanisms to facilitate compliance with the EU framework. For example, Royal Decree

817/2023 established one of the first regulatory sandboxes for artificial intelligence in Europe. These controlled experimentation environments allow organisations to test high-risk AI systems while ensuring conformity with the regulatory requirements introduced by the EU AI Act. (Real Decreto 817/2023, de 8 de noviembre, que establece un entorno controlado de pruebas para el ensayo del cumplimiento de la propuesta de Reglamento del Parlamento Europeo y del Consejo por el que se establecen normas armonizadas en materia de inteligencia artificial, 2023). Spain has also advanced national legislation to formally integrate European AI regulation into domestic law. In 2025 the government presented the "Anteproyecto de Ley para el Buen Uso y la Gobernanza de la Inteligencia Artificial", a draft law designed to adapt Spain's legal framework to the EU AI Act. The proposed legislation introduces rules on prohibited AI practices, obligations for high-risk AI systems, transparency requirements such as the labelling of AI-generated content, and a supervisory architecture coordinated by AESIA. (Ministerio para la Transformación Digital y de la Función Pública, 2025)

Beyond regulatory instruments, Spain's digital transformation strategies also align with broader European policy frameworks addressing education, skills and digital transformation. The "Agenda España Digital 2026" forms part of Spain's Recovery, Transformation and Resilience Plan and promotes digitalisation across infrastructure, the economy and society. A key dimension of this agenda focuses on developing digital competences among citizens and workers to ensure access to future employment opportunities and support the digital transition. (Ministerio para la Transición Digital y de la Función Pública, 2026). This objective directly reflects the priorities established in European initiatives such as the Digital Education Action Plan (2021–2027) and the European Skills Agenda, which emphasise the development of digital skills, AI literacy and lifelong learning systems across EU Member States. European policy frameworks also encourage Member States to strengthen digital education and promote responsible and ethical uses of emerging technologies in educational contexts. Overall, Spain's regulatory and strategic initiatives demonstrate a strong alignment with European digital policy. National legislation, governance structures and digital skills strategies are designed not only to comply with EU regulatory obligations but also to contribute to the broader European objective of promoting trustworthy AI, strengthening digital competences and supporting inclusive digital transformation.

Ethical, legal and governance principles for AI in education

Ethical and human-centred AI principles constitute a core element of Spain's national strategy. The ENIA explicitly emphasises transparency, fairness, non-discrimination, privacy protection and human oversight as guiding principles for AI deployment in society. These principles aim to ensure that technological innovation is aligned with democratic values and social welfare. The governance framework combines national regulatory initiatives with European legislation, ensuring that AI systems deployed in public services—including education—comply with risk-based regulation and accountability mechanisms. In addition, academic research on AI governance in Spain highlights the importance of legal safeguards, ethical oversight and transparent decision-making processes to mitigate potential risks associated with algorithmic systems in public administration and education. More broadly, the ethical dimension of AI implementation is increasingly emphasised in scholarly literature, which stresses the need for human-centred approaches that integrate ethical reflection, transparency and accountability into AI deployment across institutions, including educational organisations.

Implications for AI in adult learning

Overall, the Spanish policy framework signals a clear expectation that education and training systems—including adult education and lifelong learning—should play a central role in building AI-related competencies. Through national strategies on digitalisation and skills development, Spain promotes digital literacy, advanced technological skills and continuous professional training as essential components of workforce resilience in the digital era. Although specific policies focusing exclusively on AI in adult education remain limited, the combined framework of digital skills strategies, vocational training reforms and AI governance initiatives demonstrates a growing institutional commitment to integrating AI literacy and digital competence development into lifelong learning systems.

3. Institutional Practices and Digital Readiness

The integration of artificial intelligence (AI) into educational institutions in Spain is evolving rapidly but unevenly. While policy frameworks increasingly encourage the adoption of advanced digital technologies, institutional practices reveal a mixed landscape characterized by experimentation, limited implementation, and structural constraints. Research on the adoption of AI in higher education—an important component of the adult learning ecosystem—shows that institutions are beginning to incorporate AI tools into teaching, learning, and administrative processes, yet their integration remains fragmented and influenced by organisational readiness, digital infrastructure, and staff competences.

AI-related initiatives, tools and platforms in adult education institutions

In practice, AI adoption in Spanish educational institutions is largely associated with the use of generative AI tools, intelligent tutoring systems, and digital learning platforms that support personalised learning and knowledge generation. Studies conducted in Spanish universities show that generative AI tools such as large language models are increasingly used by students and educators to support learning activities including information retrieval, writing assistance, summarisation of content, and preparation of

assignments. For example, research analysing journalism students in a Spanish university found that 93% of students reported using generative AI tools, with 77.2% using them specifically for learning or studying purposes and 44.2% for completing academic assignments. These findings illustrate the rapid diffusion of AI tools as informal learning aids within higher education environments (Alonso-Muñoz & Casero-Ripollés, 2026).

Other studies focusing on teacher education programmes indicate that future educators increasingly perceive AI technologies as valuable resources for supporting digital content creation and pedagogical innovation. Positive attitudes toward AI adoption are particularly associated with higher levels of digital competence and experience in creating digital learning materials (Morales-Cevallos et al., 2025). Beyond generative AI tools, some institutions are experimenting with AI-supported learning analytics and personalised learning systems integrated into digital learning environments. These systems can provide adaptive feedback, generate quizzes or learning resources, and support personalised learning pathways, which are especially relevant in adult education contexts where learners often have diverse backgrounds and learning needs. However, despite these emerging initiatives, the integration of AI into curricula remains limited. For instance, a national review of Spanish university programmes found that only around 19% of medical faculties include specific AI courses, and most of them are optional rather than compulsory, indicating that institutional adoption remains at an early stage (Janeiro et al., 2025)

Institutional strategies and digital action plans

Many educational institutions in Spain are currently incorporating AI into broader digital transformation strategies or digital education plans rather than developing standalone AI strategies. Institutional digitalisation plans often focus on improving digital infrastructure, expanding the use of learning management systems, and promoting digital competences among staff and students. Within these strategies, AI is typically framed as part of a broader digital innovation agenda that includes data analytics, online learning technologies, and digital content creation. Research suggests that universities and adult learning providers increasingly promote training initiatives aimed at strengthening educators' digital and AI-related competences, recognising that staff development is a key factor in the effective integration of advanced technologies (Higueras-Rodríguez et al., 2026). Nevertheless, the presence of formal institutional strategies specifically addressing AI remains limited. In many cases, AI adoption occurs through bottom-up initiatives led by individual educators or research groups rather than through coordinated institutional policies. This decentralised approach contributes to variability in the adoption and pedagogical integration of AI across institutions and disciplines.

Challenges affecting institutional adoption

Although the use of AI tools in educational practice is expanding, several structural challenges continue to shape institutional readiness and limit large-scale adoption. One of the most significant barriers relates to staff training and digital competence. Studies examining Spanish universities highlight important gaps in educators' preparation for working with AI-based technologies, particularly regarding ethical, pedagogical, and accessibility considerations (Higueras-Rodríguez et al., 2026). A second challenge concerns organisational culture and pedagogical attitudes toward AI. Research on perceptions of AI in university education indicates that both students and educators express ambivalent attitudes, recognising potential benefits while also raising concerns about academic integrity, reliability of AI-generated content, and the risk of over-reliance on automated systems (Seco et al., 2025) Infrastructure and institutional capacity also play a critical role. Although many institutions provide digital learning platforms and online resources, the integration of advanced AI systems requires additional investment in data infrastructure, technical expertise, and governance mechanisms. As a result, AI adoption often occurs through the informal use of publicly available tools rather than through institutionally managed AI systems.

Institutional adoption and the evolving role of AI in adult learning

Overall, institutional practices in Spain demonstrate that AI is already influencing adult education environments, particularly through the widespread use of generative AI tools and digital learning platforms. However, the integration of AI remains largely experimental and uneven across institutions. The adoption of AI in adult learning contexts is therefore shaped by a combination of bottom-up innovation, limited institutional strategies, and structural constraints related to digital capacity and organisational culture. Strengthening institutional readiness will require coordinated strategies that combine technological infrastructure, educator training, ethical governance frameworks, and pedagogical innovation.

4. Educator Competences and AI Literacy Needs

National expectations regarding educators' digital and AI-related competences

Educational research in Spain shows that, although there is not yet a specific official national framework for teaching competencies in artificial intelligence (AI), expectations regarding teachers' digital competences are largely built around the European Digital Competence Framework for Educators (DigCompEdu) and its adaptation to Spanish contexts. Recent studies using this framework to analyze Spanish teachers' self-perception of digital competences indicate intermediate levels of competence, highlighting the need to further develop dimensions related to the management and critical use of advanced technologies. In a study involving 150 teachers from different educational levels in Spain, results showed digital competence mostly at intermediate levels (B1–B2), with

variability across educational stages and areas for improvement in digital resource creation and data protection (García-Delgado et al., 2023). Additionally, research in specific contexts, such as a multidimensional analysis of primary education teaching in Andalusia, found that teachers' digital competences are functionally adequate but leave significant room for growth toward transformative and critical uses of educational technology. This suggests that digital competence in Spain has yet to reach the level of advanced pedagogical integration required for solid AI literacy (Ábalos-Aguilera et al., 2026).

Although these studies do not specifically evaluate AI competencies, they emphasize that teachers' digital competences are a significant predictor of their willingness to integrate emerging technologies such as AI into teaching. A Spanish study found that teachers with higher levels of digital competence reported more positive attitudes and greater readiness to use AI in education (Galindo-Domínguez et al., 2024). Similar patterns have also been observed in related international research (*Cypriot teachers' digital skills and attitudes towards AI | Discover Education | Springer Nature Link*, s. f.; Dringó-Horváth et al., 2025). Thus, the implicit national expectations—reflected in these measurements and in the use of the DigCompEdu framework—are that teachers develop not only basic technical skills but also higher-level abilities to integrate technologies pedagogically, ethically, and critically. This includes understanding algorithms, selecting AI-based tools, managing student data, and critically reflecting on bias and privacy—competences not yet systematically incorporated into Spanish educational frameworks.

Availability of professional development or training opportunities on AI

Spain has developed a wide range of professional development opportunities aimed at improving educators' digital competences. National and regional training programmes offer online courses, workshops and certification processes aligned with the DigCompEdu framework. These initiatives are delivered through teacher training centres, universities and institutional professional development programmes. The availability of teacher training in Spain related to AI is still emerging and fragmented, driven mainly by university initiatives, research projects, and external programs rather than by integrated offerings within official teacher education and professional development. An emerging body of studies has explored how AI and digital competences are being conceptualized in teacher education, proposing conceptual frameworks to integrate these competences from initial teacher training to professional practice. For example, recent research has highlighted the importance of developing digital and AI competences in teaching practicums, proposing frameworks that articulate instrumental, pedagogical, and ethical dimensions of AI for educators (Alastor & Martínez-García, 2025).

However, research shows that AI training as part of initial or continuous teacher education programs remains limited and largely dependent on local or institutional initiatives rather than articulated national policy. This is observed both in studies on the preparation of future teachers regarding AI and educational technology and in the absence of standardized programs that include AI transversally (García-Perales et al., 2025). This heterogeneous availability of training—more prevalent in university settings or pilot projects—indicates that, although there are occasional courses addressing AI and digital competences, a coherent, scalable, and nationally aligned training offer seems lacking. Therefore, current training opportunities must be carefully assessed and expanded to ensure they address the cognitive, pedagogical, and ethical dimensions of AI literacy that teachers require.

Identified Gaps in Educators' Confidence, Readiness, Ethical Understanding, or Pedagogical Application of AI Tools

Spanish academic literature points to several clear gaps that limit teachers' confidence, readiness, and pedagogical application of AI-based technologies:

Insufficient technical and conceptual confidence: Research shows that while teachers may possess functional digital competences, they often lack detailed understanding of how AI applications work (e.g., generative models, machine learning) or how to select and critically evaluate them in teaching contexts. This technical gap limits not only practical use but also the confidence to experiment with AI tools (García-Delgado et al., 2023).

Low applied pedagogical readiness: Most studies on teachers' digital competences focus on overall technological preparedness, but few analyse how teachers specifically integrate AI into their instructional practices. The pedagogical use of advanced technologies depends not only on technical skills but also on methodological strategies to design meaningful learning experiences, such as adaptive tutoring, automated feedback, or learning analytics.

Recent research in Spain shows that although teachers have positive attitudes toward AI, only a small percentage have incorporated these tools into their educational practice, mainly for administrative support or content creation rather than for deep pedagogical interventions (Galindo-Domínguez et al., 2024). Similarly, literature reviews and teacher education studies indicate that AI integration in classrooms still lacks a solid methodological orientation and specific competences, revealing a significant training gap (Alastor & Martínez-García, 2025; Gómez-Trigueros, 2025).

Deficits in ethical and critical understanding: While emerging studies highlight the importance of including the ethical dimension in teacher training on AI—for instance, reflecting on data bias or student privacy—few empirical analyses examine how teachers

understand and manage these issues. Spanish evidence indicates that many teachers have theoretical notions about technology use but lack applied competences for responsible and critical use of AI in educational settings (Gómez-Trigueros, 2025).

This gap reflects not only challenges in educational practice but also the need for further empirical investigation: although the *Orientations for the Integration of Artificial Intelligence in Teacher Training* developed by the "Instituto Nacional de Tecnologías Educativas y de Formación del Profesorado" (INTEF) outline concrete strategies to support ethical, pedagogical, and responsible integration of AI in professional development—such as designing specific training programs, integrating AI into administrative and management processes, and offering guidelines for educational actors—there remains a scarcity of empirical research evaluating the implementation and impacts of these initiatives. Ethical and reflective AI use remains closely tied to broader digital citizenship competencies, underscoring the importance of more systematic inclusion of these topics in teacher training and research (INTEF, 2025).

Relationship between digital competences and attitudes toward AI: Studies with large samples of teachers in Spain have shown that higher digital competence levels are associated with more positive attitudes toward using AI in education; however, these studies also reveal that direct experience with AI tools remains low despite teachers' willingness (Galindo-Domínguez et al., 2024).

Overall, these gaps highlight a critical need for teacher training specifically aimed at:

- Providing solid conceptual foundations on how AI technologies work.
- Developing concrete pedagogical strategies to integrate AI meaningfully, aligned with learning objectives.
- Fostering ethical and critical understanding of the risks, biases, and privacy considerations inherent in AI use in educational contexts.

These needs should guide the design of training programs that not only teach technical skills but also integrate real-world application contexts, critical reflection, and pedagogical impact evaluation.

5. Barriers, Opportunities, and Emerging Trends

The integration of Artificial Intelligence (AI) into adult education in Spain is gaining momentum within the broader framework of lifelong learning and digital transformation. However, its adoption remains uneven and conditioned by systemic barriers, while simultaneously offering significant opportunities for improving accessibility, personalisation, and efficiency in adult learning environments. Understanding these dynamics is essential for anticipating the developmental trajectory of AI in the Spanish adult education ecosystem.

Systemic barriers to responsible AI adoption

Several structural barriers hinder the effective and responsible integration of AI into adult learning contexts in Spain. One of the most significant challenges concerns digital competence among educators and adult learners. Research conducted in Spanish adult education centres indicates that teachers generally display intermediate levels of digital competence but limited skills in areas such as problem-solving and advanced technological use, which constrains the pedagogical integration of emerging technologies such as AI (Garzón Artacho et al., 2021). This competence gap directly affects the capacity of adult education institutions to incorporate AI-based tools in teaching practices. A second barrier relates to pedagogical and organisational readiness. Many adult education programmes in Spain remain oriented toward traditional instructional models, which are not easily compatible with AI-supported personalised learning environments. The transition towards data-driven or adaptive learning requires significant institutional changes, including curriculum redesign, teacher training, and technological infrastructure. Without systemic support, AI adoption risks remaining superficial or confined to isolated initiatives (Higueras-Rodríguez et al., 2026).

Ethical and governance issues also represent a critical barrier. Scholars highlight concerns related to algorithmic bias, transparency, and responsible use of AI systems in educational decision-making, especially in contexts involving vulnerable adult learners (Pattier Bocos & Redondo Duarte, 2025). These concerns are particularly relevant in adult education, where learners may present heterogeneous backgrounds, varying levels of digital literacy, and diverse socio-economic conditions. Ensuring ethical and inclusive AI use therefore requires clear institutional frameworks and regulatory guidance. Finally, the digital divide among adult populations continues to affect participation in technology-enhanced learning. Adult learners—especially older individuals or those with limited educational backgrounds—may face barriers in accessing or effectively using digital tools. Studies on digital literacy among adults emphasize the importance of targeted training programmes to avoid reinforcing existing inequalities in participation and learning outcomes (Peñalva Vélez et al., 2018).

Opportunities for enhancing adult learning through AI

Despite these challenges, AI also offers considerable opportunities for improving adult education systems in Spain. One of the most widely recognised benefits is personalised learning. AI-driven tools can adapt content, pace, and assessment to individual learning profiles (Serrano & Moreno-García, 2024), which is particularly relevant in adult education where learners often combine training

with professional and family responsibilities. Flexible and adaptive learning environments may therefore enhance participation and retention in lifelong learning programmes (EPALE, 2025). AI also supports efficiency gains in teaching and institutional management (Brun Corona et al., 2024; Heras, 2024). Automated feedback, intelligent tutoring systems, and AI-assisted content creation can reduce administrative workload and enable educators to focus more on mentoring and facilitation. In adult education contexts characterised by limited resources, such efficiencies may significantly improve the scalability and sustainability of training programmes. Another important opportunity lies in improving access to lifelong learning. AI-enhanced platforms and conversational interfaces can provide continuous support, enabling adult learners to access training outside formal classroom settings. This flexibility aligns with the broader European policy objective of increasing participation in adult learning as a key strategy for addressing labour market transformations and digital transitions (European Commision, 2024)

Emerging trends and future developments in Spain

Looking ahead, several trends suggest that AI will increasingly shape the future of adult education in Spain. First, policy frameworks at both national and European levels are prioritising digital and AI-related competencies as essential for workforce development and social inclusion. Lifelong learning initiatives are therefore expected to incorporate AI literacy and digital skills training more systematically (Gobierno de España, 2026). Second, the innovation ecosystem around educational technology is expanding, involving universities, training centres, and public–private partnerships. These collaborations are likely to accelerate experimentation with AI-based learning environments, including adaptive platforms and data-driven educational analytics (Red.es, 2025). Finally, labour market transformations associated with AI adoption will increase the demand for continuous reskilling and upskilling among adults. Research on AI and employment in Spain indicates that technological change will reshape skill requirements across sectors, reinforcing the importance of flexible adult learning systems capable of supporting workforce adaptation (Mestre et al., 2025). In this context, adult education institutions—both nationally and regionally (including Galicia)—will play a critical role in facilitating inclusive access to AI-related competencies. The future trajectory of AI in adult learning will therefore depend on balancing technological innovation with pedagogical adaptation, ethical governance, and equitable access to digital skills.

6. Implications for the AAA Project

Summary of the most urgent national needs related to AI literacy in adult education.

Research in Spain reveals that while a solid policy framework exists (National AI Strategy and Digital Spain 2026 Agenda), there is a significant gap in adult education. The most urgent needs identified are:

- Practical Pedagogical Training: Educators possess intermediate levels of digital competence (B1-B2) but lack specific training to integrate AI into their teaching methodologies beyond basic instrumental use.
- Closing the Trust and Ethics Gap: There is underlying concern regarding algorithmic bias and data privacy, which breeds reluctance. It is urgent to provide clear, applicable ethical frameworks for the classroom.
- Addressing the Digital Divide in Vulnerable Populations: Since AI can deepen existing inequalities in adult education, it is a priority to train educators to use AI as a tool for inclusion and personalization for students with fewer resources or prior digital skills.

Key insights to guide project results

The results of the national analysis provide critical information for the development of the AAA project's intellectual outputs:

- For the Transnational Needs Analysis Report (WP2): Spain stands out for the creation of AESIA (Spanish Agency for AI Supervision). This national governance model should serve as a benchmark for the transnational report, analyzing how national regulation can support the safe adoption of AI in education. Additionally, the fragmentation between high individual use of AI tools by students (93%) and low formal institutional integration must be highlighted.
- For the AAA AI Training Course (WP4): The course should not focus solely on "tools," but on developing a strategic and reflective vision. In Spain, it is essential to include modules on "prompt engineering" applied to education and how to use AI to reduce administrative burdens, allowing teachers to focus on personalized support.
- For the Guide for the Responsible Use of AI in Adult Education (WP3): Findings underscore the need for the guide to translate the technicalities of the EU AI Act into language accessible to adult education centers. It must include risk assessment protocols for AI tools and transparency criteria that educators can apply directly to their daily practice.

Identification of topics requiring further investigation in the stakeholder consultation phase.

For the upcoming phase of interviews and focus groups, the following topics should be prioritized to obtain a more granular perspective:

- Specific Institutional Barriers: Investigate why, despite national policies, formal adoption in adult centers remains so low (currently around 19% in similar environments).
- Needs of Micro-SMEs and Rural Centers: Explore whether educators in environments with less technological infrastructure perceive AI as a cost-saving opportunity or as an additional barrier.
- Assessment of Current Competencies: Validate whether educators' perception of their digital competence matches their actual ability to detect AI-generated content and manage misinformation.

Final thoughts

The findings in Spain confirm that the AAA project arrives at a moment of critical transition. The success of the next steps will depend on our ability to transform AI literacy from a theoretical concept into a strategic competence that empowers adult educators in the face of labor market shifts and the ethical challenges of the digital society.

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AI Act(ing)
in Adult Education

Stakeholder Involvement

(Spain)



Introduction

The primary purpose of this National Stakeholder Engagement Report is to examine and document the specific AI literacy levels, institutional challenges, and professional development needs within the national adult education landscape. As a fundamental component of the AI-Act(ing) in Adult Education (AAA) project, this report seeks to bridge the gap between European digital strategy and local educational practice, ensuring that subsequent project outputs are rooted in the lived experiences of practitioners. The methodology employed within Work Package 2 (WP2) follows a dual-track approach, integrating a quantitative survey designed to capture broad trends in AI adoption and baseline competencies with qualitative interviews and consultations that provide nuanced insights from key sector actors, including policymakers and training providers. This stakeholder engagement is essential to the wider needs analysis, as it transforms theoretical pedagogical frameworks into an evidence-based roadmap. By synthesizing these diverse perspectives, the project can identify both universal and country-specific barriers, ultimately ensuring that the forthcoming training resources and policy guides are practically relevant, ethically grounded, and effective in fostering digital resilience across the adult education sector.

1. Methodology

1.1 Survey Administration

The data collection phase was conducted with the aim of capturing a representative and diverse overview of the current state of Artificial Intelligence within the adult education sector. The key aspects of the survey administration are detailed below:

- **Sampling Strategy and Dissemination Channels:** The sampling process was carried out in two distinct phases to optimize participation. Initially, **purposive sampling** was applied by directly contacting pre-selected adult educators based on their relevance within the sector. Due to a limited initial response, a **convenience sampling** strategy and broader dissemination were adopted. To this end, an invitation was extended to all users of the **Aula Cesga** training platform, hosted by the **Galicia Supercomputing Center (CESGA)**. This channel proved essential, as it is regularly used by educators and professionals across the Autonomous Community of Galicia (Spain), ensuring greater diversity in the resulting profiles.
- **Final Participation:** The established objective for the study was to reach a minimum of 20 responses per partner. Upon completion of the survey period, a **final sample of 28 respondents** was obtained. Consequently, participation **exceeded the initial target by 40%**, providing a robust database for analyzing trends and needs within the field of adult education.
- **Collection Tool:** To ensure accessibility and facilitate subsequent data management, **Google Forms** was utilized. The questionnaire was designed to be **self-administered**, ensuring participant anonymity and allowing for the collection of both quantitative data and qualitative perceptions through open-ended text fields. The form was accessed digitally via the following link: https://forms.gle/3ZkcEW1TUq1Ju82u5

1.2 Interview Process

To gain deeper strategic insights into AI in adult education, a qualitative research phase was conducted through semi-structured interviews. This process was governed by the following parameters:

Scope and Sample: A total of 15 interviews were completed, meeting the established target of 15 participants per project partner. Purposive sampling was employed to select key figures whose professional background and institutional responsibilities provided a comprehensive view of the regional educational and technological ecosystem.

Stakeholder Profiles: The sample is characterized by high specialization and diversity, categorized into four strategic groups for analysis:

- **Policymakers and Public Administration:** (2) Representatives from government bodies with competencies in strategic coordination, educational innovation, and regional vocational training management.
- **Institutional Directors and Managers:** (5) Heads of faculties related to teacher training, directors of national technological training centers, and former directors of educational institutions.
- **Technology and Digital Learning Specialists:** (4) Academic experts in Educational Technology and technical advisors from cutting-edge innovation and technological resource centers.
- **Senior Educators and Social Actors:** (4) Innovation coordinators in social intervention NGOs, teachers from official language centers, and gerontology specialists from higher education institutions.

Protocol and Ethics: All interviews followed a standardized interviewer guide developed within the project framework to ensure data consistency and comparability across international partners. The process began with a preliminary explanatory contact, followed by a formal letter of invitation. Strict emphasis was placed on regulatory compliance, utilizing informed consent forms aligned with the GDPR (General Data Protection Regulation), which were signed and accepted by all participants prior to each session.

Interview Administration: The sessions were conducted entirely online. To optimize the quality of the responses and mitigate uncertainty bias, participants were provided with the interview script in advance, allowing for prior reflection on the topics. Each session lasted approximately 30 to 45 minutes, facilitating a fluid dialogue regarding the challenges, barriers, and training needs in

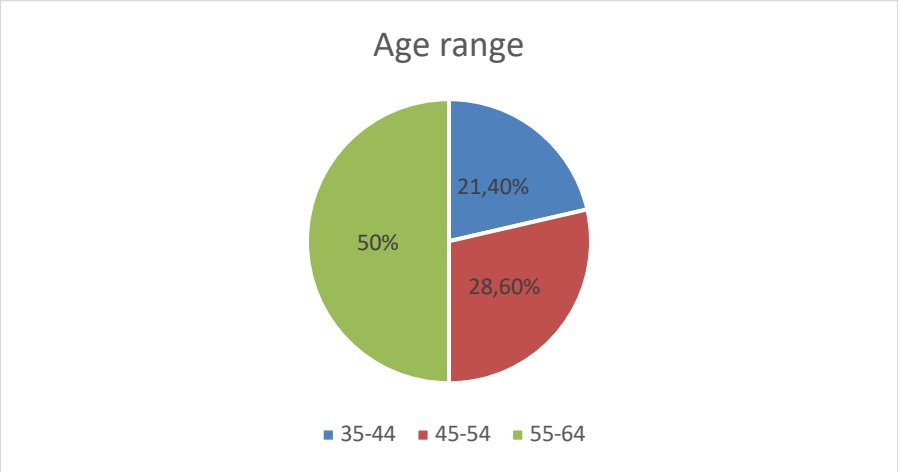
the field of AI.

2. Survey Findings

2.1 Professional background and digital experience of respondents

The sociodemographic profile of the participants reveals a group of highly qualified professionals with solid career trajectories. The majority of respondents fall into mature age groups, with 50% in the 55–64 range and 28.6% between 45 and 54. Almost the entire sample resides in Spain (96.4%). Regarding their academic background and professional roles:

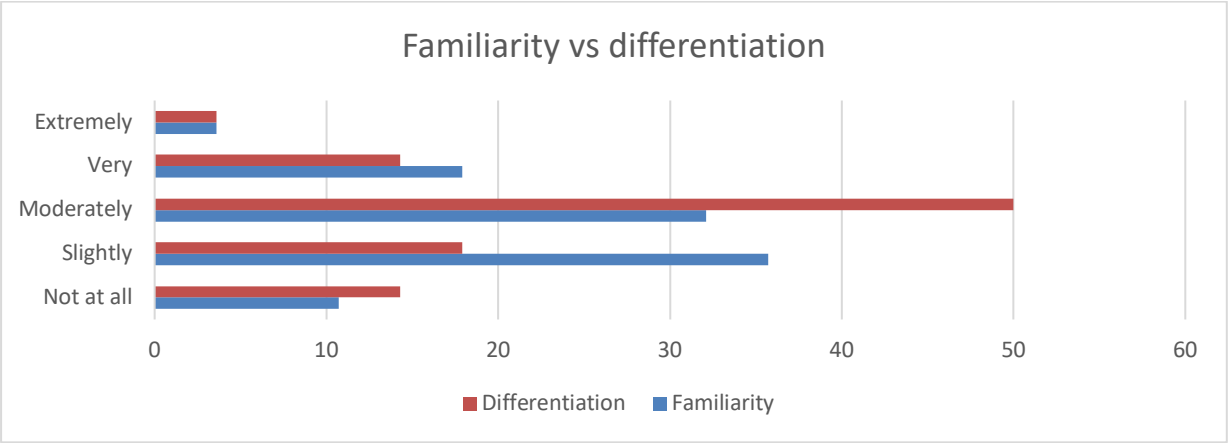
- **Higher Education:** A notable 57.1% hold a PhD, followed by 25% with a Master's degree.
- Roles: 64.3% identify as adult educators or trainers, primarily working in Vocational Training Centers (32.1%) and Higher Education Institutions (28.6%).
- **Digital Competence:** Respondents show high confidence in their technological skills; 53.6% rate their level of experience with digital tools as "Advanced" and 35.7% as "Intermediate." Only a small percentage (7.1%) consider themselves to be at a basic level.



2.2 Levels of awareness and perceptions of emerging technologies in adult education

There is widespread awareness regarding the importance of AI, although levels of technical familiarity vary.

- **Familiarity with Concepts:** 67.8% claim to be "somewhat" or "moderately" familiar with concepts such as machine learning or generative AI. However, only 17.8% feel "very familiar."
- **Tool Differentiation:** Half of the respondents (50%) feel "moderately confident" in distinguishing between AI-based tools and conventional digital tools.
- **Future Expectations:** There is a strong consensus on the impact of these technologies. 75% believe that AI will be of "great" or "fundamental" importance to their professional work in the next 3 to 5 years.
- **Qualitative Perception:** Participants define AI in adult education as a resource for personalizing learning, improving teaching materials, and providing support to reduce administrative burdens, highlighting its potential to "connect with the needs of each individual.



2.3 Current practices and technological use in teaching, learning, and institutional settings
The adoption of AI is already a reality in the daily practice of most respondents.

- **Current Usage: 92.8% already use AI tools**, broken down into 53.6% who use them occasionally and 39.3% who use them regularly.
- **Predominant Tools:** Language and writing support tools (such as ChatGPT) are the most used (57.1%), followed by automatic quiz generators (17.9%) and virtual assistants (14.3%).
- **Primary Purposes:** Usage focuses on lesson planning and content creation (75%), and information searching and synthesis (75%). Still a moderated number of respondents focuses on the design of assessment instruments (42,9%) and administrative tasks (39,3%).
- **Institutional Framework:** A gap in institutional governance is observed. 46.4% are unaware if their institution has ethical guidelines, and 28.6% categorically state they do not exist. Only 25% indicate that they are currently under development.

2.4 Identified challenges and barriers related to technology adoption and professional development
Despite high adoption rates, educators identify critical barriers that hinder optimal and ethical use.

- **Main Challenges:** A **lack of training (33.3%)** and **ethical concerns (27.5%)** are the most cited obstacles. Lack of regulatory clarity (19.6%) is also mentioned.
- **Privacy Concerns:** There is a high level of alert regarding data protection; 60.6% of respondents are "very" or "extremely" concerned about this issue.
- **Ethical Risks:** The most feared risks are bias in results (25%), data privacy (25%), and over-reliance on automated systems (21.4%).
- **Qualitative Experiences:** In open-ended responses, educators mention negative experiences related to student "plagiarism" and a lack of critical thinking. On a positive note, they highlight "time savings" and "inspiration" for creating new materials.

2.5 Self-reported training needs, preferred learning formats, and confidence levels
The report identifies a clear demand for structured and specific training.

- **Confidence Level:** Although they use AI, most do not feel like experts in its ethical application; 60.7% feel only "moderately confident" in their ability to use these tools responsibly.
- **Areas of Need:** Training priorities focus on the pedagogical uses of AI (25.3%), technical implementation skills (24.1%), and ethical and responsible use (20.3%).
- **Preferred Formats:** Educators prefer flexible modalities. Self-paced online courses (26.7%) and blended learning (21.7%) are the most valued options, along with micro-learning modules (20%).
- **Motivation:** The primary drivers for seeking training are practical relevance to their teaching work (32.3%) and the availability of time (26.2%).

Key Conclusions
The adult educators surveyed demonstrate a proactive attitude and a pragmatic vision toward AI, recognizing its value for personalization and efficiency. However, there is an urgent need for pedagogical and ethical training, as well as a clear regulatory framework from institutions to mitigate the privacy risks and biases that currently generate uncertainty among the teaching community.

3. Interview Insights
Professional roles, institutional cultures, and strategic orientations.
The qualitative data reveals a significant divergence between the personal initiative of educators and the formal strategic positioning of institutions. While individual practitioners—particularly Senior Educators and Digital Specialists—demonstrate a proactive "bottom-up" adoption of AI tools, institutional cultures are largely characterized by "productive inertia". As noted in the interviews with University and Technological Center representatives, there is a palpable disconnect between the identified training needs and the actual institutional roadmaps.

In many cases, AI is not yet a strategic priority but rather a set of decentralized experiments. Conversely, the Policymaker and Public Administration profile exhibits a culture of "institutional caution". Their strategic orientation is primarily focused on regulatory compliance and the mitigation of risks related to data privacy. This results in a landscape where institutional leadership is perceived as passive or reactive, leaving educators to navigate the digital transformation without a clear normative framework or a unified institutional vision.

Stakeholders' views on opportunities and challenges within the national adult education landscape.
Stakeholders identify AI as a dual-edged catalyst within the national adult education landscape. The consensus points towards personalization and cognitive scaffolding as the primary opportunities. Educators emphasize that AI can act as a bridge for learners with diverse backgrounds, offering tailored support that human instructors cannot provide at scale. Furthermore, the automation of administrative and repetitive pedagogical tasks is seen as a vital opportunity to redirect teacher efforts toward high-value mentorship. However, these opportunities are tempered by profound ethical and structural challenges. A recurring concern across all 15 interviews is the "black-box" nature of commercial AI, which poses significant risks to data sovereignty and algorithmic transparency. There is a widespread fear that the rapid adoption of AI could exacerbate the digital divide, creating a new class of "AI-illiterate" adult learners. The challenge, therefore, is not merely technical but philosophical: ensuring that AI supports rather than substitutes human reasoning and agency.

Capacity gaps, systemic constraints, and organisational needs.
The analysis highlights three critical dimensions of constraint:

- **The Regulatory Vacuum:** The lack of specific regional or national guidelines for AI in education creates a "chilling effect." Institutional directors feel legally exposed, which prevents the formal integration of AI into curricula.
- **Pedagogical vs. Technical Training Gap:** There is a discernible gap in how capacity is understood. Stakeholders argue that current training is too focused on "how tools work" (technical) and not enough on "how tools teach" (pedagogical). Educators lack the competencies to evaluate the accuracy of AI outputs or to design AI-mediated learning activities.
- **Resource Inequality:** While some technological centers are "cutting-edge," smaller NGOs and social intervention centers face severe infrastructure and budget constraints, limiting their ability to provide "safe playgrounds" for AI experimentation.

Emerging priorities for professional development and institutional support.
To bridge these gaps, the interviews suggest a shift toward contextualized and peer-led professional development. Rather than generic workshops, stakeholders demand:

- **Framework-Aligned Competency Building:** Training must be mapped to international standards (e.g., DigCompEdu or UNESCO) to ensure professional recognition and systemic consistency.
- **Legal and Ethical Literacy:** A top priority for managers and policymakers is the creation of "Ethical Usage Handbooks" that provide clear legal certainty for staff.
- **Community of Practice (CoP) Models:** Institutional support should facilitate spaces where "early adopters" can share evidence-based practices with more hesitant colleagues, humanizing the technology through local success stories.

Illustrative quotes (anonymised) or examples that exemplify key points.
The following excerpts exemplify the core tensions and aspirations identified during the research phase:

- **On Institutional Stance:** *"There is a disconnect... no efforts are being made to integrate these technologies into the institutional roadmap; the teacher is currently an island of innovation in a sea of administrative passivity."* (Technology Specialist).
- **On the Nature of Learning:** *"AI should be viewed as a 'cognitive scaffold.' Our priority is ensuring it doesn't become a shortcut for critical thinking, but a tool that amplifies it."* (Institutional Director).
- **On Training Needs:** *"We don't need more manuals on how to use ChatGPT; we need a pedagogical framework that tells us how to assess a student who has used it."* (Senior Educator).
- **On Equity:** *"If we don't provide public, validated AI environments, we are essentially outsourcing our educational sovereignty to private corporations."* (Policymaker).

4. Integrated Analysis: Convergences and Divergences
Areas where survey and interview findings reinforce each other.

There is total alignment between both methods regarding the high rate of individual AI adoption. While 92.8% of survey respondents claim to use AI tools, the interviews confirm a "bottom-up" adoption driven by personal teacher initiative in the absence of official guidelines. Likewise, both sources agree that the predominant use is content creation and planning (75% in surveys) and the use of tools such as ChatGPT. Ethical concerns and data privacy also emerge as the primary shared risk across both sources.

Areas where stakeholder groups differ in their perceptions or priorities.
A significant gap is observed between teacher proactivity ("islands of innovation") and the institutional stance, defined in the

interviews as "productive inertia" or a "regulatory vacuum." While educators prioritize efficiency and personalization, policymakers and managers focus on caution and regulatory compliance. Furthermore, a resource disparity exists: technological centers are highly integrated with industrial standards, whereas NGOs and smaller centers face budgetary limitations and fear that AI will widen the social divide for vulnerable groups.

Cross-cutting issues that appear particularly significant within the national context.
The "legal vacuum" is a critical factor generating a paralyzing effect on the formal integration of AI. The need to shift from purely technical to pedagogical training is a constant demand; there is a call to know "how to teach with AI" rather than just "how the tool works."

Implications for the design of the AAA training programme and practical guidance resources.
Training resources must prioritize recognized competency frameworks (such as UNESCO or DigCompEdu) to provide professional validity. It is essential to include modules on legal security and ethics to reduce the feeling of vulnerability among teachers. Additionally, a model based on communities of practice is recommended, where "early adopters" can mentor their colleagues.

5. Conclusions and Recommendations
Summary of the most critical national needs and priorities identified through stakeholder engagement.
The absolute national priority is the creation of a clear regulatory and ethical framework that provides legal certainty to teachers and institutions. There is an urgent demand for specific pedagogical training that addresses AI-mediated learning assessment and the promotion of critical thinking in the face of model "hallucinations."

Implications for adult educators, institutions, and policymakers.

- **Educators:** Must evolve from being mere information providers to mentors and facilitators of autonomy.
- **Institutions:** Need to move from ad-hoc experimentation to official AI strategies that include ethical oversight committees and mandatory continuous training plans.
- **Policymakers:** Policy harmonization at the regional and national levels is necessary to avoid a multi-speed advancement that aggravates the digital divide.

Recommendations for capacity building, including topics to be covered in the AAA training and the *Guide to Responsible AI Use in Adult Education*.

- **AAA Training:** Should focus on human-centric AI use, avoiding technical information overload and focusing on high-value use cases, such as personalization for healthy aging or the inclusion of at-risk youth.
- **Guide for Responsible AI Use:** This resource should act as a "functional literacy" manual that translates complex concepts into practical safety and ethics guidelines.

Suggestions for areas requiring further investigation during the transnational analysis.
It is recommended to investigate how other partner countries are addressing the legal vacuum and whether successful models exist for assessing students who use AI intensively. It is also vital to compare whether the resource gap between tech centers and NGOs is a European pattern or specific to the Spanish context.

AI Act(ing)
in Adult Education

Desk Research

(Belgium)



1. Introduction

The Belgian adult education landscape is defined by its federalised governance, where the responsibility for lifelong learning and vocational training is distributed across the three linguistic communities: the Flemish, French, and German-speaking communities. This structure results in a varied ecosystem of providers, ranging from formal Adult Education Centres in the north to social advancement education in the Wallonia-Brussels Federation. These institutions serve a diverse population of adult learners, often focusing on those requiring digital upskilling or reintegration into the labour market. The purpose of this report is to construct an evidence-based understanding of the current state of AI integration within these adult learning systems, the AI literacy needs among adult educators and the institutional conditions influencing AI adoption. Sources for this report were selected based on their reliability and recency. The analysis incorporates official documents from national and European institutions, regional strategic roadmaps, and statistical reports from the Belgian Statistical Office. The methodology involved a qualitative content analysis of these sources to ensure that the findings align with both national realities and European directives such as the AI Act.

2. National Policy and Strategic Context

Belgium's strategic approach to AI is characterised by a dual focus on economic competitiveness and social inclusion, and is shaped by regional roadmaps such as the "Vlaams AI-plan" and the Walloon "DigitalWallonia4.ai" framework. These strategies increasingly prioritise digital transformation and the upskilling of the workforce, operating under the umbrella of the federal "AI 4 Belgium" coalition, which seeks to position the country as a leader in trustworthy AI. The relevance of national frameworks to European frameworks is substantial. Belgium is rapidly updating its strategies to align with the Digital Education Action Plan and the European Skills Agenda. Of particular importance is the alignment with the EU AI Act (Regulation (EU) 2024/1689), a landmark law that sets safety standards for artificial intelligence across Europe. Under this law, AI tools used in adult education and vocational training are officially classified as "high-risk", since a mistake or bias could unfairly impact an adult's degree or their future job opportunities. To protect learners, this classification requires Belgian educational institutions to implement three strict safety measures: transparency, human oversight, and risk-management mechanisms. These requirements become fully mandatory on 02.08.2026.
The ethical and legal principles guiding AI use in Belgium are rooted in the General Data Protection Regulation (Official Journal of the European Union, L 119/1; date of adoption: 27.04.2016; date of entry into force: 25.05.2018), which remains the primary governance framework for data-driven educational tools. Regional authorities have supplemented this with specific ethical guidelines that emphasize human-centred innovation and the prevention of algorithmic bias in adult learning.

However, within these frameworks, adult education is often viewed through the lens of labour market flexibility rather than being treated as a standalone pedagogical sector. In practice, this means that the national "capacity" to handle AI is being built primarily by providing companies and educational institutions with financial incentives to deliver job-specific AI training. While this ensures that the workforce is ready to handle AI-driven shifts in the workplace, it often overlooks the need for broad AI literacy. Consequently, there remains a critical gap in addressing the human-centred side of AI, such as safeguarding ethical standards, promoting equity, and enhancing the specific pedagogical quality required for diverse adult learning environments beyond mere employability. Furthermore, despite the high-level strategies, statistical data reveals a significant gap at the level of implementation. As of 2025, while 61.2% of the Belgian population aged 16 to 74 possess at least basic digital skills, the target set in "Europe's Digital Decade" of 80.0% by 2030 remains a challenge for the national adult education sector (Statbel, 2025). Ultimately, while the national system formally expects institutions to promote AI literacy that extends beyond technical skills to include "ethical decision-making" and "critical thinking," the current policy landscape presents a notable challenge. On one hand, it establishes clear incentives for modernisation—such as regional funding for digital infrastructure—yet on the other, it places a heavy burden of compliance on providers that may lack the legal expertise to navigate the complex high-risk requirements of the AI Act. This suggests that for Belgium to meet its strategic goals, further support is needed to bridge the gap between technical infrastructure and regulatory readiness.

3. Institutional Practices and Digital Readiness

The preparedness and capacity of Belgian adult education institutions to adopt AI-based tools vary significantly between large-scale public providers and smaller organisations. Leading entities such as the Flemish *VDAB* and the French-speaking *Bruxelles Formation* have pioneered AI-enabled initiatives, particularly in the use of adaptive learning platforms and automated systems for matching learners with labour market demands. For example, these institutions have integrated AI-driven chatbots and predictive analytics to support learner retention and to personalise training pathways for job seekers. Nevertheless, institutional readiness across Belgium remains uneven. Even though a large number of adult education organisations incorporate AI in some capacity—ranging from administration to classroom experimentation, a significant governance gap exists. According to the Monitor voor Volwassenenonderwijs (2023), only 12.0% of Flemish institutions have a formalised strategy for the responsible integration of generative AI. This discrepancy suggests that while AI use is widespread, it remains largely uncoordinated and lacks the strategic alignment necessary for long-term pedagogical quality. The transition from experimental use to systemic integration is currently hindered by several structural barriers (Monitor voor Volwassenenonderwijs, 2023):

- **Infrastructure:** Limited access to high-performance computing resources in smaller social advancement institutions.

- **Organisational Culture:** A "wait-and-see" approach often prevails among management due to uncertainties regarding the long-term impact of AI on teaching roles and the legal liability of automated assessment.
- **Capacity:** There is a notable shortage of internal technical expertise required to conduct rigorous data governance and ensure compliance with the "high-risk" AI classifications under the AI Act.

To address these imbalances, the "FutureProof Education" initiative—a joint UNESCO-EU project involving both the Flemish and French communities of Belgium—represents a multi-systemic attempt to bridge these gaps by creating practical toolkits and professional development resources specifically for schools and school leaders (UNESCO, 2025).

4. Educator Competences and AI Literacy Needs

Within the Belgian context, AI literacy is no longer viewed solely as a technical proficiency but as a combination of pedagogical, ethical, and evaluative capacities. Educators are expected to be able to critically assess AI-generated content, adapt their teaching practices to incorporate AI tools responsibly, and support learners in developing their own digital citizenship. Therefore, national expectations regarding educators' digital and AI-related competences are increasingly formalised through professional standards that align with the European DigiComp framework. Availability of professional development varies by community:

- **Flemish Community**: The "Kenniscentrum Digisprong" provides a central resource for digital training, though AI-specific modules are still being phased in as a standard requirement.
- **Wallonia-Brussels Federation**: The "Institut de la Formation en cours de Carrière" (IFPC) has introduced short-term training sessions on digital tools, but deep-dive courses on the pedagogical use of AI remain limited.

Despite relevant opportunities, there are still gaps in educators' readiness. Research suggests that while 65.0% of Belgian educators feel confident using basic digital tools, fewer than 20.0% believe they have the competence to use AI to design responsive or personalised learning environments (European Commission, 2024). Specific identified gaps include a lack of confidence in addressing the ethical risks of AI, a limited understanding of how to mitigate algorithmic bias and an inability to navigate pedagogical and technical risks associated with generative AI. These competence-related needs are critical for the design of the AAA project's training. Educators require training that focuses on the practical application of AI, such as prompt engineering for curriculum development, alongside a robust grounding in the ethical standards required to safeguard pedagogical quality. Without targeted support, the integration of AI risks being a disruptive rather than an enhancing force in the Belgian adult education sector.

5. Barriers, Opportunities, and Emerging Trends

Systemic Barriers to AI Adoption

The landscape of AI use within the Belgian adult education sector is defined by a paradox; while technology offers transformative potential, implementation is obstructed by complex systemic hurdles. The primary challenge in Belgium remains structural and regulatory. Since education is managed separately by the Flemish, French, and German-speaking communities, the resulting fragmentation in data privacy standards and ethical oversight creates confusion for both providers and technology developers (Wallonia-Brussels Federation, 2024; European Commission, 2024). Furthermore, ethical and pedagogical barriers are tied to a persistent "digital divide". Organisationally, a "capacity gap" persists, as many institutions lack the internal legal and technical expertise to meet the strict transparency requirements of the EU AI Act.

Opportunities for Enhancing Adult Learning

Despite these barriers, AI presents significant opportunities for the sector: Personalisation, via AI-driven adaptive platforms provides 24/7 support, allowing adult learners to balance education with work and family commitments by learning at their own pace (Flemish Ministry of Education, 2025); Efficiency, through the automation of routine tasks, such as grading and scheduling, allow educators to redirect their focus toward "high-value pedagogical interactions" and mentoring, which are vital for retention; and Accessibility and Inclusion, essential for Belgium's diverse migrant population, through real-time translation and text-to-speech tools, promoting digital inclusion by lowering language barriers to certification (European Commission, 2024).

Anticipated Future Developments and Trends Looking toward late 2026, the national focus is shifting from "Automation" to "Human-Centred Augmentation." Three major shifts are anticipated:

1. **Policy and Regulation**: As the AI Act's "high-risk" obligations become fully mandatory on 02.08.2026 (Official Journal of the EU, 2024), institutions will transition toward "auditable evidence trails" to ensure all pedagogical AI tools are transparent and human-supervised.
2. **Innovation Ecosystems**: There is a growing trend toward "modular AI content"—short, stackable learning units that allow for rapid curriculum updates in response to technological shifts.
3. **Labour Market Alignment**: Demands for an AI-literate workforce are forcing closer collaboration between IT and pedagogical staff, with institutional success measured by the ability to scale digital offerings effectively (European Commission, 2024).

6. Implications for the AAA Project

The national findings for Belgium highlight several urgent needs that must inform the project's AI training course and the Guide to Responsible AI Use in Adult Education. The most pressing requirement is for a practical, clear framework that helps institutions and educators navigate the complexities of the AI Act without being overwhelmed by technical jargon.

Key priorities for the project include:

- **Training Content**: Focus on "ethical literacy" and the ability to evaluate AI tools for compliance with European values. The course must bridge the gap between high policy ambitions and the limited number of trainers that feel prepared to use AI pedagogically.
- **Guidance for Providers**: The Guide to Responsible AI Use must provide checklists for institutional managers on "high-risk" system compliance, data governance, and human oversight.

The Belgian case illustrates that while the policy foundation is strong, "on-the-ground" readiness requires immediate, targeted intervention through capacity-building initiatives to ensure AI acts as a pedagogical enhancer rather than a disruptive force.

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AI Act(ing)
in Adult Education

Stakeholder Involvement

(Belgium)



1. Introduction

This National Stakeholder Engagement Report constitutes a core component of Work Package 2 (WP2) within the "AI Act(ing) in Adult Education" (AAA) project. Its purpose is to analyse the current state of Artificial Intelligence (AI) awareness, adoption, and integration within the Belgian adult education and Vocational Education and Training (VET) ecosystem. As the digital economy accelerates, Belgian adult educators face a dual challenge: the need to upskill themselves while simultaneously preparing a diverse cohort of learners for a labour market increasingly influenced by the EU AI Act. The report is based on a combination of quantitative and qualitative data, including a national survey with 22 respondents and 13 semi-structured interviews with key stakeholders such as adult educators, trainers, curriculum designers, policymakers, and digital education experts. By documenting the specific needs and technical gaps of Belgian stakeholders, this research ensures that the project's subsequent outputs are not merely theoretical but are tailored to the practical, linguistic, and regulatory realities of the Belgian context. Together, these methods provide a comprehensive understanding of both systemic trends and individual experiences.

2. Methodology

2.1 Survey Administration

The quantitative phase involved the dissemination of a structured online survey targeting professionals in adult education and VET across Belgium. The survey aimed to capture insights into AI usage, perceptions, challenges, and training needs. A total of 22 valid responses were collected, meeting the minimum target. Respondents were reached through professional networks, VET providers, digital education organisations, and policy-related stakeholders. The survey was distributed across the Flemish, Walloon, and Brussels-Capital regions to reflect the diversity of the Belgian system. Data collection was conducted using Google Forms platform. Given that the Headway's primary resources and outputs are predominantly developed in English, the survey instrument was provided exclusively in English.

2.2 Interview Process

The qualitative phase consisted of 13 semi-structured interviews with a diverse range of stakeholders, including adult educators, VET trainers, curriculum developers, digital experts, and representatives from public and non-profit organisations. Interviews followed the common AAA research guidelines and were conducted in compliance with GDPR requirements, including informed consent procedures. Sessions were carried out by telephone, depending on participant availability. Each interview lasted approximately 30–45 minutes, allowing for in-depth exploration of institutional practices, perceptions, and needs. Detailed notes were taken and later synthesised to identify recurring themes and contextual nuances within the Belgian adult education landscape.

3. Survey Findings

The survey sample is composed primarily of experienced professionals, with the largest age group being 35–44 years (13 respondents), followed by individuals aged 45–54. The majority of respondents work as adult educators or trainers (16 out of 22), mainly within vocational training centres (12) and public adult education institutions (5). All respondents demonstrate a baseline level of digital competence. Regarding AI-specific familiarity, participants are evenly split between being moderately familiar (50%) and very familiar (50%) with AI-related concepts such as machine learning and generative AI. Awareness of AI applications in education is slightly lower, with 68% reporting moderate awareness and 32% high awareness. When asked how they currently understand the concept of "AI in adult education", respondents generally describe it as a practical and supportive tool integrated into teaching and learning processes. AI is most commonly perceived as a way to assist both educators and learners by improving efficiency, enhancing learning experiences, and making education more adaptive and personalised. Many respondents associate AI with tools such as ChatGPT or Gemini that help structure lessons, generate ideas, and provide learning support. It is frequently described as a form of assistance that enhances teaching practice rather than replacing educators, supporting the idea that AI serves as an enabler of better pedagogy and learner engagement. Some respondents emphasise its role in making learning faster, more flexible, and more tailored to individual learner needs, while others frame it as part of the broader digital transformation of adult education. Overall, AI is understood as a supportive educational tool that contributes to more interactive, personalised, and efficient learning environments, provided it is used with appropriate guidance and training.

AI adoption among respondents is universal, with 100% reporting current use of AI tools in their professional practice. Overall confidence in using AI is relatively high, with 64% of respondents reporting being "very" or "fully" confident in using AI responsibly. Despite this, significant concerns remain regarding data protection and privacy (18 out of 22 concerned), bias and unfair outcomes, over-reliance on AI systems, and accuracy and reliability of outputs. Institutional support is uneven. While some respondents report existing guidelines, others indicate that policies are still under development or absent altogether. There is strong consensus regarding the importance of AI in the near future, with 91% of respondents considering it "very important" or "essential" for their professional roles within the next 3–5 years. Key training needs include technical implementation of ai tools (13 mentions), ethical and responsible ai use (10 mentions), pedagogical integration (8 mentions), and ai regulation and institutional policy (6 mentions). Additional needs relate to critical evaluation skills, prompt design, and staying updated on emerging tools. In terms of delivery formats, online self-paced learning is strongly preferred (20 out of 22 respondents), highlighting the importance of flexibility. Recognition mechanisms such as certification are also seen as motivating factors.

4. Interview Insights

Interview data reflects a diverse range of professional roles, including adult educators, VET trainers, curriculum designers, digital experts, and policy-level stakeholders. These roles are embedded within varied institutional cultures and strategic orientations, which influence how AI is perceived and adopted. Some organisations demonstrate a proactive, innovation-driven approach, while others prioritise social inclusion and human-centred learning, resulting in more cautious engagement with AI. Interview data reveals a fragmented landscape characterised by differing levels of readiness and strategic alignment. In some institutions, particularly those linked to digital or technical fields, AI is actively explored, though often without formal governance structures. In other institutions, especially within social or inclusion-focused education, AI adoption is minimal and approached with caution. A recurring theme is the disconnect between institutional ambitions and operational realities. While some organisations promote innovation at a strategic level, frontline educators often lack clear guidance, resources, or permission to integrate AI into their practice.

Stakeholders identify significant opportunities in personalised learning and adaptive content, efficiency gains in lesson preparation, enhanced learner engagement, and support for administrative and repetitive tasks. However, these are counterbalanced by key challenges, including uncertainty around ethical and legal implications, lack of institutional policies, variability in digital infrastructure, risk of reduced critical thinking among learners. Several interviewees emphasised the importance of maintaining human oversight, particularly in contexts where trust, communication, and social interaction are central. The interviews highlight substantial gaps in trainer preparedness and confidence in pedagogical integration, understanding of AI limitations and risks, institutional coordination and knowledge sharing and access to practical, context-specific training resources. In many cases, AI use is driven by individual initiative rather than organisational strategy, leading to inconsistent practices. Key priorities identified include the development of clear ethical guidelines and usage policies, the provision of practical, hands-on training for educators, the strengthening critical evaluation skills and the supporting collaboration and knowledge exchange within institutions.

5. Integrated Analysis: Convergences and Divergences

Both survey and interview findings converge on several key points. There is a strong shared recognition of AI's growing importance, with 91% of survey respondents identifying it as "very important" or "essential" for their future roles, a perception consistently echoed in interviews across all stakeholder profiles. In both data sources, AI is already embedded in daily professional practices, particularly for lesson planning, content creation, and administrative tasks, often driven by individual initiative rather than institutional strategy. Furthermore, there is a clear and consistent demand for practical, hands-on training combined with ethical and responsible use guidance. Both survey respondents and interviewees emphasise the need to move beyond theoretical understanding towards applied skills, particularly in areas such as pedagogical integration, critical evaluation of outputs, and data protection. Across both datasets, stakeholders also converge on the perception of AI as a supportive tool, reinforcing rather than replacing the role of the educator. The importance of maintaining human oversight and professional judgement emerges as a shared principle.

However, divergences emerge in terms of institutional readiness and stakeholder perceptions. While survey respondents generally report relatively high levels of confidence and active use of AI tools, the interviews reveal more nuanced and, at times, critical perspectives regarding organisational preparedness. Interviewees highlight structural barriers such as unclear governance frameworks, lack of coordinated strategies, and insufficient institutional support. Differences are also evident across stakeholder groups and sectors. Educators and trainers tend to focus on practical classroom applications and immediate pedagogical benefits, whereas policy-level actors and coordinators emphasise compliance, standardisation, and risk management, particularly in relation to the regulatory environment. Similarly, stakeholders from technical or industry-linked training contexts demonstrate higher levels of adoption and openness to experimentation, while those working in social, inclusion-oriented, or low-resource settings express greater caution, often prioritising ethical considerations, accessibility, and the preservation of the human dimension in learning processes. A number of cross-cutting issues emerge as particularly significant within the Belgian context. The most prominent is the gap between individual competence and institutional support. While many educators demonstrate initiative and capability in using AI tools, organisations frequently lack clear policies, structured training frameworks, or mechanisms for knowledge sharing. This results in fragmented practices and limits the potential for scaling innovation.

In addition, data protection and ethical concerns represent a transversal issue across all stakeholder groups, regardless of sector or level of experience. The absence of consistent institutional guidelines contributes to uncertainty and cautious adoption. Another key issue is the risk of over-reliance on AI and the potential erosion of critical thinking skills among learners, which is highlighted in both survey responses and interviews. Finally, the need for flexible and accessible professional development formats, particularly self-paced online learning, emerges as a shared priority linked to time constraints and workload pressures. These findings suggest that the AAA project should prioritise bridging the gap between practice and policy by providing not only training for educators but also guidance for institutional leadership. There is a clear need to support both individual capacity building and organisational readiness through flexible, accessible, and context-sensitive training resources, complemented by practical tools and policy-oriented guidance that can be adapted across diverse adult education settings.

6. Conclusions and Recommendations

The stakeholder engagement process highlights that Belgium's adult education sector is at a transitional stage in AI adoption. While awareness and usage are already high, structured integration remains limited. Several essential requirements have emerged from the engagement process. Specifically, there is a demand for practical skills for implementing AI tools in education and a stronger focus on ethical and responsible AI use. Furthermore, the sector requires clear institutional policies and guidance, alongside the development of critical evaluation competencies. Based on these findings, the AAA Project should focus on developing modular, self-paced training programmes centered on real-world applications. These programmes ought to include ethical frameworks and data protection guidance aligned with EU regulations. To assist educators directly, the project should provide practical tools such as prompts, case studies, and scenarios. Additionally, the project can support institutional capacity building through the provision of policy templates and guidelines. Future analysis should explore further investigation into the differences between regional systems within Belgium. It is also necessary to examine sector-specific needs, such as the distinction between technical and social education. Finally, research should consider the long-term impact of AI on teaching roles and learner outcomes.

AI Act(ing)
in Adult Education

Desk Research

(Greece)



1. Introduction

Adult education plays a central role in lifelong learning policies across the European Union, supporting citizens to adapt to technological change and evolving labour market demands. The increasing integration of Artificial Intelligence (AI) into educational and training systems is reshaping how learning is designed, delivered, and assessed, including in adult education contexts. AI applications can support personalised learning, improve assessment processes, and automate administrative tasks, thereby contributing to efficiency and accessibility when implemented responsibly (European Commission, 2021). In Greece, participation in adult education remains below the EU average, reflecting structural challenges in lifelong learning engagement. Eurostat data indicate that Greece reports one of the lowest adult participation rates in education and training among EU Member States (Eurostat, 2023), at approximately 15%. This low participation rate is a critical contextual factor, as effective AI integration in adult education presupposes both baseline digital competences and sustained learner engagement. It also highlights existing inequalities in access to lifelong learning opportunities, which may be further amplified by uneven access to digital technologies.

1.1 Purpose and Scope

The purpose of this national desk research is to map, analyse, and synthesise the policy, institutional, and competence-related conditions shaping the integration of Artificial Intelligence in Greek adult education. It provides an evidence-based overview of the current state of AI readiness, adoption, and governance within the sector. Consequently, the findings of the present report serve three interconnected purposes:

- Provide a structured analysis of the Greek adult education context in relation to AI integration and digital transformation;
- Contribute directly to the consolidated transnational report entitled “AI: Challenges and Needs in the Adult Education Sector” under WP2;
- Inform the development of the Guide to Responsible AI Use in Adult Education (WP3) and the AI Training Course (WP4).

In addition, the desk research establishes a structured evidence base for Greece by addressing the following dimensions:

- Mapping the current policy and strategic framework governing AI and digital education;
- Identifying institutional practices and levels of digital and AI readiness;
- Examining educator competences and AI literacy needs within adult education;
- Analysing systemic, institutional, and pedagogical barriers to AI adoption;
- Highlighting emerging opportunities for the integration of AI in adult learning;
- Assessing the extent to which current developments align with European policy frameworks and priorities.

2. National Policy and Strategic Context

2.1 National AI and Digital Policy Framework

In Greece, AI development is embedded within broader national digital transformation strategies rather than a dedicated education-specific policy framework. The National Strategy for Artificial Intelligence, coordinated by the Ministry of Digital Governance, establishes priorities for AI development across public administration, research, innovation, and skills development (Hellenic Ministry of Digital Governance, 2021). This strategy is complemented by Greece’s Digital Transformation Strategy and its alignment with the EU Digital Decade framework, both of which emphasise digital skills development, upskilling, and reskilling of the population (European Commission, 2023). However, these frameworks primarily address digital transformation in general terms, rather than providing sector-specific operational guidance for AI in adult education. Within the adult education system, policy frameworks focus primarily on digital literacy and lifelong learning participation. AI-specific competences are not explicitly addressed, and no dedicated regulatory or strategic framework exists for AI integration in adult learning provision (OECD, 2022). This results in a policy gap between high-level digital ambitions and operational guidance for educational practice.

2.2 Alignment with European Policy Frameworks

At EU level, the Digital Education Action Plan (2021–2027) promotes the integration of digital and AI technologies in education systems to enhance accessibility, quality, and inclusiveness (European Commission, 2021). The European Skills Agenda further reinforces the need for advanced digital competences and continuous upskilling across the workforce. In addition, the proposed EU AI Act establishes a regulatory framework for trustworthy AI, including requirements related to transparency, accountability, and risk management. While not education-specific, it has direct implications for the governance of AI use in educational settings.

2.3 Ethical and Governance Principles

Greek national strategies emphasise alignment with EU ethical principles, including data protection, human-centred AI, and respect for fundamental rights (Hellenic Ministry of Digital Governance, 2021). However, these principles remain at a general policy level and are not translated into operational guidance for adult education institutions. As a result, the application of ethical standards in AI use within adult education is largely implicit and decentralised, leaving institutions and educators to interpret responsibilities individually.

3. Institutional Practices and Digital Readiness

3.1 Digital Readiness in Adult Education Institutions

The adoption of AI in Greek adult education is closely linked to overall digital maturity levels within institutions. Adult education provision includes public vocational training centres, lifelong learning structures, and employment-oriented training programmes. While basic digital tools are widely used for administration and online delivery, the adoption of advanced technologies, such as AI, remains limited. Evidence from OECD and CEDEFOP indicates that digital transformation in adult education is primarily focused on digitisation rather than pedagogical innovation (OECD, 2022; CEDEFOP, 2023). This uneven digital readiness reflects broader structural constraints, including limited infrastructure, fragmented governance, and dependence on project-based innovation.

3.2 Current Use of AI in Practice

The use of AI in Greek adult education remains limited and largely indirect. Where present, AI functions are embedded within digital platforms, namely learning management systems and automated administrative tools, without being formally identified or governed as AI systems. More advanced applications are primarily found in EU-funded pilot projects, particularly Erasmus+ initiatives focused on innovation in teaching and learning. However, these remain isolated and are not systematically integrated into national provision, resulting in fragmented and non-sustained adoption patterns (CEDEFOP, 2023).

3.3 Educator Competences and Challenges

The competences of adult educators represent a key constraint in AI integration. While general digital skills are present, AI literacy, including understanding of algorithmic systems, data use, and ethical implications, remains limited (European Commission, 2023). Professional development programmes primarily focus on general digital pedagogy, with limited or no structured provision on AI-specific competences. This creates a gap between emerging technological realities and educator preparedness, limiting both confidence and pedagogical innovation.

4. Educator Competences and AI Literacy Needs

4.1 Policy Expectations on Competences

National frameworks in Greece recognise the importance of digital competences in lifelong learning, but do not explicitly define AI-related competences for adult educators (Ministry of Digital Governance, 2021). As a result, expectations regarding AI literacy remain indirect and underdeveloped. This absence of formal competence definitions creates ambiguity in how educators are expected to engage with AI tools in practice.

4.2 Professional Development Provision

Existing training opportunities for adult educators focus primarily on digital tools and online teaching methodologies. AI-specific training is largely absent from national continuing professional development systems and is instead delivered through short-term EU-funded initiatives (OECD, 2022). These initiatives are valuable but limited in scope, reach, and sustainability, resulting in uneven access to AI-related learning opportunities.

4.3 Competence Gaps

Key gaps include limited understanding of AI system functioning, algorithmic bias, data protection requirements, and pedagogical integration of AI tools. These gaps reduce the ability of adult educators to critically evaluate AI outputs and to integrate AI meaningfully into teaching practice. This indicates a structural need for targeted AI literacy development that combines technical understanding, ethical awareness, and pedagogical application.

5. Barriers, Opportunities, and Emerging Needs

5.1 Systemic Barriers

Several structural barriers continue to hinder the effective and responsible adoption of AI in adult education in Greece. These include limited digital infrastructure, uneven institutional capacity, and the absence of a coordinated national strategy specifically addressing AI integration in education. Existing policy frameworks tend to prioritise general digital skills development rather than AI-specific competences, leaving institutions without clear direction for implementation (OECD, 2022; European Commission, 2023). In addition, ethical uncertainty and the lack of operational governance frameworks contribute to cautious and often fragmented adoption practices. In the absence of clear guidelines on data protection, transparency, and acceptable use, institutions and educators are left to make individual judgements regarding AI use. This situation limits systematic engagement and increases the risk of inconsistent or inappropriate application of AI tools across educational settings (European Commission, 2021).

5.2 Opportunities for Adult Learning

Despite the constraints, AI presents significant opportunities for enhancing adult education in Greece. AI-supported tools can enable more personalised learning pathways, allowing educators to adapt content, pace, and feedback to the diverse needs of adult learners. This is particularly relevant in adult education contexts, where learners often combine education with work and family responsibilities. AI also has the potential to improve accessibility and inclusion by supporting learners with different linguistic, cognitive, or socio-economic backgrounds through adaptive content and assistive technologies. Furthermore, the use of automated feedback, learning analytics, and digital guidance systems can increase efficiency in both teaching and learning processes, reducing

administrative workload and enabling more targeted learner support (CEDEFOP, 2023). These developments are closely aligned with broader European priorities related to lifelong learning, employability, and digital inclusion, as outlined in key policy frameworks such as the Digital Education Action Plan and the European Skills Agenda (European Commission, 2021; European Commission, 2023).

5.3 Emerging Trends

Future developments are likely to be shaped by increasing alignment with EU regulatory frameworks, including the AI Act and the Digital Decade Strategy. At the same time, Greece's evolving innovation ecosystem and participation in EU-funded programmes are expected to support gradual expansion of AI-related educational practices. Labour market demand for AI-related skills is also likely to increase pressure on adult education providers to integrate AI literacy into their programmes.

6. Implications for AAA Project

The findings indicate a structural gap between policy ambitions and practical implementation in Greek adult education. While digital transformation is a strategic priority, AI-specific competences and governance mechanisms remain underdeveloped. For the AAA project, this highlights the need to translate high-level EU principles into practical, accessible tools for educators and institutions. In particular, there is a clear need for structured guidance on AI literacy, ethical use, and pedagogical integration. The Guide to Responsible AI Use should therefore provide concrete, practice-oriented frameworks addressing data protection, classroom application, and institutional policy development. In parallel, the training programme should prioritise applied AI competences, including prompt engineering, evaluation of AI outputs, and pedagogical design. Finally, further empirical validation through stakeholder consultation is required, particularly regarding educators' lived experiences, ethical concerns, and institutional constraints in the use of AI in adult education.

7. Conclusions

The national desk research indicates that the integration of Artificial Intelligence in adult education in Greece remains limited, uneven, and largely unstructured. While AI is acknowledged within broader national digital transformation agendas, it is not yet translated into sector-specific strategies or operational frameworks for adult learning. This reflects a gap between policy-level ambition and implementation at institutional level. At the institutional level, AI adoption is fragmented and primarily driven by isolated initiatives or externally funded projects. There is limited evidence of coordinated strategies, sustained investment, or systematic integration of AI into adult education provision. This results in uneven levels of digital and AI readiness across organisations. In terms of educator competences, the findings highlight a clear distinction between general digital skills and AI-specific literacy. While adult educators demonstrate baseline digital competence, there is limited evidence of structured development in areas, such as understanding AI systems, evaluating outputs, and addressing ethical considerations. This constrains the effective and critical use of AI in pedagogical contexts. Across all areas, the absence of clear operational guidance on data protection, ethical use, and governance emerges as a consistent feature. Although national and European frameworks establish general principles, these are not sufficiently translated into practice-oriented guidance for adult education settings. The analysis confirms that AI holds significant potential to support adult learning, particularly in relation to personalisation, accessibility, and efficiency. However, this potential remains largely unrealised within the current national context due to the structural, institutional, and competence-related limitations identified. Overall, the findings point to a developing landscape in which AI is present in Greece, but not yet systematically integrated, with progress dependent on future alignment between policy frameworks, institutional capacity, and educator competences.

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AI Act(ing)
in Adult Education

Stakeholder Involvement

(Greece)



1. Introduction

The National Stakeholder Engagement Report presents the findings of the needs and gaps identified in Greece in relation to the use of Artificial Intelligence (AI) in adult education. As the Greek partner of the consortium, ReadLab developed this report and coordinated the national activities under A2.2, following the common methodology established by Syncnify as Work Package Leader. This ensured a consistent and robust research approach across all partners, enabling the aggregation and comparability of data collected across the five participating countries. Stakeholder engagement in Greece was conducted using a mixed-methods approach. Quantitative data were collected through a structured survey completed by 22 professionals active in adult education and related fields. Qualitative data were gathered through 15 semi-structured interviews with designated project stakeholders, producing rich insights into professional experiences, institutional contexts, and identified needs.

1.1 Purpose and Scope

The purpose of this report is to document, analyse, and synthesise the perspectives, experiences, and professional development needs of Greek stakeholders in relation to the use of Artificial Intelligence in adult education. Consequently, the findings of the present report serve three interconnected purposes, as described below:

- Provide a needs assessment of the Greek context in relation to the use of AI in adult education;
- Contribute directly to the consolidated transnational report entitled “AI: Challenges and Needs in the Adult Education Sector” under WP2;
- Inform the design of the Guide to Responsible AI Use in Adult Education (WP3) and the AI Training Course (WP4).

In addition, the components of the National Stakeholder Engagement Report provide a structured and mutually reinforcing evidence base for Greece, covering the following areas:

- Mapping awareness levels of AI use in adult education;
- Identifying adoption patterns;
- Reporting training priorities across a diverse professional cohort;
- Analysing the conditions, constraints, and motivations shaping the use of AI in Greek adult education settings;
- Documenting current levels of AI integration in adult education curricula;
- Examining systemic, institutional, and individual factors that enable or hinder responsible and effective adoption.

2. Methodology

The methodology of the present report was fully aligned with the guidelines provided by Syncnify and applied by all consortium members to ensure robust and comparable results for the consolidated transnational report entitled “AI: Challenges and Needs in the Adult Education Sector”.

2.1 Survey Administration

ReadLab used the Google Forms survey developed by Syncnify and translated it into Greek to ensure engagement and contextual adaptation to the national research setting. The dissemination strategy for the survey was implemented through multiple channels:

- Publication on ReadLab’s LinkedIn network to reach relevant stakeholders;
- Targeted email invitations to existing professional contacts;
- Promotion during the interview phase, where participants were encouraged to share the survey within their professional networks.

A total of 22 respondents participated in the survey in Greece, meeting and slightly exceeding the minimum target of 20 responses per project partner. This response rate reflects strong participant engagement and the effectiveness of the dissemination strategy, ensuring a sufficiently robust dataset for analysis. Data collection was conducted via Google Forms. Anonymous responses were exported into an Excel dataset, where they were systematically processed, monitored, and analysed. This facilitated efficient aggregation and evaluation of the data. The findings and visualisations presented in the following section (Survey Findings) are based on this analytical process.

2.2 Interview Process

The interview process was conducted by ReadLab in accordance with the common methodological guidelines, including defined target groups, interview questions, reporting templates, and GDPR-compliant consent forms. Interviewees were informed in advance about the purpose and scope of the project and the specific objectives of the activity. They were also given the opportunity to review the consent form and interview questions prior to participation to support informed consent and adequate preparation. In line with GDPR requirements, participants were informed about the anonymisation of their personal data and the confidentiality of the information collected within the AAA project. They were also notified that audio and, where applicable, video recording

would take place subject to their explicit consent. Participants were made aware when recordings commenced and concluded.
A total of 15 interviews were completed in Greece, in line with the project target per partner, ensuring compliance with project KPIs and enabling in-depth qualitative engagement on the use of AI in adult education. The stakeholder sample reflected the designated target groups defined in the activity guidelines. More specifically, the sample included a diverse range of professional profiles within the adult education ecosystem:

- 6 Adult Educators
- 2 Owners of Private Education Centers
- 3 Trainers in Private Sector Workplaces
- 2 Trainers in Public Sector Workplaces
- 1 AI for Educators Trainer
- 1 Instructional Designer and E-learning Developer

The interviews followed a semi-structured format to allow for in-depth qualitative exploration of the topics discussed. As a result, duration varied depending on the depth of participant responses. The majority of interviews lasted between 20 and 45 minutes, reflecting prominent levels of engagement and alignment with the interview guidelines.

3. Survey Findings
The present section analyses the responses of the 22 survey participants, focusing on key dimensions of their professional profiles, awareness and use of AI, current practices, challenges, barriers, and training needs.

3.1 Professional Background and Experience
The vast majority of respondents (70%) are adult educators while the rest are split equally among the remaining categories (curriculum designer, teachers, policy officer, etc.). As a result, the sample reflects a highly qualified and professionally experienced cohort:

Educational Attainment
- 18/22 respondents hold tertiary qualifications (Bachelor's, Master's, PhD)
- 4/22 hold secondary or post-secondary non-tertiary education

Professional Background
- 15/22 are directly engaged in adult education (educators/trainers)
- 7/22 represent complementary roles, including secondary education, policy, curriculum design, and specialised training

Sectoral Distribution
- 9/22 in the private education and training sector
- 6/22 in public education and training institutions
- 3/22 in higher education
- 4/22 in other sectors (NGOs, private companies, specialised services)

Overall, the sample captures a well-qualified and cross-sectoral professional group, providing a relevant basis for analysing AI use in adult education in Greece.

3.2 Awareness Levels and Perceptions of Emerging Technologies
The findings indicate relatively high levels of digital competence among respondents, accompanied by growing awareness and engagement with emerging technologies, particularly Artificial Intelligence (AI). While familiarity and confidence levels are strong, the data also reveals a clear need for further capacity building and structured guidance to support effective and responsible use.

Digital Proficiency
- 18/22 report at least intermediate digital skills
- 4/22 report basic or limited proficiency

Training Experience and Interest
- 8/22 have participated in training focused specifically on AI
- 9/22 have participated in training with a focus on general digital skills
- 4/22 have not yet participated, but intend to do so
- 1/22 has not participated and does not intend to

Familiarity with AI
- 8/22 report being remarkably familiar with AI
- 9/22 report moderate familiarity
- 3/22 report low familiarity

- 2/22 report no familiarity
- 1/22 reports specialised/advanced understanding

Confidence in Identifying AI Tools

- 7/22 report high confidence
- 1/22 reports full confidence
- 10/22 report moderate confidence
- 4/22 report low confidence

Awareness of AI in Education

- 8/20 report being highly aware of AI applications in education
- 7/20 report moderate awareness
- 4/20 report low awareness
- 1/20 reports no awareness

Perceptions of AI in Adult Education

AI is primarily perceived as a support tool that enhances efficiency and personalisation, with recognised potential for lifelong learning and increased accessibility.

Key Concerns

- Data Protection and Privacy
- Accuracy and Reliability of AI-generated Content
- Lack of Structured Training and Institutional Guidance

Overall, the data indicates a high level of digital readiness, with approximately 82% of respondents reporting at least intermediate digital skills and 77% demonstrating moderate to high familiarity with AI, while around 82% also express moderate to high confidence in identifying AI tools. At the same time, a smaller but significant minority (approx. 18–23%) report low levels of familiarity, confidence, or awareness, highlighting the continued need for targeted introductory and capacity-building interventions.

3.3 Current Practices

This section examines the use of Artificial Intelligence at both professional and educational levels. According to the survey findings, approximately 80% of respondents currently use AI tools either occasionally or regularly, while the remaining participants, although not yet users, express interest in future adoption. Among the tools most frequently used, language and writing support applications are the most prevalent (approximately 75%). This is followed by automated quiz or assessment generators (13%) and adaptive learning platforms (9%). AI tools are used for multiple purposes, as is apparent from the results of the following figure.

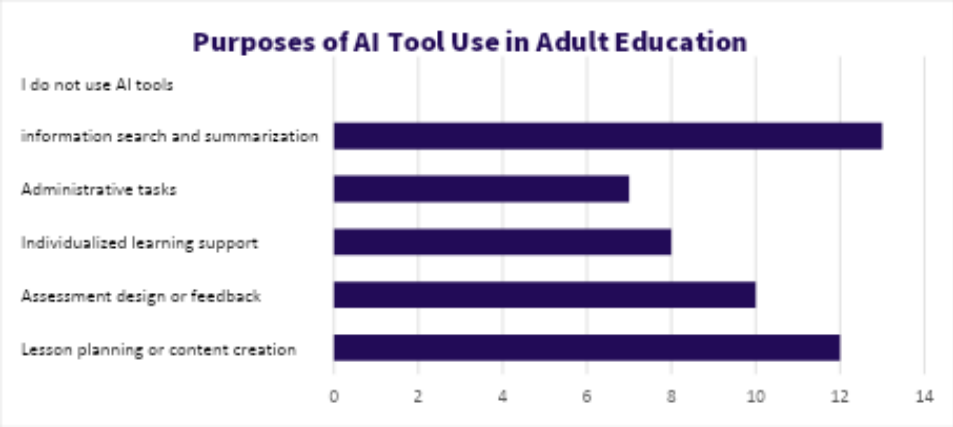


Figure 1. Survey Results: Purposes of AI Tool Use in Adult Education

The data further indicate that AI integration is primarily driven by research and information synthesis (59%), closely followed by core pedagogical tasks such as lesson planning and assessment design (55%). Overall, the findings suggest that AI has already become embedded in the professional practice of the majority of respondents, with no active non-users identified within the sample, indicating its establishment as a functional tool within adult education workflows.

3.4 Identified Challenges and Barriers

Survey findings on identified challenges and barriers highlight the main factors affecting the integration of Artificial Intelligence in

adult education in Greece. The data point to a combination of structural, institutional, and pedagogical constraints, alongside emerging ethical concerns related to AI use. At the same time, responses indicate that AI is already being actively used in educational practice, although in a context characterised by limited regulatory guidance and uneven institutional support.

Main Barriers to AI Integration

- Lack of training (41%) is identified as the primary barrier;
- Unclear regulations (36%) represent a significant systemic constraint;
- Ethical implications (32%) are also a major concern;
- Technical barriers (~30%) remain relevant;
- Lack of institutional support (14%) is also attributed as a challenge.

These results indicate a clear policy-practice gap, where AI is used or explored in practice but insufficiently supported through formal structures, training, and guidance.

Perceived Benefits and Practical Use

Despite the challenges, participants report a largely positive experience with AI. The main benefits include significant time savings and the automation of labour-intensive tasks such as lesson planning, assessment design, and content creation. These efficiencies enable educators to focus on higher-level pedagogical tasks.

Pedagogical and Practical Concerns

- Academic integrity risks (student over-reliance on AI)
- Factual inaccuracies and reliability issues in AI outputs
- Lack of emotional/contextual understanding in AI systems
- Absence of structured training contributes to non-systematic and experimental use

Ethical Concerns and Data Protection

Data protection is a universal concern among participants. While all respondents express some level of awareness regarding privacy risks, just over 30% identify data protection as their primary ethical concern, second only to over-reliance on automated systems (40%). A further 13% express concerns about the loss of teacher autonomy, while a small number of highlight issues related to bias and unfair outcomes. Open-ended responses reinforce these findings, highlighting concerns about:

- Lack of transparency in data handling by large AI providers
- Risks of cognitive dependency and reduced critical thinking
- Potential erosion of empathy and human judgement in education

Institutional Preparedness and Ethical Governance

In terms of institutional readiness, approximately 54% of respondents report that their organisations provide guidelines or safeguards for AI use, while 31% are in the process of developing them. However, 22% report the absence of any institutional guidelines, indicating uneven levels of preparedness across the sector. Participants consistently emphasise the need for a robust legal and ethical framework addressing bias, misinformation, and the protection of minors. From a pedagogical perspective, concerns are raised about the risk of "copy-paste" practices and the consequent erosion of academic integrity, highlighting the need to redesign learning activities to encourage deeper critical engagement.

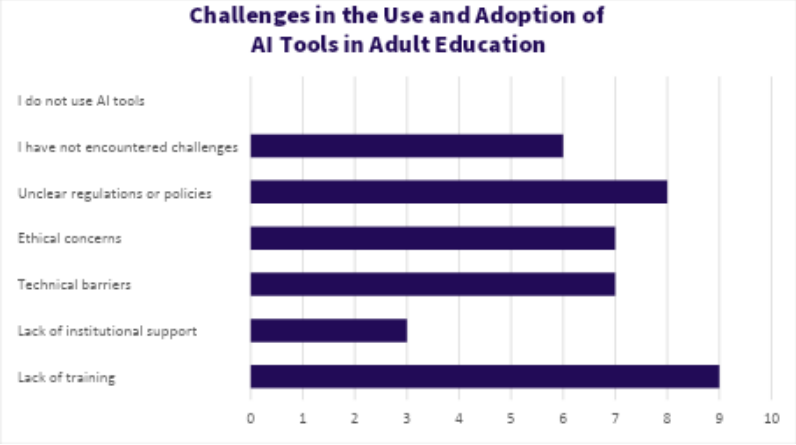


Figure 2. Survey Results: Challenges in the Use/Adoption of AI Tools in Adult Education

Overall, while AI is widely recognised as a powerful tool for enhancing efficiency and supporting teaching practice, there is a strong consensus that it must not replace human judgement, interaction, or the fundamental relational dimension of education.

3.5 Training Needs, Preferred Learning Formats, and Confidence Levels

The findings indicate a clear preference for practical, interactive, and applied learning formats, with face-to-face delivery emerging as the dominant modality. At the same time, the combined interest in blended and self-paced formats suggests a need for flexibility and continuous access to learning resources. Overall, respondents prioritise training that enables immediate application in professional contexts rather than purely theoretical instruction.

Training Needs

- 14/22 (64%): Technical Skills for Implementing AI Tools
- 11/22 (50%): Pedagogical Integration and Responsible/Ethical AI Use
- 4/22 (18%): Basic Understanding of AI Fundamentals
- 4/22 (18%): Guidance on Regulation and Institutional Policy
- 1/22 (5%): Tools for Detecting AI-generated Student Work
- 1/22 (5%): No Training Needs Identified

Preferred Training Formats (see also Figure 3 below)

- Face-to-face Workshops: 50%
- Blended Learning: 41%
- Self-paced Modules: 36%
- Live Online Workshops: 18%

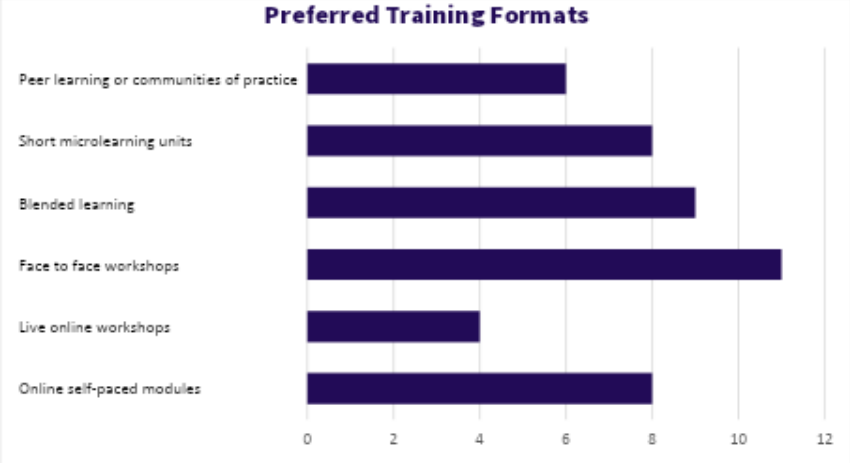


Figure 3. Survey Results: Preferred Training Formats

4. Interview Insights

The present section presents the findings from the 15 semi-structured interviews conducted with key stakeholders in adult education in Greece. The analysis focuses on institutional and professional contexts of AI adoption, perceived opportunities and challenges, identified capacity gaps and systemic constraints, and emerging priorities for training and support. The section also integrates selected testimonies to illustrate key themes and provide contextual depth to the qualitative findings.

4.1 Professional and Institutional Insights

The interviewed participants represent a diverse cross-section of adult education practice in Greece, spanning private education centres, public vocational training institutes (IEK), universities, corporate training departments, military education, and freelance instructional design. This breadth surfaces a striking divergence in how institutions are oriented toward AI adoption.

Higher Education Institutions

Universities show a mixed pattern of adoption. While individual academics and PhD candidates use AI tools independently and often at an advanced level, institutional policies remain limited or absent. AI is not formally integrated into teaching or assessment frameworks, and in some cases, staff or researchers privately finance access. One PhD candidate working on machine-learning methods described paying personally for Claude and ChatGPT. The institutional stance tends toward suppression rather than integration, motivated less by principled ethics than by concern that AI-generated work will dilute academic quality and homogenise outputs.

Public Vocational and Educational Training Institutes

Public institutions, including state schools and IEKs, demonstrate low level of AI integration. The most advanced technology mentioned in one public school context was a basic learning management system for uploading worksheets and recording grades, described as impressive by local standards. AI has not entered institutional strategy at this level.

Private Education Centres

Private education centres occupy a middle position. Teachers use AI individually and informally, often for creating images, generating exercises, or proofreading. Institutions have not formalised usage policies or provided organisational subscriptions, leaving adoption to individual initiative. One teacher trainer described a broad network of colleagues who are aware of AI but lack the specific prompting skills to use it well, defaulting to ChatGPT as the only tool they feel comfortable with.

Corporate Training

Companies emerge as the most advanced sector in terms of AI adoption. AI tools are embedded in the development of training materials, including presentations, simulations, AI-powered chatbots with information repositories, and internal training on the use of AI in daily work processes. In addition, companies invest in enterprise AI solutions that are provided to employees free of charge to enhance learning and productivity. AI-supported platforms are also integrated into structured organisational systems, particularly for performance analysis of trainees and the identification of areas requiring retraining or targeted coaching.

4.2 Opportunities and Challenges in Greece

Opportunities

AI is primarily perceived as a tool for:

- Time Efficiency in Administrative and Teaching Tasks
- Personalisation of Learning Content
- Increased Accessibility and Inclusion

Teachers consistently described AI as useful for pre-screening student work, differentiation of learning materials, generating exercises, and producing images for learners. One adult educator highlighted its value for inclusive education, citing how AI allowed a student from a migrant background to give a confident presentation on his own cultural heritage after years of being marginalised. The corporate training context introduces a distinct dimension, with AI primarily used as a mechanism for workflow automation. The ability to process performance evaluation data and automatically generate coaching scripts, or to simulate client conversations for sales training, was described as genuinely transformative, particularly for small teams responsible for managing large numbers of staff.

Challenges

- AI-generated Student Work and Academic Integrity: The most frequently cited challenge is the difficulty in identifying AI-generated assignments. Educators report adapting assessment strategies, including increased in-class work and reduced reliance on homework.
- Accuracy and Reliability Limitations: Stresses as a significant concern, particularly for subject-specific content. A teacher of ancient Greek and Latin was explicit that current LLMs lack the competence to generate correct exercises in classical languages, meaning the tool cannot be trusted for his core pedagogical task without extensive human verification. A lawyer with a transition into adult education teaching noted that AI consistently shows outdated legislation and cannot be used reliably for legal content without a specialist subscription. Several participants mentioned that even basic grammar checking in AI tools produces errors roughly one time in three.
- Educational Inequality: Unequal access to paid AI tools and digital infrastructure is perceived as a factor reinforcing existing socio-economic disparities among learners.
- Over-reliance and Reduced Critical Thinking: Interviewees expressed concern regarding dependency on AI tools and reduced development of analytical and reasoning skills among learners. One teacher was particularly direct: “This new generation's IQ has greatly diminished because they have become passive recipients of knowledge.” Another noted that students using AI for assignments jump to conclusions without showing the logical steps in between, the output looks complete, but the reasoning process has been bypassed. The risk of dependency was described by one military engineering trainer as psychosocial as well as cognitive: “AI creates a response, that response creates emotion, that emotion creates dependency.”

4.3 Capacity Gaps, Systemic Constraints and Organisational Needs

Prompt Engineering Literacy

The most prominent capacity gap across all institutional types is prompt engineering literacy. Multiple participants described using AI in ways they recognised as suboptimal because they did not know how to structure inputs to get useful outputs. One educator said: “I don't know how to give it the instructions it needs.” A PhD candidate framed it as the central skill: “The most important thing is prompting. That is where it starts and ends.” A teacher trainer described teachers defaulting to whatever ChatGPT produces without knowing how to train the model on their own content.

Understanding of AI Systems

Related to this is a gap in understanding the underlying logic of AI systems. Several participants noted that existing seminars they had attended focused on what AI can do and presented example outputs, but did not explain how models work, what their limitations are, or why they hallucinate. This lack of conceptual grounding makes it more difficult for educators to critically evaluate outputs. As one interviewee stated, "If you don't understand the theory behind it, you're afraid of it." Another added: "I want to understand what algorithm is behind it before I trust it."

Data Privacy

Data privacy constitutes a systemic constraint that actively limits AI adoption in both educational and corporate contexts. Multiple participants expressed reluctance, and in some cases firm refusal, to input student personal data, such as addresses, phone numbers, or identifiable written work, into AI tools. The concern is not theoretical, as several participants provided concrete examples, including photographs of students' work, while one explicitly stated that she would not upload even anonymised essays due to concerns that potential errors could not be traced or corrected. The absence of a clear and enforced regulatory framework governing AI and personal data was highlighted by almost all participants as leaving them legally and ethically exposed.

Institutional Fragmentation

In most organisations (schools, universities, private education centers) there is no official policy, no institutional subscription, and no coordinated approach to AI use. Individual teachers make individual choices with personal accounts. This has the paradoxical effect of creating pockets of very sophisticated use (among younger, technically oriented staff) alongside almost total non-use (among older or more subject-specialist staff), with no mechanism to share knowledge or establish common standards.

Cost and Tool Fragmentation

A practical barrier, particularly for freelancers and small educational institutions. One instructional designer described cycling through subscriptions, paying, learning a tool, cancelling, moving to the next, because no single tool covers all her needs and paying for five simultaneously is not viable. Teachers described spending personal money on AI subscriptions with no institutional support or reimbursement.

4.4 Emerging Priorities

From the interview data, several clear priorities for professional development emerge, which could also be taken into consideration for the development of the AI training course under WP4.

Practical Training

The most frequently requested feature for future AI training is a practical, hands-on approach. Participants consistently distinguished between presentations that demonstrate what AI can produce and training formats that allow them to actively apply the tools themselves. As one language teacher stated, the preferred approach is "step by step, with practical application." Another participant emphasised the need for direct guidance, stating: "someone to take my hand and say: this, this, this." A corporate trainer who had completed platform onboarding similarly noted a preference for more guided practice rather than procedural setup instructions, explaining that most effective practices were learned through trial and error.

Prompting Skills

The single most frequently requested topic was prompting skills. This was not framed as a technical curiosity, but as a foundational prerequisite for effective AI use. If educators cannot communicate precisely with AI tools, they cannot benefit from them. Several participants distinguished between surface-level use (typing a question and receiving an answer) and more advanced use, which includes persona construction, precise formatting instructions, iterative refinement, and grounding the model in provided source material.

Understanding Limitations and Error-checking

Participants expressed a need to understand not only what AI can do, but also where it fails reliably, in order to develop appropriate verification practices rather than uncritical trust. One educator described this as fostering "a productive scepticism rather than fear or blind acceptance." Several participants also emphasised the need to know when to cross-check AI outputs and how to identify hallucinations.

Ethics and Data Protection

This topic featured in almost every interview as an expected component of future training. The concern was primarily practical rather than philosophical: what information can be safely entered into AI systems, how personal or student data is processed, and which legal frameworks apply. The instructional designer summarised this perspective succinctly: "AI is not the problem. The problem is the companies using the information." Overall, educators expressed a need for clear, actionable guidance that would enable confident engagement with AI tools, rather than general warnings that discourage use.

Real Case Studies and Subject-specific Examples

Real case studies and subject-specific examples were specifically requested by participants who felt that generic AI demonstrations do not translate into their professional practice. A teacher trainer described a seminar attended by several colleagues where "they showed what AI could produce a presentation, but not how to build it." She emphasised the importance of worked examples linked to real teaching contexts. The instructional designer similarly highlighted the need for applied examples, stating: "Real examples.

Not just here is what it can do, but here is a project that worked and here is the tool chain behind it."

4.5 Testimonies

The following anonymised interview testimonies illustrate the key themes identified above.

- **Gap between Awareness and Practical Skill**

"I have a general idea of how to use it, but I've been to seminars that just showed a presentation of what it can do. They didn't show me, practically, step by step, how to actually build something."

- **AI as a Complementary Tool, Not a Replacement**

"It's more like a complement to our own knowledge. It gives me an alternative when I'm not sure of something, but I wouldn't trust it as the primary source."

- **Human Element in Teaching**

"Students don't just need information, they need you to touch their soul. That is not something AI can do. They need to feel secure, to feel they matter. AI cannot give them that."

- **Inequality Dimension**

"If you have a father who works in a company with access to AI, you can use the paid version for your assignments. But there are learners with no internet, no laptop, no phone. The inequality becomes more visible."

- **Absence of Institutional Strategy**

"It's left to each person's discretion. Nobody tells us to use it or not to use it. It just exists, unregulated, undefined."

- **Ethics of Personal Data**

"I'm afraid to put in addresses, phone numbers, anything personal. They say it is secure, but I do not believe it. I keep those things in files, written or on the computer, but not in AI."

- **Competitive Pressure to Adapt**

"If another institution is using AI responsibly and effectively, making lessons more interactive, producing better materials, yes, it's a real competitive advantage. But the key word is responsibly. Those who are just using it to paste everything in and not look at the output, they're not winning anything."

- **The Pace of Institutional Change in Greece**

"We had computers arrive in classrooms without any materials inside them. We had projectors with no content to show. Technology keeps arriving before the training, the guidance, or the regulations."

5. Integrated Analysis

This section presents an integrated analysis of the survey and interview findings, with the aim of identifying areas of convergence and divergence between quantitative and qualitative data. It synthesises evidence on AI adoption, perceived opportunities and barriers, and training needs in adult education in Greece. The analysis further highlights cross-cutting issues emerging from both data sets and outlines their implications for future project implementation and training design.

5.1 Convergence Between Survey and Interview Findings

The quantitative and qualitative findings show strong convergence across key themes, indicating a coherent overall picture of AI adoption in Greek adult education.

Training Gaps as the Primary Barrier

The dominance of lack of training as the primary barrier is consistently identified in both datasets. The survey identifies it as the leading obstacle, cited by 41% of respondents, while the interviews return to it repeatedly and in granular detail. Interviewees describe attending seminars that demonstrated AI outputs without teaching them how to produce those outputs, and express frustration at being left to discover functional prompting through personal trial and error. Both data sources agree that the problem is not a lack of willingness but a lack of structured, practical support.

Data Protection

Data privacy concerns surface with similar prominence in both strands. All survey respondents expressed some level of concern about data protection, with 30% identifying it as their primary ethical worry. During interviews, educators described refusing to enter student names, addresses, or written work into AI systems, expressing distrust not of the technology in the abstract but of the large private corporations that operate it. The survey finds that only around half of institutions currently provide ethical guidelines aligning directly with interviewees' descriptions of working in a policy vacuum where each individual makes personal risk assessments.

Over-reliance on AI

The identification of over-reliance on AI both by learners and by educators as the leading ethical concern appears strongly in both strands. The survey places it at 40%, above even data privacy, while interviews provide vivid illustrations (students photographing textbook exercises and receiving answers within seconds, teachers passing AI-generated content directly to learners without review, education magazine receiving articles that are 95% AI-generated from experienced professionals). Both sources converge

on the view that the problem is not AI use per se but uncritical, unreflective use.

Training Preferences

The strong preference for practical, firsthand training formats is consistent across methods. The survey shows a clear preference for face-to-face workshops are the most preferred format (50%), with blended learning a close second, aligns with interviewees' explicit requests for someone to guide them step by step through real tools, and their dissatisfaction with presentation-style seminars that show possibilities without building skills. In both cases, the underlying motivation is the same. Participants want to leave a training session with something they can apply the next day.

Professional Relevance of AI Skills

Both strands register the competitive and professional development dimension of AI literacy. The survey finds that 77% of participants cite practical utility as their primary motivator for engaging with training. The interviews articulate this as a concrete concern about institutional and individual competitiveness. Educators who use AI responsibly and effectively are perceived as having a real advantage, and there is anxiety, particularly among freelancers and private sector educators, about being left behind.

5.2 Divergence Between Survey and Interview Findings

The present section outlines the main divergences between the survey and interview findings across key dimensions of AI adoption in Greek adult education.

Sectoral and Professional Context

The main divergence between the datasets relates to sectoral and professional context. The survey, which reflects a digitally more confident group (82% reporting intermediate or higher digital skills), suggests relatively elevated levels of AI engagement and confidence. In contrast, the interviews highlight more limited or uneven engagement among certain groups, particularly public-sector educators, and subject specialists, where AI use is constrained by either limited applicability or institutional resistance. This indicates that the survey may over-represent overall readiness.

Differences Across Professional Environments

Within the interview cohort, corporate trainers describe established and operational use of AI, focusing on optimisation of existing workflows. In contrast, educators in schools and public institutions are primarily in an exploratory phase, focusing on initial understanding and trust-building. This suggests differing levels of maturity in AI integration across sectors.

AI and Ethics

There is also a divergence in what responsible use looks like in practice. Survey respondents, when asked about ethical concerns, tend to frame them at a systemic or institutional level (regulations, guidelines, institutional policies). Interviewees more often articulate ethics as a personal, day-to-day judgement call about what to trust, what to enter into a system, and how to maintain their own professional standards. This distinction has implications for training design, as it indicates that there is a gap between policy-oriented and practice-oriented understandings of ethical AI use.

5.3 Key Cross-cutting Issues in Greece

Two key cross-cutting issues emerge from the combined data within the Greek national context.

Gap between Institutional Policy and Actual Practice

Both data sources describe a situation in which educators are using AI, while their institutions have neither endorsed nor regulated that use. This creates a form of silent adoption that carries professional and legal risk for individual practitioners and forecloses the possibility of collective learning or shared standards. Greece's historically slow pace of technology integration in public education, referenced in multiple interviews, makes this lag particularly pronounced.

Dual Perception of AI

The second is the unresolved tension between AI as a tool for educational improvement and AI as a threat to educational integrity. Unlike some national contexts where this debate is more settled in one direction, the Greek participants hold both views simultaneously and with genuine ambivalence. AI is welcomed as a time-saving assistant and a means of personalisation, but it is feared as an accelerant of academic dishonesty and a risk to the development of critical thinking. This tension is not easily resolved by training alone, but training that ignores it will fail to gain the trust of the intended audience.

5.4 Implications for Future Project Implementation

Several key implications emerge from the integrated analysis for future programme design and implementation.

Practical Skill Development

The training programme should be structured around practical skill-building rather than awareness-raising. The evidence is clear that this audience already knows AI exists and has opinions about it. What they lack are the specific competences to use it well and evaluate its outputs critically.

Prompt Engineering

It should be treated as a core, foundational module rather than an advanced topic. Both data sources identify it as the primary technical gap, and it is the skill that unlocks meaningful use of every other AI application in educational contexts.

Responsible Use of AI
The programme must give substantial attention to ethics, data protection, and responsible use, not as a compliance module appended to the end of a training, but as a thread integrated throughout, with specific guidance on what data educators can and cannot safely input, and what institutional and legal frameworks apply. Given that a third of institutions have no guidelines at all, the programme's accompanying guidance resources should include practical frameworks that individual educators can apply in the absence of institutional policy.
Modular Structure
Given the sectoral diversity of the target audience, the programme would benefit from a modular design that enables subject-specific and sector-specific pathways. The needs of law, engineering, mathematics, and philology educators differ sufficiently that generic content risks being either too broad or too superficial. Case studies and worked examples should therefore be drawn from a wide range of educational contexts rather than relying on a single disciplinary model.
Interactive Training Formats
The strong preference for in-person, interactive delivery suggests that any e-learning platform component should complement rather than substitute for face-to-face sessions, functioning as a repository for practice materials and ongoing reference rather than the primary site of skill development.

6. Conclusions and Recommendations

The National Stakeholder Engagement Report for Greece indicates a sector characterised by a strong willingness to engage with AI, alongside significant structural, institutional, and skills-related gaps that currently limit its responsible and effective integration into adult education. While most adult educators already use AI tools in some form, this adoption is largely informal and occurs in the absence of systematic training, institutional guidance, or clear regulatory and ethical frameworks. As a result, AI use remains fragmented and individually driven, contributing to uneven levels of readiness across sectors, generations, and institutional contexts, and reinforcing existing inequalities in access to digital transformation.

Three priority needs emerge from the analysis. First, the development of practical AI competences, particularly in prompt engineering, critical evaluation of outputs, and informed tool selection, which constitute the main gap between current practice and effective use. Second, the provision of clear and accessible guidance on data protection and ethical use, identified as a key barrier and source of uncertainty among educators. Third, the establishment of institutional mechanisms for AI integration, including policies, shared standards, and structured professional development pathways, in order to shift AI adoption from individual initiative to coordinated and sustainable practice within adult education systems.

6.1 Implications

Adult Educators
For adult educators, the findings highlight the importance of using AI as a support tool for professional practice rather than a replacement for pedagogical judgement. The relational and instructional dimensions of teaching remain central, and AI is most effectively used to reduce administrative workload and support preparation tasks. The most immediate development priorities are basic prompt engineering skills and the ability to critically evaluate AI-generated outputs.
Institutions
For institutions, the results indicate that the absence of formal AI policies leads to inconsistent practice, unequal levels of competence, and unmanaged ethical and legal risk. Establishing clear institutional guidelines should therefore be treated as a priority. In parallel, AI literacy should be integrated into both onboarding and continuous professional development, rather than left to individual initiative. Consideration should also be given to facilitating equitable access to AI tools through institutional subscriptions or collective licensing arrangements, in order to reduce disparities among staff.
Policymakers
For policymakers, the findings highlight the need for a structured national approach to AI in education that complements the EU AI Act with context-specific guidance for the Greek educational system. Public-sector educators in particular report limited institutional support and widening gaps compared to more advanced private-sector adoption. Targeted investment in structured training programmes for public-school and vocational education staff, supported by clear national guidelines on acceptable AI use, would help address these disparities and promote more consistent implementation across the sector.

6.2 Recommendations for Capacity Building

The following topics are recommended as core components of the Guide to Responsible Use of AI in Adult Education developed under WP3 and the AI Training Course under WP4.

Guide to Responsible Use of AI in Adult Education

- A plain-language overview of key obligations under the GDPR and the EU AI Act as applicable to educational contexts;
- Practical guidance on data categories that can and cannot be processed using commercial AI systems;
- Templates and frameworks for institutional AI policies that can be adapted by organisations;

- Guidance on defining and communicating acceptable use policies for educators and learners;
- Recommendations for safeguarding academic integrity in AI-enabled learning environments, including approaches to assessment redesign.

AI Training Course

- Foundational understanding of how large language models operate, including their limitations and error generation mechanisms;
- Prompt engineering as a core practical competence, supported by discipline-specific examples;
- Methods for evaluating, validating, and verifying AI-generated outputs;
- Responsible use of AI in educational content development, including exercise generation, content adaptation, and assessment design;
- Application of AI in administrative and workflow processes;
- Inclusive learning design and the use of AI to support accessibility and learner diversity.

6.3 Suggestions for Further Investigation

Several questions emerging from the Greek data would benefit from comparative analysis across partner countries in order to assess whether the identified patterns are context-specific or reflect broader trends in AI adoption and use within adult education across Europe.

Sectoral Differences in AI Adoption

It would be valuable to investigate whether the strong sectoral divide between private-sector AI adoption and public-sector lag is a specifically Greek phenomenon or a shared European pattern, as the answer has significant implications for where policy intervention is most needed.

Subject-specific Differences in AI Utility

The data suggests that educators in humanities, classical studies, and law perceive AI as less useful or less reliable than those in technical or generalist fields. Further investigation is needed to determine whether this reflects actual limitations of current tools or gaps in training and familiarity, and how this should inform differentiated programme design.

Academic Integrity

Concerns regarding student use of AI and its impact on critical thinking and academic integrity emerged as a dominant theme in the Greek context. A comparative analysis of how these concerns manifest across partner countries, and the strategies used to address them, would strengthen the transnational recommendations.

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