AI COMPETENCY FRAMEWORK

FOR ADULT EDUCATORS

AI-ADU
BUILDING PATHS TO THE FUTURE

The AI-ADU: Building Paths to the Future project aims to empower adult education providers and professionals to embrace artificial intelligence (AI) as a tool for digital transformation, innovation, and inclusion. Bringing together partners from Cyprus, Lithuania, Italy and Greece, the project supports the development of AI competencies among educators, trainers and administrative staff working in the adult learning and education (ALE) sector.

Through the co-creation of a modular AI Competency Framework, a blended learning programme and practical resources, AI-ADU promotes responsible, ethical, and strategic use of AI tools in adult education. The project responds to the urgent need for upskilling in the digital era and supports adult learning organisations in becoming more future-ready, equitable and innovative.

More information: https://aipaths.eu

Co-funded by the European Union

Published in 2025 by the AI-ADU Consortium
As part of the AI-ADU: Building Paths to the Future Erasmus+ KA2 Cooperation Partnership Project (https://aipaths.eu/)

Design and layout: DOREA Educational Institute
Published online only.

TABLE OF CONTENTS

ABOUT 1

PROJECT PARTNERSHIP 2

FOCUS GROUPS 3

AI COMPETENCE FRAMEWORK 4

STRUCTURE OF AI COMPETENCE FRAMEWORK 6

MODULE 1. TECHNICAL SKILLS AND DATA LITERACY 9

MODULE 2. PEDAGOGICAL APPLICATIONS 20

MODULE 3. ORGANISATIONAL PROCESSES 29

MODULE 4. ETHICAL CONSIDERATIONS AND SAFETY 41

MODULE 5. AI INTEGRATION STRATEGIES, LEADERSHIP AND ADVOCACY 50

CONCLUSION 61

BIBLIOGRAPHY 62

ABOUT THE PROJECT

AI-ADU: Building Paths to the Future is an innovative Erasmus+ initiative designed to empower adult education institutions and their staff, both teaching and administrative, with the knowledge, tools, and competencies needed to embrace the transformative potential of Artificial Intelligence (AI). As AI continues to reshape the way we live, work, and learn, this project aims to ensure that adult education does not lag behind but instead becomes a leader in digital transformation.

Artificial Intelligence is no longer a distant concept of the future - it is already integrated into our daily lives, often invisibly, through smartphones, online services and increasingly, through educational technologies. Despite this, many adult education providers remain underprepared to adapt their services to the opportunities and challenges posed by AI. With adult participation in lifelong learning still falling short of EU targets, it is critical to act now and build more engaging, inclusive, and future-oriented learning environments.

Through a comprehensive and inclusive approach, AI-ADU addresses this urgent need by supporting educators, institutions and stakeholders in their digital evolution. The project delivers key outputs including a pioneering AI Competency Framework for Digital Transformation Specialists, a blended learning programme, a network of digital transformation experts and various participatory activities such as focus groups, webinars, and multiplier events.

By equipping adult education professionals with AI literacy and strategic tools, the project not only enhances individual capacities but also enables organisations to reimagine their administrative and educational processes. This dual focus on both human and institutional development makes AI-ADU a unique and forward-thinking initiative. Ultimately, AI-ADU strives to promote a more innovative, accessible, and effective adult education system that supports all learners, regardless of age, background, or ability, on their lifelong learning journey.

2024 — 2025 — 2026

PROJECT PARTNERSHIP

SOCIALINIŲ INOVACIJŲ CENTRAS (SIC)

The success of the project is built on the strength of its diverse and complementary partnership, coordinated by VšĮ Socialinių inovacijų centras (SIC) from Lithuania. SIC is a well-established adult education centre with extensive experience in social work, non-formal education, and EU project implementation. With a strong team of professionals and a network of volunteers, SIC collaborates with both experts and vulnerable groups, delivering innovative social initiatives and training programs that reach over 2,000 learners annually.

DOREA EDUCATIONAL INSTITUTE (DOREA)

DOREA is a provider of high-quality non-formal adult education and international training, active in over 12 countries with more than 45 courses focused on transversal skills, inclusion and lifelong learning. As part of its commitment to the digital transition, DOREA also develops innovative programmes that support adult educators and organisations in building AI competencies and adapting to emerging technologies.

KINITRO AMKE

From Greece, KINITRO AMKE contributes with strong experience in inclusion, accessibility, and informal learning. Known for its award-winning "Labyrinth of Senses" initiative, KINITRO fosters inclusive education, promotes the 17 SDGS and works with over 1000 volunteers and 250+ institutions across Europe.

FONDAZIONE AREZZO INNOVAZIONE (FAI)

Arezzo Innovazione Fondazione di Partecipazione (Italy) strengthens the partnership with its focus on innovation, digital transformation, and sustainability. Acting as a hub for technology transfer, FAI connects public and private actors, promotes gender equality and youth employability, and supports educational projects that drive social and economic development.

FOCUS GROUPS & NEEDS ANALYSIS

STAKEHOLDERS

To ensure the project responds to real and diverse needs across Europe, each project partner organised a national focus group involving professionals from the adult education sector. In total, 40 participants took part in these discussions, with each partner inviting 10 adult education experts, trainers or ALE organisation representatives to contribute.

GUIDED DISCUSSIONS

The focus groups were conducted using a common set of guiding questions developed by the consortium. These served as the basis for structured discussions aimed at identifying key challenges, skill gaps, and opportunities related to adult learning and digital transformation. Depending on local contexts and preferences, partners held these sessions either in person or online.

SURVEY INSIGHTS

To complement the qualitative input from the focus groups, an online questionnaire was also circulated to gather broader insights. The combination of live discussion and survey data allowed the project to collect in-depth and well-rounded input that served as a solid foundation for the development of the AI Competency Framework.

AI COMPETENCY FRAMEWORK

FOR DIGITAL TRANSFORMATION SPECIALISTS

The AI Competency Framework for Digital Transformation Specialists is a central output of the AI-ADU project, designed to guide adult educators, trainers and adult learning and education (ALE) institutions in navigating and leveraging AI technologies within their teaching practices and broader organisational transformation processes.

Inspired by the widely recognised EntreComp and DigiComp frameworks, this new framework highlights the transformative potential of AI in education. It outlines the essential knowledge, skills, attitudes, and proficiency levels needed to effectively use AI, offering a clear and structured roadmap for developing AI competencies.

This framework aims to:

- Equip educators and ALE leaders with the tools to assess current capabilities and identify learning needs.
- Support professional development through targeted training and upskilling pathways aligned with organisational goals.
- Establish a shared language around AI competencies, fostering stronger collaboration among educators, curriculum developers, and policymakers.

The development process included two focus groups organised in each project partner country, ensuring the framework is co-created with stakeholders and tailored to sector-specific realities. This Framework is a practical, comprehensive and future-focused resource that supports long-term innovation and inclusive digital transformation in adult education.

Rooted in both practice and policy, the framework also draws inspiration from well-established European and international references such as:

- DigComp 2.2: The Digital Competence Framework for Citizens
- UNESCO's AI Competency Framework for Educators
- The European Commission's 2030 Digital Compass and AI Act
- Additional sector-specific insights gathered through focus groups and needs analyses across five European countries.

The framework offers a flexible yet robust tool to help adult education providers:

- **Assess current AI competencies**
- **Identify training and development priorities**
- **Guide the design of learning programmes and organisational strategies**
- **Promote ethical, inclusive, and human-centred AI adoption**

It is not a checklist of tools or technologies, but a developmental guide - fostering reflection, upskilling and long-term transformation.

STRUCTURE OF AI COMPETENCY FRAMEWORK

MODULES

The AI Competency Framework for Digital Transformation Specialists in Adult Education consists of five modules that support educators, administrative staff and organisational leaders in integrating AI into their practice by outlining key skills, knowledge, and attitudes in a clear, practical structure. The modules are:

1

MODULE 1. TECHNICAL SKILLS AND DATA LITERACY

Defines the foundational knowledge and abilities needed to understand how AI works and how data influences its outputs. Emphasises the capacity to critically assess, select and use AI tools and data sources in adult education contexts.

2

MODULE 2: PEDAGOGICAL APPLICATIONS

Outlines key competencies for using AI to support adult learning processes, including content generation, assessment support and personalised learning. Focuses on aligning AI use with inclusive, learner-centred educational practices.

3

MODULE 3: AI FOR ORGANISATIONAL PROCESSES

Describes the skills and mindsets required to apply AI within organisational and administrative functions. Highlights how adult education institutions can use AI to enhance planning, communication, efficiency and decision-making.

4

MODULE 4: ETHICAL CONSIDERATIONS AND SAFETY

Identifies the competences needed to ensure that AI use is transparent, fair, and aligned with ethical standards. Covers issues such as bias, data protection, human oversight, and inclusive practice in the adult learning sector.

5

MODULE 5: AI INTEGRATION STRATEGIES, LEADERSHIP AND ADVOCACY

Focuses on strategic and leadership-oriented competences for guiding AI adoption within adult education settings. Includes advocacy, institutional vision, peer support and fostering a culture of responsible and future-focused AI use.

COMPETENCY LEVELS

Each module begins with a short description, followed by clearly defined competencies structured across three progressive levels: **Explorer, Practitioner** and **Innovator**.

Explorer

At the Explorer level, individuals are beginning their journey with AI in adult education. They may have limited experience and rely on basic knowledge or tools while exploring new possibilities. This stage is marked by curiosity, early experimentation and growing awareness of the opportunities and challenges AI presents. Explorers often require guidance and support as they build confidence in applying AI in simple or small-scale contexts.

Practitioner

Practitioners demonstrate consistent and hands-on use of AI in educational or organisational activities. They actively apply AI tools, adapt them to suit diverse learner needs or administrative tasks and solve problems as they arise. Practitioners are often self-directed in their learning and contribute to team knowledge by sharing good practices. Their approach is grounded in real-world application and continuous improvement.

Innovator

Innovators are experienced professionals who lead by example. They mentor others, shape organisational strategies and drive innovation in the use of AI in adult education. At this level, individuals critically assess emerging tools, develop new methods or frameworks as well as promote responsible, inclusive and ethical AI use. Innovators not only apply AI effectively but help create the conditions for its thoughtful integration across the organisation.

STRUCTURE

Each module uses the same structure to stay clear and easy to follow:

MODULE INTRODUCTION
Offers a concise overview of the module's focus area and its relevance to AI integration in adult education.

COMPETENCY TABLES
Present key skills, knowledge and attitudes across three progressive levels - Explorer, Practitioner and Innovator.

SELF-REFLECTION QUESTIONS
Encourage users to reflect critically on their current practice, challenges, and development needs.

CASE STUDIES
Real-world examples illustrate how competences are applied in practice, providing inspiration and practical insights.

ROADMAP
Outlines key developmental steps adult educators can follow to gradually build confidence and competence in using AI.

This structured approach ensures that each module is easy to navigate, adaptable to different professional roles and focused on practical application.

By combining clear progression levels, role-specific guidance, reflective prompts, real-world case studies and tep-by-step roadmaps, the framework offers a comprehensive yet flexible tool to support adult education professionals in building AI-related competences over time.

TECHNICAL SKILLS AND DATA LITERACY

MODULE 1

MODULE 1.
TECHNICAL SKILLS AND DATA LITERACY

Focus Areas:
Key concepts and history of AI; risks, benefits, and challenges of AI adoption; psychological and societal effects of AI, particularly in educational contexts; importance of accurate and high-quality data; techniques for assessing AI-generated content; selecting appropriate AI tools for different purposes; and adapting to AI advancements and their practical applications in adult education.

DESCRIPTION:

This module outlines the core competencies needed by adult education professionals to understand, evaluate and use AI technologies responsibly. It introduces key concepts related to AI and data literacy, emphasising the importance of data quality and the critical assessment of AI-generated content.

The framework also defines the competencies educators and staff need to evaluate, select, and use AI tools effectively for diverse educational and organisational tasks.

Each competence is presented at three levels - Explorer, Practitioner, and Innovator - offering a progressive path for adult educators to build confidence, awareness and leadership in the use of AI.

MODULE 1. COMPETENCES

	LEVEL 1: EXPLORER		LEVEL 2: PRACTITIONER		LEVEL 3: INNOVATOR	
	Knowledge/Skills	*Attitudes*	*Knowledge/Skills*	*Attitudes*	*Knowledge/Skills*	*Attitudes*
INTRODUCTION TO AI	• Understands what AI is and can name few AI tools • Knows the brief history of AI • Understands key AI concepts • Understands the benefits and risks of using AI	• Open to learning about AI • Embraces new technologies like AI with a mindset of learning and adaptation • Recognises both the benefits and limitations of AI	• Knows the different types of AI and can describe how they function • Understands rapid advancements in AI and can adapt to the changes • Knows how to address challenges and mitigate risks when using AI • Understands the psychological impact of using AI	• Willing to stay flexible and adjust to the rapid changes and advancements in AI technology • Questions and analyses AI outcomes to ensure accurate and responsible use. • Maintains a positive attitude towards overcoming challenges in AI adoption	• Is able to fully explain complex AI concepts and train colleagues or learners • Develops AI resilience skills and is capable of teaching others to develop these skills • Proposes institutional AI use strategies or contributes to tool selection	• Is eager to stay current with AI developments • Takes the lead in promoting AI adoption that is inclusive, accessible and aligned with the organisation's goals • Is willing to train, mentor and support colleagues or learners in building their AI knowledge and skills
DATA LITERACY AND AI CONTENT ASSESSMENT	• Understands that AI systems rely on data to work well • Knows that better data leads to more accurate AI results • Recognises how cleaning and organising data affects AI performance	• Curious about how data shapes AI results • Open to learning how data quality affects AI accuracy • Aware that clean, well-organised data improves AI performance • Interested in AI-generated content, but mindful of its limits due to data quality	• Can identify different types of data (structured vs. unstructured) and their role in AI • Has critical judgment in using AI tools • Knows how to verify AI-generated content against external sources	• Has a thoughtful approach to choosing, handling and using different data for AI tasks • Takes initiative to verify and correct AI-generated content, addressing any potential issues before they affect the outcome	• Mentors colleagues in critically assessing AI-generated results • Leads initiatives to improve data quality and AI content accuracy in the organisation • Develops systems or guidelines to monitor AI output and content quality	• Advocates for high standards for data quality and content accuracy • Helps colleagues build critical thinking for evaluating AI content • Constantly seeks ways to improve data and AI assessment processes

MODULE 1. COMPETENCES

	LEVEL 1: EXPLORER		LEVEL 2: PRACTITIONER		LEVEL 3: INNOVATOR	
	Knowledge/Skills	*Attitudes*	*Knowledge/Skills*	*Attitudes*	*Knowledge/Skills*	*Attitudes*
AI TOOLS AND TECHNOLOGIES	• Has a basic understanding of different types of AI tools • Recognises which AI tools are suitable for various tasks • Demonstrates basic interaction skills when using AI-powered tool	• Eager to explore and learn about the variety of AI tools available and their applications • Willing to engage and experiment with AI tools and try different technologies • Recognises the value of AI tools in completing tasks efficiently and is mindful of their limitations	• Understands how to effectively use AI tools to enhance various tasks • Uses AI-powered tools for a wide range of purposes, such as text, image, and video creation, transcription summarization, and content generation • Selects and adapts tools based on context and needs	• Thinks strategically about using AI tools for tasks and creates effective prompt strategies • Is comfortable in using and exploring a variety of AI tools • Continuously seeks to improve and refine how AI tools are used, focusing on efficiency and effectiveness	• Understands how algorithms shape AI tool outputs and decision-making • Guides and mentors others in effectively integrating AI tools • Continuously evaluates AI advancements and applies relevant innovations in their work	• Takes the initiative to guide and mentor others in the strategic use and integration of AI tools • Stays current with advancements in AI tools and their evolving capabilities • Actively looks for ways to innovate and enhance workflows by integrating new AI technologies
AI FOR ACCESSING AND ORGANIZING INFORMATION	• Uses AI tools (e.g., search assistants, summarizers) to find or understand basic information • Can retrieve insights and summaries from chatbots or voice tools	• Curious about how AI can support content discovery • Is willing to assess the value and accuracy of information returned	• Compares AI summaries with original sources • Uses AI to organise teaching material, lesson plans, or admin workflows	• Reflects on when AI enhances vs. replaces critical thought • Values AI's potential to reduce information overload	• Designs or supports systems that help learners or staff retrieve and organise information with AI • Trains others in structured content selection	• Advocates for informed AI use. • Encourages independent thinking alongside AI-assisted discovery • Promotes digital literacy and empowerment in general

SELF-REFLECTION QUESTIONS

	LEVEL 1: EXPLORER	LEVEL 2: PRACTITIONER	LEVEL 3: INNOVATOR
INTRODUCTION TO AI	• What do I already know about how AI works and where are my gaps in understanding? • Am I open to learning about AI and its potential impact on my work? • Do I recognize both the benefits and limitations of AI in my professional field? • How do I feel about learning and using AI - am I open to adapting to new technologies or do I have concerns? • Do I understand the key concepts of AI well enough? • What excites me most about AI, and what aspects make me cautious?	• Do I understand the difference between various types of AI (e.g., generative vs. predictive)? • How do I assess whether an AI tool is appropriate for use with adult learners? • Am I aware of the psychological impact AI might have on students, colleagues, or myself? How can I address these concerns? • What challenges do I see in AI adoption in my organisation? • Am I ready to actively keep up with the latest advancements in AI?	• Am I helping others in my organisation better understand the fundamentals of AI? • Do I advocate for or shape responsible AI strategies that are human-centred? • Am I staying up to date with AI trends, tools, and policy developments that affect my field? • What challenges do I see in AI adoption in my organisation and how can I help overcome them? • Am I ready to actively promote inclusive and accessible AI solutions within my organisation? • How ready am I to effectively explain AI concepts and support colleagues in understanding and using AI
DATA LITERACY AND AI CONTENT ASSESSMENT	• Do I understand how data quality impacts the accuracy of AI-generated content? • Am I aware of how AI models rely on data to function effectively? • How mindful am I about the importance of cleaning and organizing data before using AI tools? • Am I curious to explore how AI processes data and generates results?	• Do I take the initiative to verify AI generated information against reliable external sources? • How do I approach identifying and addressing gaps or errors in AI outputs? • How do I support learners or colleagues in becoming critical consumers of AI content?	• How do I contribute to improving data quality and AI content accuracy in my organisation? • Do I take the initiative in implementing systems for ongoing monitoring of AI outputs? • Am I mentoring others in developing data literacy and content assessment skills?

SELF-REFLECTION QUESTIONS

	LEVEL 1: EXPLORER	LEVEL 2: PRACTITIONER	LEVEL 3: INNOVATOR
AI TOOLS AND TECHNOLOGIES	• Which AI tools have I tried and what was my experience with them? • Am I open to exploring and experimenting with AI tools in my daily work? • How can AI tools help me work more efficiently? • Am I comfortable interacting with AI-powered tools, or do I need more practice?	• Am I comfortable creating effective prompts to get the best results from AI tools? • Do I know how to select the right tool for a specific educational or organisational need? • Have I explored the limits of the tools I use (e.g., where they fail, where human input is needed)? • Do I regularly evaluate how well AI tools are performing for my specific needs?	• Do I feel confident in guiding others to integrate AI tools within their daily tasks and workflows? • How do I ensure that the AI tools I use align with organizational goals and drive positive results?
AI FOR ACCESSING AND ORGANIZING INFORMATION	• Have I tried using AI to help me search for or summarise information? • How confident am I in assessing the accuracy of the information returned by AI tools? • Have I tried using it to reduce information overload in my work?	• Do I compare AI-generated summaries to original sources to check for accuracy or completeness? • How do I organise and store AI-generated information for teaching, planning or communication? • Can I support learners or colleagues in doing the same?	• Am I designing or guiding systems that help discover, organise and suggest relevant content using AI? • Do I train others to think critically and use AI productively in finding or managing information? • How do I balance the convenience of AI with the need for independent thinking and analysis?

CASE STUDY 1

CHATGPT IN EDUCATION

BACKGROUND

ChatGPT, a powerful AI tool, has become widely adopted by students at Ho Chi Minh City University of Technology and Education (HCMUTE) to aid in learning and academic tasks. Students use it for idea generation, assignment completion and summarizing content. While it provides significant benefits in terms of accessibility and efficiency, concerns about over-reliance, ethical issues and academic integrity have arisen.

THE CHALLENGE

ChatGPT's integration into the learning process has had a transformative effect on students, with many using it daily for a variety of academic purposes. However, its increasing adoption has led to several concerns:

1. Overreliance: Students are becoming dependent on AI tools like ChatGPT, which may impair their ability to think critically and solve problems independently.

2. Academic integrity: Issues related to plagiarism, information accuracy and the potential for cheating have surfaced, leading to ethical concerns about the tool's use in academic settings.

3.*Decreased creativity:* The convenience of using AI to generate ideas or summarize content might discourage students from engaging deeply with the material, reducing opportunities for creative thinking.

BIAS DILEMMA

While ChatGPT is a useful tool for generating academic content, it does not replace the need for critical evaluation and independent thinking. However, there are concerns about equity and fairness in how students use ChatGPT. For example:

- *Information Reliability:* Not all information generated by AI tools is accurate, which can mislead students and lead to incorrect conclusions.
- *Cultural and Linguistic Bias:* Similar to AI detection tools in plagiarism cases, ChatGPT might not be fully attuned to the cultural and linguistic context of all students, potentially reinforcing biases against non-native English speakers.
- *Ethical Concerns:* Students using ChatGPT may not fully understand the ethical implications of relying on AI for academic tasks, which could lead to issues of academic dishonesty.

CASE STUDY 1

FOOD FOR THOUGHT

Although ChatGPT offers clear educational advantages in terms of efficiency and accessibility, educators must approach its integration carefully to avoid reinforcing inequities and compromising academic integrity. Here are some questions to consider:

- How can educators ensure students use AI tools like ChatGPT responsibly, without fostering over-reliance or academic dishonesty?
- When might the use of ChatGPT be more of a obstacle than a help, particularly in terms of developing problem-solving and critical-thinking skills?
- How can educators balance the convenience of AI with the need to develop students' creativity and original thinking?
- What policies or practices can be implemented to ensure the ethical use of AI in educational settings, ensuring that it serves all students equitably?

KEY INSIGHTS

1. **Responsible use of AI:** Teachers should guide students on how to use AI tools like ChatGPT in a way that fosters independent learning while also ensuring academic integrity.
2. **Ethical guidelines:** Clear ethical guidelines should be put in place for using AI tools, emphasising the importance of verifying AI-generated content and avoiding plagiarism.
3. **Cultural sensitivity:** Educators need to be aware of potential biases in AI tools and ensure that these tools are used in a way that accommodates students from diverse linguistic and cultural backgrounds.
4. **Balanced integration:** A balanced approach, combining AI tools with traditional teaching methods and fostering critical thinking, is essential to ensure the tool enhances learning without replacing essential skills.

REFERENCES

Nguyen, T. N. T., Lai, N. V., & Nguyen, Q. T. (2024) 'Artificial Intelligence (AI) in Education: A Case Study on ChatGPT's Influence on Student Learning Behaviors' [Case Study], Education and Practice International Journal, 13(2), pp. 105–121. Published Online: May 2024. Available at: https://www.edupij.com/index/arsiv/64/335/artificial-intelligence-ai-in-education-a-case-study-on-chatgpts-influence-on-student-learning-behaviors.

CASE STUDY 2

AI INTEGRATION IN HIGHER EDUCATION

OVERVIEW

This case study explores the integration of AI at Skyline University College (SUC), aiming to assess how AI tools are enhancing educational experiences for students and faculty while identifying barriers and challenges to their effective use.

BENEFITS AND CHALLENGES OF AI IN EDUCATION

AI has become a transformative tool in various industries, including education. At SUC, AI tools like chatbots and automated systems have helped improve administrative tasks and personalized learning. AI's ability to tailor content to individual student needs can significantly enhance learning outcomes. However, challenges such as technical issues, resistance to change, and privacy concerns persist. Additionally, AI systems may inherit biases, impacting fairness and equity in education.

RESEARCH GAPS

While AI's potential in education is widely acknowledged, there is a lack of empirical research on its practical implementation at specific institutions, such as SUC. The study aimed to fill this gap by providing insights into the challenges and opportunities of AI integration at SUC.

STUDY OBJECTIVES

1. Explore AI tools used at SUC.
2. Evaluate their effectiveness in improving learning and administrative processes.
3. Assess perceptions of students and faculty regarding AI.
4. Identify barriers to AI adoption.
5. Determine the training needed to enhance AI use.
6. Provide actionable recommendations for better AI integration.

FINDINGS

The study found that AI adoption at SUC is widespread, with students and faculty using AI tools for tasks like plagiarism checking and improving administrative efficiency. However, challenges such as a lack of technical expertise and resistance to AI remain. Students and faculty generally have a positive view of AI, recognizing its benefits but also acknowledging the need for better training and addressing privacy concerns.

CASE STUDY 2

CONCLUSION

AI integration at SUC has led to improvements in learning personalization and administrative processes, but challenges persist. Addressing these obstacles is critical for maximizing the benefits of AI in education. The findings contribute valuable insights into AI's role in higher education and provide recommendations for optimizing its integration at SUC.

KEY INSIGHTS

1. **AI enhances learning and administrative efficiency.** At SUC, AI tools like chatbots and plagiarism checkers have improved both the student learning experience and administrative workflows. Personalized content delivery has led to more engaging and effective education.
2. **Students and faculty show cautious optimism.** While most students and faculty view AI positively and recognize its benefits, they also express concerns about data privacy, transparency, and potential bias in AI-driven systems.
3. **Key barriers - skills gaps and resistance to change.** Lack of technical expertise and reluctance to adopt new technologies remain major obstacles to fully leveraging AI. Addressing these barriers is crucial for successful integration.
4. **Training and support are essential for effective AI use.** The study highlights the need for structured training programs that go beyond technical skills to include ethical and pedagogical guidance, helping users apply AI responsibly and confidently.

REFERENCES

Sebihi, A. (2024) 'AI Integration in Higher Education: A Case Study of Skyline University College' [Case Study], Skyline University College. Available at: https://www.skylineuniversity.ac.ae/knowledge-update/from-different-corners/ai-integration-in-higher-education-a-case-study-of-skyline-university-college

Module 1.
ROADMAP

KEEP GROWING

Stay updated, review evolving tools, and improve your AI practices.

ACT ETHICALLY

Apply ethical principles and ensure responsible, transparent AI use.

THINK CRITICALLY

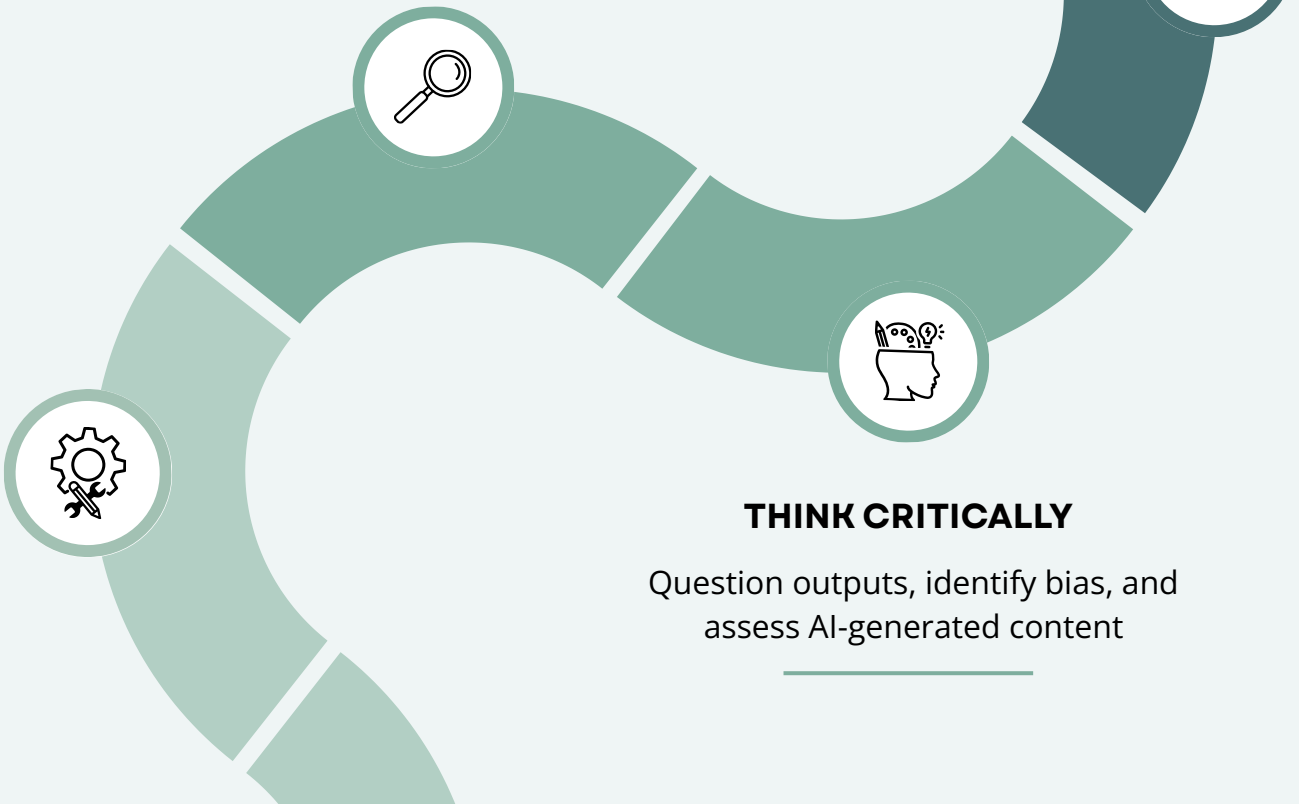
Question outputs, identify bias, and assess AI-generated content

EXPLORE USE CASES

Learn how AI can support different tasks and when it's most effective

UNDERSTAND THE BASICS

Get familiar with AI concepts, capabilities, and limitations



PEDAGOGICAL APPLICATIONS

MODULE 2

MODULE 2.
PEDAGOGICAL APPLICATIONS

Focus Areas:
Supporting AI-driven personalization, facilitating interactive and personalized learning experiences, streamlining assessment and feedback, and pedagogical support in the context of AI use in education and adult training organizations.

DESCRIPTION:

This module outlines the core competencies required to understand and evaluate the pedagogical use of AI in adult education. It focuses on how AI can support teaching and learning processes such as personalisation, interaction, feedback and assessment, while highlighting the importance of ethical, inclusive and learner-centred practices.

Each competence is structured across three levels – Explorer, Practitioner, and Innovator – enabling adult educators to identify their current stage of engagement and plan for progression toward more confident and strategic use of AI in educational practice.

MODULE 2. COMPETENCES

	LEVEL 1: EXPLORER		LEVEL 2: PRACTITIONER		LEVEL 3: INNOVATOR	
	Knowledge/Skills	*Attitudes*	*Knowledge/Skills*	*Attitudes*	*Knowledge/Skills*	*Attitudes*
SUPPORTING AI-DRIVEN PERSONALISATION	• Understands that AI can tailor content to learners' needs (e.g., adaptive quizzes) • Identifies basic AI personalisation tools (e.g., recommendation engines) • Identifies ethical concerns in AI-generated personalised feedback (e.g., bias, fairness)	• Curious about personalization but unsure how to apply it effectively • Open to experimenting despite limited technical knowledge • Is aware of the potential for AI to misinterpret learners' needs	• Uses AI tools to customize learning paths based on learner goals • Analyses AI-generated insights to refine personalization for individuals or groups • Comprehends how AI analyses learners' backgrounds to improve engagement	• Values AI's ability to meet diverse adult learner needs (e.g., pace, skill level) • Committed to ensuring AI supports learner autonomy and motivation • Addresses potential biases in personalized AI-generated recommendations	• Designs AI-driven systems that adjust content dynamically using learner data (e.g., interests, progress) • Integrates AI with adult learning principles (e.g., andragogy) to enhance relevance • Develops AI-assisted formative and summative assessment models	• Promotes personalisation as a cornerstone of adult education, inspiring peers • Advocates for scalable, ethical personalization strategies institution-wide • Advocates for learners' empowerment in AI-driven learning equity and accessibility
FACILITATING INTERACTIVE LEARNING EXPERIENCES WITH AI	• Experiments with AI tools for interaction (e.g., chatbots for Q&A) • Recognises how AI can simulate real-world scenarios (e.g., role-play bots) • Learning how AI improves accessibility (e.g., real-time translation, speech-to-text)	• Excited by AI's potential to engage learners but cautious about complexity • Willing to try new methods with guidance • Recognises AI's potential to increase inclusivity in learning	• Creates AI-supported activities (e.g., simulations, virtual discussions) to boost participation • Adjusts AI tools based on learner feedback to improve interactivity • Uses AI-generated feedback to refine teaching methodologies	• Enthusiastic about AI fostering active, hands-on learning • Sees AI as a partner in creating dynamic, relevant learning environments • Encourages learners to critically assess AI-generated content	• Develops immersive AI experiences (e.g., AR/VR with machine learning) for deeper engagement • Collaborates with tech specialists to co-create advanced interactive content • Leads research in AI-enhanced pedagogy	• Promotes innovative AI use to transform adult learning experiences • Leads efforts to integrate cutting-edge AI into pedagogy collaboratively • Advocates for AI in lifelong and self-directed learning

MODULE 2. COMPETENCES

STREAMLINING ASSESSMENT AND FEEDBACK PROCESSES WITH AI

LEVEL 1: EXPLORER		LEVEL 2: PRACTITIONER		LEVEL 3: INNOVATOR	
Knowledge/Skills	***Attitudes***	***Knowledge/Skills***	***Attitudes***	***Knowledge/Skills***	***Attitudes***
• Uses basic AI tools for assessment (e.g., auto-grading quizzes) • Familiarises with how AI provides predictive insights into learners' performance • Understands AI can track learner progress over time	• Open to AI simplifying grading but unsure of its accuracy • Willing to learn how AI can support evaluation • Acknowledges AI's limitations in subjective assessment	• Employs AI for detailed feedback (e.g., writing analysis, progress tracking) • Combines AI insights with human judgment to provide balanced feedback • Monitors bias detection in AI-based grading systems	• Confident in AI's ability to save time while maintaining quality feedback • Values AI as a tool to support, not replace, educator expertise • Ensures AI does not undermine student motivation by making assessments overly mechanized	• Designs AI systems for comprehensive assessment (e.g., predictive analytics for skill gaps) • Creates and Implements AI-enhanced formative assessment strategies • Mentors peers on using AI to streamline and improve assessment practices	• Advocates for AI to enhance fair, timely, and actionable feedback • Drives policies for ethical, transparent AI use in assessment • Encourages a growth mindset in students regarding AI-driven feedback

SELF-REFLECTION QUESTIONS

SUPPORTING AI-DRIVEN PERSONALISATION

LEVEL 1: EXPLORER

- Can I name an AI tool that personalises learning and its basic use?
- Am I interested in how AI can make learning more relevant for adults?
- How can I use AI tools to enhance learning without replacing human interaction?

LEVEL 2: PRACTITIONER

- Do I use AI to tailor content or pacing to my learners' needs?
- Do I analyse AI insights to improve personalisation for my learners?
- How can I balance AI-driven personalisation with teacher-led learning?

LEVEL 3: INNOVATOR

- Am I designing AI systems that dynamically adapt to learner profiles?
- Do I advocate for ethical, scalable AI personalisation in my institution?
- What long-term impact will AI personalisation have on my learners' autonomy?

FACILITATING INTERACTIVE LEARNING EXPERIENCES WITH AI

LEVEL 1: EXPLORER

- Have I tried an AI tool to make lessons more interactive?
- Do I see how AI could simulate real-world tasks for learners?
- How can I use AI-powered tools to enhance accessibility for diverse learners?

LEVEL 2: PRACTITIONER

- Am I creating AI activities that actively engage my learners?
- Do I adjust AI tools based on learner reactions to boost participation?
- Am I integrating AI tools ethically in interactive learning?

LEVEL 3: INNOVATOR

- Do I develop immersive AI experiences that transform learning?
- Am I collaborating to integrate advanced AI into interactive pedagogy?
- How can I lead AI-driven interactive learning initiatives in my organisation/ institution?

SELF-REFLECTION QUESTIONS

STREAMLINING ASSESSMENT AND FEEDBACK PROCESSES WITH AI

LEVEL 1: EXPLORER

- Have I used an AI tool to grade or track learner progress?
- Am I open to AI simplifying my assessment tasks?
- How do I ensure AI-driven grading does not introduce bias?

LEVEL 2: PRACTITIONER

- Do I combine AI feedback with my own insights for better results?
- How can I make AI-generated feedback more personalised for students?
- Do I trust AI to enhance the quality and speed of my feedback?

LEVEL 3: INNOVATOR

- Am I designing AI assessment systems that predict and address skill gaps?
- Do I guide peers on using AI for fair and effective assessments?
- What strategies should I demonstrate to encourage a growth mindset in students regarding AI-driven feedback?

CASE STUDY 1

BERLITZ VIRTUAL LANGUAGE PRACTICE

BACKGROUND

Berlitz integrated Azure AI Speech to enhance spoken language practice for adult learners in virtual settings, enabling flexible skill development for work or travel. This AI-driven tool assesses pronunciation in real time, generates diverse accents and dialogues, and adapts exercises to learners' proficiency levels, allowing educators to focus on refining teaching strategies rather than basic correction. By scaling language practice online, it reaches thousands of learners efficiently. However, the tool has limitations: it may not fully capture conversational fluency or cultural nuances, and its reliance on clear audio input can falter in noisy environments, requiring human oversight for comprehensive learning.

BIAS DILEMA

Early versions of Azure AI Speech struggled with recognizing non-standard accents, as noted in VKTR's 2024 case study analysis, potentially penalizing learners from diverse linguistic backgrounds (e.g., non-native speakers or those with regional dialects). This could reinforce inequities for adult learners whose pronunciation deviates from "standard" models, particularly in professional contexts where fluency expectations vary. A balanced approach, combining AI feedback with instructor guidance, ensures equitable skill development across diverse learners.

FOOD FOR THOUGHT

While Berlitz's AI promises scalable language practice, it risks disadvantaging learners with unique speech patterns. Pairing AI with human input fosters inclusivity. Some questions to think about:

- How can educators use Berlitz's AI to enhance speaking skills while ensuring fairness for all accents?
- In what ways might this tool be unfair to learners with non-standard speech (e.g., non-native speakers), and how can educators address this? Have you seen such issues?
- In which situations might an AI pronunciation error mislead learners, if not corrected by a teacher?
- What other methods (beyond AI tools) can improve spoken proficiency, like peer practice or role-playing?
- What guidelines can ensure this AI supports all learners, especially those with diverse linguistic backgrounds?

CASE STUDY 2

BE MY EYES BY BE MY AI

BACKGROUND

Be My Eyes, partnered with OpenAI, introduced Be My AI to support visually impaired adults in education by providing real-time visual descriptions via a mobile app. This tool uses image-to-text generation and NLP to describe materials and environments, enabling independent engagement with coursework and reducing reliance on human volunteers. Educators can focus on teaching rather than facilitation. However, Be My AI struggles with complex scenes (e.g., crowded classrooms) and requires stable connectivity, limiting its effectiveness without supplementary support.

BIAS DILEMA

Be My Eyes (2024) notes that Be My AI occasionally misidentifies objects in low-light or cluttered settings, disproportionately affecting learners in under-resourced areas (e.g., rural adult programs). It may also prioritize standard formats over diverse materials (e.g., handwritten notes), excluding learners with unique needs, as per American Foundation for the Blind insights. Pairing AI with human or tactile aids ensures equitable access.

FOOD FOR THOUGHT

Be My AI enhances independence, but it risks excluding learners with environmental or format barriers. Combining AI with diverse methods fosters inclusion. Some questions to think about:

- How can educators use Be My AI to support visually impaired learners while ensuring fairness in all settings?
- In what ways might this tool disadvantage certain learners (e.g., those in low-tech areas), and how can educators address this? Have you seen this?
- In which situations might an AI misdescription confuse learners, if not verified by a person?
- What other methods (beyond AI tools) can aid visually impaired adults, like braille or audio guides?
- What guidelines can ensure Be My AI supports all learners, especially those with limited resources?

REFERENCES

1. VKTR (n.d.) 5 AI Case Studies in Education [Web article]. VKTR. Available at: https://www.vktr.com/ai-disruption/5-ai-case-studies-in-education
2. Be My Eyes (2024) Be My AI: A New Era of Visual Assistance [Case Study]. Be My Eyes. Available at: https://www.bemyeyes.com/be-my-ai

Module 2.
ROADMAP

LEAD INNOVATION

Advocate for responsible and inclusive AI use in pedagogy

SHARE & REFLECT

Exchange ideas and experiences with colleagues

ADAPT TO LEARNERS

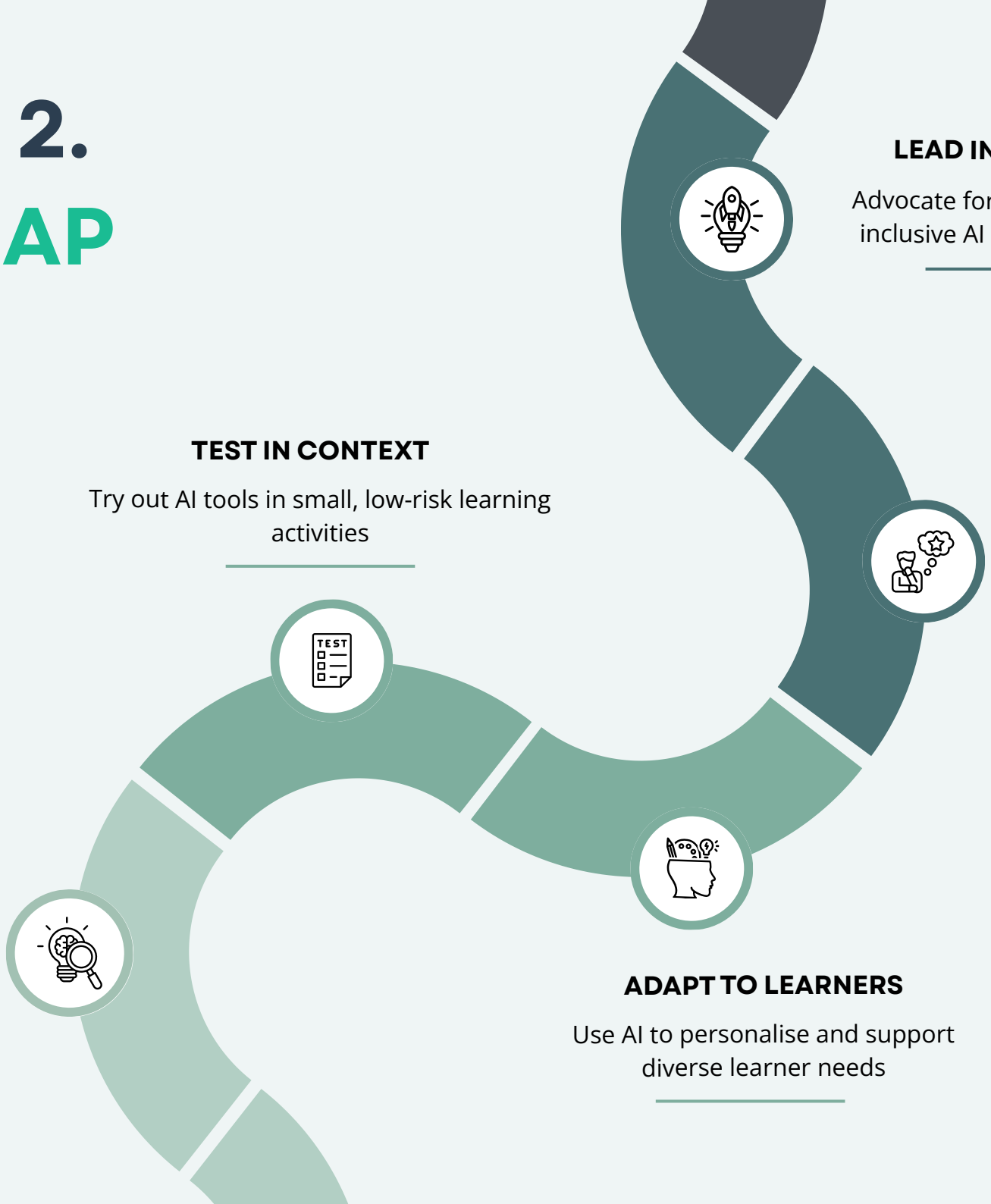
Use AI to personalise and support diverse learner needs

TEST IN CONTEXT

Try out AI tools in small, low-risk learning activities

DISCOVER POSSIBILITIES

Explore how AI can support teaching and learning



AI FOR ORGANISATIONAL PROCESSES

MODULE 3

MODULE 3.

AI FOR ORGANISATIONAL PROCESSES

Focus Areas:
Automation, workflow management, predictive analytics, digital transformation strategies, big data, data integration, data governance in the context of AI use in education and training organisations.

DESCRIPTION:

This module outlines the competences needed to understand and apply AI in organisational workflows within adult education institutions. It focuses on how AI can support digital transformation by improving efficiency, enhancing decision-making and enabling data-informed planning and communication across teams.

Each competence is presented across three levels – Explorer, Practitioner and Innovator – allowing staff to assess their current engagement and plan for progressive development. The module highlights the strategic role of AI in shaping more responsive, innovative and future-ready organisations.

MODULE 3. COMPETENCES

AI-ENHANCED INFRASTRUCTURE & TOOLS

LEVEL 1: EXPLORER		LEVEL 2: PRACTITIONER		LEVEL 3: INNOVATOR	
Knowledge/Skills	***Attitudes***	***Knowledge/Skills***	***Attitudes***	***Knowledge/Skills***	***Attitudes***
• Identifies basic AI tools and platforms that can be used to support adult learning processes (e.g., AI-driven content recommendation, auto-translation) • Understands the fundamentals of AI-based communication (e.g., chatbots, virtual assistants) • Recognizes the importance of secure digital environments when introducing AI solution	• Demonstrates curiosity and willingness to experiment with basic AI applications for organizational tasks • Respects potential ethical concerns (e.g., bias, data privacy) when exploring AI-driven systems	• Selects and uses AI-driven educational tools (e.g., adaptive learning platforms, automated feedback systems) suited to adult learners' needs • Employs analytics from AI dashboards to inform real-time decisions (e.g., predicting learner dropout, personalizing support) • Collaborates with IT colleagues to ensure reliable and ethical integration of AI tool.	• Shows a proactive stance in refining AI solutions to enhance learning outcomes and organizational effectiveness • Acknowledges both the opportunities and the risks of implementing AI at scale • Maintains a balanced view on AI potential	• Designs or co-creates holistic AI-enabled ecosystems (e.g., integrated LMS with AI tutoring) that cater to diverse adult learners' needs • Implements advanced strategies for security, data protection and machine learning model calibration • Leads the piloting of cutting-edge AI research (e.g., deep learning, predictive analytics) for organisational advancement	• Promotes a culture of AI-driven innovation, inspiring teams to invest in emerging AI technologies • Exhibits resilience and a forward-looking perspective, understanding that AI adoption requires continuos learning and strategic oversight

MODULE 3. COMPETENCES

AI-BASED PEDAGOGY & INNOVATION

LEVEL 1: EXPLORER		LEVEL 2: PRACTITIONER		LEVEL 3: INNOVATOR	
Knowledge/Skills	*Attitudes*	*Knowledge/Skills*	*Attitudes*	*Knowledge/Skills*	*Attitudes*
• Identifies simple AI-led functionalities (e.g., auto-grading, adaptive quizzes) that can enhance adult training • Understands basic principles of AI-driven personalized learning, including potential benefits and pitfalls • Explores low-complexity AI applications (e.g., generative text suggestions) to enrich lesson materials	• Maintains an open-minded approach to new AI pedagogical methods, recognizing the evolving nature of these tools • Demonstrates readiness to learn from small-scale experiments before expanding AI adoption	• Integrates AI-driven personalization into blended or hybrid learning models (e.g., tailored learning paths, intelligent tutoring) • Uses AI analytics (e.g., learning progress prediction, sentiment analysis) to refine course design and instruction • Builds interactive AI-based learning experiences (e.g., simulations powered by machine learning	• Seeks continuous improvement in teaching practice through evidence-based AI insights • Embraces co-creation with peers, sharing AI pedagogical successes and challenges within the organisation	• Oversees large-scale AI implementation (e.g., advanced recommendation systems, automated scheduling) to individualize adult learners' journeys • Develops or curates high-level AI content (e.g., AR/VR integrated with machine learning) for immersive educational experiences • Applies comprehensive data science methodologies to assess and refine long-term pedagogical impact	• Encourages experimentation with AI, striving to redefine adult education experiences in collaboration with technology specialists • Fosters an organizational mindset of AI literacy, promoting advanced upskilling and ethical adoption across all teams

MODULE 3. COMPETENCES

ORGANIZATIONAL & COMMUNITY ENGAGEMENT WITH AI

LEVEL 1: EXPLORER		LEVEL 2: PRACTITIONER		LEVEL 3: INNOVATOR	
Knowledge/Skills	*Attitudes*	*Knowledge/Skills*	*Attitudes*	*Knowledge/Skills*	*Attitudes*
• Understands basic governance and policies around AI implementation (e.g., handling personal data, addressing algorithmic bias) • Communicates effectively about AI-driven initiatives to immediate colleagues and stakeholders • Identifies local or institutional resources for AI-related projects (funding, technical support)	• Expresses readiness to align personal goals with wider organizational AI strategies • Respects diverse levels of AI awareness among colleagues, sharing basic knowledge to build collective confidence	• Coordinates with cross-functional teams (e.g., data protection officers, AI developers, pedagogical specialists) to implement AI solutions responsibly • Integrates stakeholder feedback (learners, staff, partners) to iteratively refine AI initiatives • Prepares proposals or evaluation reports to acquire support for AI-based organizational reforms	• Displays accountability for fostering a transparent, inclusive culture around AI usage and policy compliance • Promotes equitable access to AI tools and training, ensuring no learner or employee is left behind	• Collaborates with leadership to formulate long-term AI vision, setting milestones and success metrics for digital transformation • Initiates alliances with external partners (tech vendors, research institutions) to co-build advanced AI solutions • Designs strategic frameworks for sustainable AI expansion, including budget planning, workforce development, and ethical guidelines	• Serves as an AI ambassador, advocating for continuous cross-departmental collaboration and resource allocation • Creates an organizational culture that values reflection, constant adaptation and critical engagement with AI developments

SELF-REFLECTION QUESTIONS

	LEVEL 1: EXPLORER	LEVEL 2: PRACTITIONER	LEVEL 3: INNOVATOR
AI-ENHANCED INFRASTRUCTURE & TOOLS	• What basic AI tools have I started exploring or experimenting with in my work? • In what ways can I collaborate with IT colleagues or other peers to expand my understanding of AI-based tools?	• How effectively am I using AI analytics (e.g., dashboards, predictive tools) to make data-driven decisions? • Do I adapt my choices of AI tools to match the needs and digital readiness of my adult learners or colleagues? • In what ways do I collaborate with IT and administration to maintain secure, stable and up-to-date AI resources?	• How am I shaping a long-term strategy for AI adoption within my organisation (beyond isolated tools)? • How do I ensure advanced data protection and responsible use of learners' and colleagues' data when implementing sophisticated AI models? • In what ways do I foster a culture of AI experimentation, while managing risks and anxieties around new technologies?
AI-BASED PEDAGOGY & INNOVATION	• Which simple AI-led features (auto-grading, text suggestions, adaptive quizzes) have I tested, and how did they impact learning? • How comfortable am I with basic AI concepts like personalization or machine learning? • Do I consult my learners about their experiences and comfort levels with AI-driven tasks?	• How am I using AI analytics (e.g., progress predictions, sentiment analysis) to adapt my teaching approaches in real time? • Which methods or tools do I rely on to ensure that AI-based personalization does not inadvertently reinforce biases or exclude certain learners? • Am I collaborating with other educators to share best practices or co-develop AI-augmented lesson designs?	• How do I integrate advanced AI-driven content creation (e.g., AR/VR with machine learning) for truly immersive learning experiences? • Do I systematically evaluate the effectiveness of AI-based pedagogy through data collection and long-term assessments? • What mentorship or leadership role do I play in helping others adopt AI in their teaching?

SELF-REFLECTION QUESTIONS

ORGANIZATIONAL & COMMUNITY ENGAGEMENT WITH AI

LEVEL 1: EXPLORER

- Am I aware of the basic institutional policies or guidelines on AI, including ethical or privacy standards?
- How do I communicate my modest AI-related initiatives to team members or other stakeholders?
- Do I know any available resources or trainings could I leverage to deepen my organisation's AI capacity?

LEVEL 2: PRACTITIONER

- How effectively am I collaborating across departments (IT, HR, academic, etc.) to support responsible AI use?
- Am I actively involving learners, employers or community partners to co-create or evaluate AI projects?
- In what ways do I secure or request resources (budget, staff time) to scale AI-driven initiatives?

LEVEL 3: INNOVATOR

- How do I work with senior leadership to develop a strategic AI roadmap aligned with organisational mission and long-term goals?
- Which external networks or alliances (industry, research, tech communities) have I fostered to keep our organisation at the AI forefront?
- How do I measure and communicate the broader impact of AI initiatives, both internally and externally, to ensure sustainability and ongoing support?

CASE STUDY 1

IBM SKILLS BUILD

BACKGROUND

IBM SkillsBuild (formerly known as 'SkillsBuild Reignite') is a digital learning program aimed at supporting adult learners, particularly job seekers, career changers, and individuals from underserved communities, to develop highly marketable digital skills. The program is free and leverages AI to personalise educational content, streamline administrative tasks, and foster partnerships with local training providers worldwide.

THE CHALLENGE

Many adult learners face challenges such as limited time, shifting career paths, or returning to education after long gaps. These learners require highly flexible, tailored learning experiences that align with real-world job demands. IBM aimed to move beyond traditional static e-learning by embedding artificial intelligence into the platform to offer personalised learning, automate support services, and better connect skills development to employment outcomes.

AI SOLUTION

- *Adaptive learning paths*: AI recommends modules based on each learner's performance, goals, and assessments, allowing for more personalised and efficient learning journeys.
- *Skills profiler and labour market matching*: An AI-based tool analyses learners' existing skills and compares them with real-time labour market data to suggest in-demand career paths and relevant training.
- *AI-powered support:* A chatbot addresses frequently asked questions, while virtual mentors provide learners with feedback on exercises and projects.
- *Analytics dashboards:* Partner organisations and educators use AI-based dashboards to track learner progress, identify drop-out risks and offer timely support interventions

CASE STUDY 1

FOOD FOR THOUGHT

The growing use of AI for personalised learning offers efficiency and improved outcomes, but it also raises important questions for adult education providers:

- How can we ensure that AI-generated learning paths still leave room for broader skill exploration and critical thinking?
- What additional support do learners need to engage meaningfully with AI-driven content, especially those with limited digital skills?
- In what ways can human facilitators complement AI systems to ensure learners stay motivated and feel supported?
- How do we maintain transparency in AI recommendations so that learners understand and trust the process?

KEY INSIGHTS

1. AI personalisation increased learner progression, with 60% of participants advancing to higher-level modules based on tailored suggestions.
2. Automation of administrative tasks enabled staff to spend more time on learner support and mentoring.
3. AI-supported job-matching tools helped align training to real labour market needs, improving employability outcomes.
4. Combining self-paced AI-driven learning with human mentorship proved especially effective in supporting adult learners with varied educational backgrounds.

REFERENCES

IBM Corporation (2023) IBM SkillsBuild: AI-Driven Personalized Learning for the Future Workforce [Case Study], IBM Newsroom. Published Online: 18 September 2023. Available at: https://newsroom.ibm.com/2023-09-18-IBM-Commits-to-Train-2-Million-in-Artificial-Intelligence-in-Three-Years,-with-a-Focus-on-Underrepresented-Communities

CASE STUDY 2

NORDSTADT LEARNING CENTRE, GERMANY

BACKGROUND

The “Nordstadt Learning Centre” is a fictional adult education provider used to show how AI tools could support day-to-day operations and improve how services are managed in a typical community-based learning setting.

The centre is focused on delivering flexible, learner-centred programmes. As demand for personalised learning increased, the institution faced mounting administrative pressure, with inefficiencies in enrollment processes, course planning, and resource allocation affecting service delivery.

THE CHALLENGE

The organisation identified several constrictions in its operations, including:

- Repetitive manual tasks slowing down administration
- Delays in learner enrollment and communication
- Difficulty in predicting learner interest and demand
- Inefficient use of teaching staff and facilities

These challenges created a need for AI-driven systems to streamline internal operations, reduce delays, and better match resources with learner needs

AI SOLUTION

- *Workflow automation:* AI systems integrated data across internal platforms, automating routine administrative tasks such as enrollment and confirmation emails.
- *Smart scheduling:* AI tools were used to optimise staff and facility scheduling based on real-time demand and availability.
- *Predictive analytics:* AI analysed historical enrolment data and local demand trends to forecast interest in specific subjects and formats.
- *Adaptive resource management:* Insights from AI helped tailor course offerings more closely to learner needs and organisational capacity.

CASE STUDY 2

FOOD FOR THOUGHT

The use of AI in back-office operations raises key strategic and ethical questions for adult education providers:

- What safeguards are needed to ensure that automation enhances service without dehumanising learner support?
- How can organisations maintain flexibility and equity when AI recommends data-driven adjustments in course offerings or locations?
- To what extent should staffing decisions be influenced by algorithmic predictions?
- How can we ensure that smaller or low-demand learner groups still receive equal access?

KEY INSIGHTS

1. Small steps, big gains. Even basic AI tools, like automated registration forms or scheduling support, can save valuable time and reduce staff workload in adult learning centres.
2. Data can guide, not decide. Using past learner data helps plan better programmes, but human judgment is still essential to interpret what learners need.
3. More time for people. When routine admin tasks are handled by AI, staff can focus more on learner support, programme development, or outreach — areas where human connection matters most.
4. Involve the whole team. Successful integration of AI tools works best when all staff, from admin to programme managers, are engaged and trained. It builds confidence and improves results.

Module 3.
ROADMAP

STRENGTHEN STRATEGY

Scale up successful AI use and integrate it into long-term digital transformation plans

COLLABORATE WITH OTHERS

Work with admin, teaching, and IT teams to align goals and support ethical implementation

USE DATA WISELY

Leverage AI insights (e.g. dashboards, analytics) to guide planning and resource allocation

START SMALL

Test AI tools in simple tasks like scheduling or enrolment workflows

IDENTIFY OPPORTUNITIES

Spot areas where AI could streamline processes or improve decision-making

ETHICAL CONSIDERATIONS AND SAFETY

MODULE 4

MODULE 4.
ETHICAL CONSIDERATIONS AND SAFETY

Focus Areas:
Bias, Transparency, Explainability, Human Agency, Privacy, and Data Security in the context of AI use in adult education and training.

DESCRIPTION:

This module focuses on helping adult education professionals understand and apply ethical principles when working with AI tools and systems. It supports users in identifying key risks such as bias, lack of transparency, diminished human oversight and data privacy breaches.

The aim is to help educators and trainers reflect on their own practice and institutional systems and to take informed steps toward fair, transparent and inclusive AI use. The module encourages self-assessment and continuous improvement aligned with EU and international frameworks, including the AI Act, DigComp 2.2, and UNESCO's AI ethics guidelines.

Each competence in this module is presented at three levels - Explorer, Practitioner, and Innovator - providing a developmental path for professionals to build confidence, understanding and leadership in ethical AI use across various roles.

MODULE 4. COMPETENCES

	LEVEL 1: EXPLORER		LEVEL 2: PRACTITIONER		LEVEL 3: INNOVATOR	
	Knowledge/Skills	*Attitudes*	*Knowledge/Skills*	*Attitudes*	*Knowledge/Skills*	*Attitudes*
RECOGNISING AND MITIGATING AI BIAS	• Understands that AI tools can exhibit bias, potentially disadvantaging certain groups of adult learners • Follows simple guidelines or best practices when choosing AI tools to ensure minimal bias • After trying AI tools, begins to notice unfair results	• Shows curiosity and openness to learning about fairness and inclusion in AI • Open to learning more about how biases can impact learner outcomes and motivation. • Sees fairness as important, but still needs guidance on how to achieve it	• Can tell the difference between various forms of bias and understand potential effects on diverse adult learner groups • Adjusts or switches AI tools if they appear unfair, looking for more inclusive alternatives	• Seeks feedback from colleagues and learners about AI fairness • Committed to creating an environment where every learner has equal opportunity	• Shares techniques and strategies with colleagues to detect and reduce bias (e.g., reviewing how data is collected) • Contributes to or leads institutional guidelines on fair AI practices in adult education	• Advocates for a culture of equity, encouraging ongoing reflection and improvement in AI use • Proactively mentors others in identifying and addressing bias
ENSURING TRANSPARENCY AND EXPLAINABILITY	• Tells adult learners when AI is being used • Can provide simple explanations about AI tool being used	• Respects learners' right to understand how decisions affecting their education are made • Believes that transparency helps build trust, especially with adults who may be skeptical or unfamiliar with AI	• Can explain how an AI tool used processes inputs and produces outputs • Compares different AI tools, choosing those that provide clear, understandable explanations for learners • Encourages learners to ask questions and voice concerns about AI tools used	• Believes transparency builds trust, especially for adult learners who may have varying comfort levels with technology • Open to offering more explanations if they seem confusing or incomplete	• Guides colleagues on effectively communicating AI-generated outcomes and handling learners' questions • Helps develop or refine internal guidelines or training sessions that ensure all AI tools used are transparent	• Actively promotes a clear and open culture, where learners feel empowered to understand and question AI results • Encourages continuous updates to maintain clarity as AI tools evolve

MODULE 4. COMPETENCES

	LEVEL 1: EXPLORER		LEVEL 2: PRACTITIONER		LEVEL 3: INNOVATOR	
	Knowledge/Skills	*Attitudes*	*Knowledge/Skills*	*Attitudes*	*Knowledge/Skills*	*Attitudes*
HUMAN AGENCY AND OVERSIGHT	• Understands that AI systems should support, not replace, human decisions in education • Recognizes that automated feedback or recommendations may need human review • Understands that AI decisions might affect learner outcomes (e.g.automatic grading)	• Believes that learners deserve human input and support, especially when decisions may affect their progress • Open to critically questioning AI outcomes instead of assuming accuracy • Sees their human role as central in facilitating learning	• Reviews and monitors AI-generated outputs (e.g., automated feedback, learning pathways) before accepting or acting on them • Chooses tools that allow human intervention • Instructs learners when AI is used and offers channels for feedback or dispute	• Trusts in human judgment over automation when needed • Actively ensures learners' voices and perspectives are heard in AI-supported learning • Values collaborative decision-making and learner autonomy	• Designs or improves ways to keep human control in AI-supported teaching (e.g., adding review checkpoints) • Advocates for balanced use of AI and human insight in institutional decisions • Supports colleagues in applying "human-in-the-loop" practices	• Encourages ethical and human-centred AI practices • Leads efforts to ensure transparency and appeal processes are available • Sees human oversight as a safeguard for inclusion, justice and learner empowerment
PRIVACY AND DATA SECURITY	• Understands the importance of protecting learners' personal and professional data • Follows basic security practices and knows to avoid sharing data in unsecured channels	• Respects the need for confidentiality, recognizing the sensitivity of learners' information and potential consequences • Willing to learn more about privacy regulations (e.g., GDPR) as needed	• Evaluates AI tools for privacy and data security features (e.g., encrypted logins, secure data storage) • Takes steps to secure learners' data • Keeps up to date on new data security recommendations or updates	• Promotes safe digital practices among staff and learners • Stays informed and proactive about data protection regulations • Believes strong data protection builds adult learners' trust and comfort with AI tools	• Trains colleagues on advanced data protection (e.g. anonymising information). • Offers input on institutional policies to ensure robust data privacy standards • Plans ahead for potential security risks and responds quickly	• Leads by example, demonstrating consistent ethical behaviour and prioritising data security at every level • Recognizes privacy as a cornerstone of ethical AI use, advocating for strong protections at all levels

SELF-REFLECTION QUESTIONS

RECOGNISING AND MITIGATING AI BIAS

LEVEL 1: EXPLORER

- Do I realise AI can be biased against certain groups of adult learners (e.g., older adults, non-native speakers), but still need guidance on how this happens?
- Have I tried at least one AI tool and noticed any potential bias or unfair outcomes without fully knowing how to fix them?

LEVEL 2: PRACTITIONER

- Do I actively check different AI tools to see if they treat various learner groups fairly (e.g., by comparing results or feedback)?
- When I spot bias or suspect it, do I adjust the tool (or choose a different one) to better serve my learners' diverse needs?

LEVEL 3: INNOVATOR

- Have I gained enough experience to teach or mentor my colleagues on ways to detect and reduce AI bias?
- Am I helping shape, improve, or advise on institutional guidelines or best practices to ensure AI tools remain fair for all learners?

ENSURING TRANSPARENCY AND EXPLAINABILITY

LEVEL 1: EXPLORER

- Am I upfront with learners when I use AI?
- Can I offer a simple explanation of why I use AI and how the chosen AI was used?

LEVEL 2: PRACTITIONER

- Do I evaluate different AI tools and choose ones that offer clear, understandable explanations for learners?
- Am I encouraging learners to ask questions about AI tools used and discussing concerns as they come up?

LEVEL 3: INNOVATOR

- Have I become confident enough to show colleagues how to explain AI outputs in plain language, addressing learner questions effectively?
- Do I help develop or update in-house guidelines so that all AI tools and processes stay transparent and easy to understand for learners?

SELF-REFLECTION QUESTIONS

HUMAN AGENCY AND OVERSIGHT

LEVEL 1: EXPLORER

- Do I understand that AI tools are meant to assist, not replace, my role as an educator?
- Have I ever questioned the output of an AI tool or considered that it might need human interpretation?
- Am I clear on when a learner might be affected by an AI-supported decision (e.g., feedback, evaluation, content suggestions)?

LEVEL 2: PRACTITIONER

- Do I regularly review AI-generated recommendations or feedback before sharing them with learners?
- Do I give my learners the chance to ask questions or challenge AI-based outputs or decisions?
- Have I chosen AI tools that allow for human intervention or explanation when needed?

LEVEL 3: INNOVATOR

- Have I helped shape or improve our procedures so that critical decisions involving AI always include human oversight?
- Am I offering support to others on how to balance AI use with professional judgment and learner voice?
- Do I advocate for processes that protect learner autonomy and ensure no one is unfairly impacted by automated decisions?

PRIVACY AND DATA SECURITY

LEVEL 1: EXPLORER

- Am I aware that adult learners' data is sensitive (e.g., work history, personal stories) and must be handled securely?
- Do I follow basic institutional rules for data protection (e.g., using encrypted platforms, not sharing passwords)?

LEVEL 2: PRACTITIONER

- Do I try out different AI tools and check whether they meet recognised privacy standards (e.g., secure logins, proper data storage)?
- Am I proactive about learning new ways to keep data safe (e.g., being cautious with how data is exported or shared)?

LEVEL 3: INNOVATOR

- Can I guide or train colleagues on best practices for data security when using AI tools (e.g., running workshops or sharing tips)?
- Am I involved in or influencing our organisation's decisions on how to handle learner data securely, ensuring compliance with laws and policies?

CASE STUDY 1

AI DETECTION TOOLS

BACKGROUND

AI detection tools are increasingly being used by educators to identify plagiarism, AI-generated content, or other forms of academic dishonesty. These tools can analyse vast amounts of text quickly, flagging potential issues and saving educator's valuable time. By automating the initial review process, AI detection tools allow educators to focus on fostering academic integrity and providing meaningful guidance to students.

THE CHALLENGE

However, these tools are not without limitations. While they can efficiently detect patterns or anomalies in text, distinguishing genuine intent, contextual understanding, or complex nuances often requires human judgment and contextual understanding, especially important in adult learning, where many learners may have non-standard writing styles, language barriers, or neurodiverse ways of expressing themselves.

Relying too much on AI detection tools can lead to false results or unfair accusations. This might especially affect students from different backgrounds.

BIAS DILEMMA

Stanford University raised concerns about AI detection tools that were found to penalize non-native English speakers. The tools emphasized writing mechanics, such as grammar and syntax, over the quality of ideas, reinforcing inequities based on students' language proficiency.

The Geneva Graduate Institute publication AI and Digital Inequities notes that remote testing platforms using AI to detect off-task behaviour fail to recognize Black students, creating situations where Black students are locked out of or receive failing grades on exams or are subjected to unfair infractions.

A balanced approach, combining AI tools with human oversight, ensures fair and equitable evaluation in educational settings.

CASE STUDY 1

FOOD FOR THOUGHT

Although AI tools promise efficiency, they can inadvertently discriminate against students from diverse backgrounds. A balanced approach, combining AI tools with human oversight, ensures fair and equitable evaluation in educational settings. Some questions to think about:

- How can educators use AI for academic integrity without replacing human judgment?
- Should flagged content automatically trigger disciplinary procedures or be reviewed first by a person?
- How might AI systems unintentionally disadvantage learners who use language differently due to cultural, linguistic or cognitive factors?
- Are there fairer ways to assess learning than relying heavily on writing mechanics?
- What institutional policies or safeguards can help ensure AI supports inclusion rather than deepening disparities?

KEY INSIGHTS

1. **Responsible use of AI detection.** Educators should apply AI detection tools as part of a broader strategy to support academic integrity, not as the sole authority on misconduct**.**
2. **Human oversight is essential.** AI-generated flags must be reviewed by a person who can assess intent, context, and learner background before making decisions.
3. **Transparent review processes.** Institutions should ensure learners are informed about how detection tools work and are given a chance to explain flagged content.
4. **Inclusive assessment practices.** AI should not overemphasise grammar or standardised writing norms; alternative ways of demonstrating understanding should be considered.
5. **Ongoing monitoring and improvement.** Detection tools should be regularly checked for potential bias or unintended effects, with feedback from educators and diverse learner groups.

REFERENCES

EDUCAUSE (2024) Striking a Balance: Navigating the Ethical Dilemmas of AI in Higher Education [Article], EDUCAUSE Review. Published Online: December 2024. Available at: https://er.educause.edu/articles/2024/12/striking-a-balance-navigating-the-ethical-dilemmas-of-ai-in-higher-education

Module 4.
ROADMAP

LEAD ETHICALLY

Advocate for inclusive, transparent, and fair AI use at the organisational level

SUPPORT SAFE PRACTICES

Promote ethical standards and help colleagues understand the risks and safety meassures

ACT WITH CARE

Use AI tools responsibly, ensuring human oversight and protecting learner data

ASK THE RIGHT QUESTIONS

Reflect on how AI affects learners, especially those from diverse or vulnerable backgrounds

NOTICE THE RISKS

Become aware of ethical concerns like bias, data misuse and lack of transparency in AI tools

AI INTEGRATION STRATEGIES, LEADERSHIP AND ADVOCACY

MODULE 5

MODULE 5.

AI INTEGRATION STRATEGIES, LEADERSHIP AND ADVOCACY

Focus Areas:
Strategic planning for AI integration; organisational readiness and vision-setting; staff engagement and motivation; mentoring and peer support in AI adoption; building a shared culture of ethical, inclusive AI use; advocating for responsible AI policies and practices in education and training

DESCRIPTION:

This module defines the competences needed to lead, coordinate or influence the meaningful integration of AI within adult education institutions and networks. It focuses not on technical implementation, but on the strategic, motivational and ethical aspects of guiding digital transformation. The competences in this module are relevant to professionals who take initiative, whether formally or informally, in shaping responsible and inclusive AI practices across teams, programmes or communities.

Each competence is structured across three levels - Explorer, Practitioner, and Innovator - offering a pathway for progression from initial awareness to strategic leadership. By mapping their position within these levels, professionals can gain a better understanding of how they contribute to building AI maturity in their working environments.

MODULE 5. COMPETENCES

	LEVEL 1: EXPLORER		LEVEL 2: PRACTITIONER		LEVEL 3: INNOVATOR	
	Knowledge/Skills	***Attitudes***	***Knowledge/Skills***	***Attitudes***	***Knowledge/Skills***	***Attitudes***
STRATEGIC THINKING FOR AI INTEGRATION	• Understands basic ways AI can support adult learning (e.g. adapting materials, providing feedback, helping with administrative tasks) • Can recognise where AI could improve their own teaching or learning activities	• Curious about improving their teaching practice • Open to exploring how AI can make adult education more effective and relevant to learners and job market needs	• Plans how to use AI to meet specific learning or programme goals • Selects tools that fit adult learners' needs • Shares ideas and examples with colleagues	• Uses AI tools with a clear purpose • Values practical use that supports learners and learning outcomes	• Helps others plan how to use AI in adult learning. • Contributes to the design of programmes or strategies that include the responsible use of AI • Connects AI use with long-term educational goal	• Encourages others to connect AI use with long-term goals and improvements in adult education, seeing a bigger picture
SUPPORTING AND MOTIVATING OTHERS TO USE AI	• Shares simple AI tools or ideas with colleagues • Talks about what has worked for them or what they are still learning (current & potential use)	• Enjoys sharing knowledge • Believes learning together and from each other makes AI easier to understand and use	• Supports peers as they try AI tools • Organises or takes part in informal peer learning or mentoring • Answers questions or helps with challenges	• Encourages and supports others • Understands that people learn at different speeds and need time to build confidence	• Develops and leads training programme, workshops or group discussions about AI in adult education • Builds a team or learning group that shares experiences and good practices	• Creates a safe and open learning culture. • Motivates others to explore AI in a positive and responsible way

MODULE 5. COMPETENCES

PROMOTING RESPONSIBLE AI USE AND DIGITAL CITIZENSHIP

LEVEL 1: EXPLORER		LEVEL 2: PRACTITIONER		LEVEL 3: INNOVATOR	
Knowledge/Skills	*Attitudes*	*Knowledge/Skills*	*Attitudes*	*Knowledge/Skills*	*Attitudes*
• Understands that AI should be used in ways that are fair, safe and respectful • Can explain why it's important to think about ethics and inclusion while using AI	• Cares about how AI affects people • Is willing to speak up when something seems unfair or unclear	• Talks with learners or peers about how to use AI responsibly • Makes sure AI use in learning respects the different needs and backgrounds of learners	• Is committed to fairness, transparency and inclusion • Tries to support others in making ethical and fair choices	• Shares experiences or gives input on how AI tools, policies or practices can be more ethical and inclusive • Joins events, networks or advocacy groups focused on AI use, especially in adult education	• Acts as a role model for responsible AI use • Promotes awareness and action in their organisation or community

SELF-REFLECTION QUESTIONS

STRATEGIC THINKING FOR AI INTEGRATION

LEVEL 1: EXPLORER

- Can I think of ways AI might support or improve my work with adult learners?
- Have I considered how AI fits into my overall learning or teaching approach?

LEVEL 2: PRACTITIONER

- Do I plan how to use AI tools based on programme objectives, learning goals or learner needs?
- How do I decide which tools are worth using and which are not?

LEVEL 3: INNOVATOR

- Am I contributing to broader planning or discussions about how AI is used in our teaching programmes or organisation?
- How can I help others connect AI use with the long-term goals of the organisation and adult education in general?

SUPPORTING AND MOTIVATING OTHERS TO USE AI

LEVEL 1: EXPLORER

- Have I shared any AI tools or experiences with colleagues or peers?
- Do I create space for open conversations about AI, including concerns from my colleagues?

LEVEL 2: PRACTITIONER

- How am I supporting others in learning to use AI tools?
- What challenges do my colleagues face and how can I help?

LEVEL 3: INNOVATOR

- Am I building a positive environment where colleagues feel safe to ask for my help in exploring and learning about AI?
- How do I encourage collaboration and shared learning about responsible AI use with my colleagues?

SELF-REFLECTION QUESTIONS

LEVEL 1: EXPLORER

- Do I think about fairness, inclusion or transparency when using AI tools?
- Have I ever raised concerns about the ethical or social impacts of AI use?

LEVEL 2: PRACTITIONER

- How do I talk about responsible AI use with learners or colleagues?
- Do I adapt my use of AI to support the different needs and backgrounds of my learners?

LEVEL 3: INNOVATOR

- Am I involved in sharing good practices or raising awareness about ethical AI in and/or outside my organisation?
- How can I inspire others to use AI tools in fair, safe and inclusive ways?

CASE STUDY 1

VOLKSHOCHSCHULEN NETWORK, GERMANY

BACKGROUND

The Volkshochschulen (VHS) are Germany's non-formal adult education centres, serving millions of learners across the country. In response to the growing relevance of digital transformation, several VHS associations began embedding artificial intelligence into their long-term strategic planning. A leading example is the Lower Saxony VHS Association, which in 2023 launched the programme "KI in der VHS" (AI in Adult Education Centres), aimed at building AI capacity among staff and integrating AI across both educational and administrative practices.

THE CHALLENGE

As adult education providers with diverse staff and decentralised operations, VHS centres faced multiple challenges:

- A need to increase operational efficiency without reducing the quality of learner support
- Limited experience among staff in using AI tools in practical, day-to-day contexts
- Fragmented adoption of digital tools, without shared strategies or consistent support
- An interest in applying AI to both curriculum innovation and internal processes, but uncertainty about where to begin

AI STRATEGY

The Lower Saxony programme introduced a sustainable, hands-on model for upskilling staff. Through 1–2 day workshops, VHS employees, including directors, program planners, instructors, and administrators, received practical training on generative AI and related tools. Each session focused on real tasks:

- Program planners used AI to analyse course demand and draft outlines
- Communication staff explored AI for writing press releases and social media content
- Administrators applied AI in managing enrolments and funding applications

Following the workshops, participants implemented small-scale AI uses at their institutions and returned for online follow-ups to share results and address challenges. New modules were then introduced in cycles, focusing on different applications such as educational content creation or AI for office management.

The programme explicitly supported pedagogical innovation: instructors tested AI tools like image generators for creating visual aids or chatbots for language practice. A dedicated module helped academic staff redesign learning content using AI to simplify complex topics or generate practice materials.

CASE STUDY 1

EARLY OUTCOMES

- Greater Efficiency: Staff reported time savings in content creation, curriculum planning, and admin tasks
- Enhanced Services: AI-supported processes allowed for quicker responses and more personalised learning support
- Increased Engagement: Educators noted improved interactivity and learner motivation when using AI-driven tools
- Sustained Growth: The programme created a repeatable, evolving model for capacity-building and peer learning

KEY INSIGHTS

1. **Hands-on learning works.** Training that focuses on real-world tasks helps staff adopt AI meaningfully, not just conceptually.
2. **Follow-up activities are critical.** Reinforcement through peer exchange and follow-up sessions builds confidence and supports long-term use.
3. **Broaden the scope.** AI integration should extend across both teaching and administrative workflows to increase impact.
4. **Lead by example.** Regional networks like VHS Lower Saxony can set a powerful precedent, demonstrating how even traditional adult education centres can lead the way in digital transformation.

FOOD FOR THOUGHT

The VHS case demonstrates that successful AI integration is not only about tools, but about creating the right conditions:

- What support structures (training, time, follow-up) are needed for real adoption of AI in adult education?
- How can institutions move from one-off digital projects to continuous learning and long-term digital strategies?
- In what ways can AI help traditional providers remain relevant while preserving their core values of inclusion and learner-centredness?
- What role should national or regional networks play in setting the pace and direction for sector-wide digital transformation?

REFERENCES

Landesverband der Volkshochschulen Niedersachsens e.V. (2025) Qualifizierung für vhs-Mitarbeitende: KI in der vhs [Project Overview], Landesverband der Volkshochschulen Niedersachsens e.V. Published Online: 12 February 2025. Available at: https://vhs-nds.de/projekte/qualifizierung-ki-in-der-vhs/

CASE STUDY 2

UNIVERSITY OF MURCIA, SPAIN

BACKGROUND

Since 2021, the University of Murcia (UMU) in Spain has taken a strategic approach to digital transformation, implementing more than 35 AI-driven initiatives. These initiatives were not isolated experiments but part of a broader institutional commitment to enhancing teaching, student support, and operational efficiency. The university's model demonstrates how AI integration can be embedded into long-term planning, supported by leadership and cross-functional collaboratio

THE CHALLENGE

UMU aimed to address multiple institutional needs:

- Reduce administrative workload while maintaining high-quality student services
- Offer timely, individualised support to a growing and diverse student population
- Use data more effectively to support learner success and tailor interventions
- Establish ethical and responsible approaches to automation and AI use

AI STRATEGY

UMU's AI integration includes a broad set of applications:

- *AI-powered chatbot (Lola)*: Developed with 1MillionBot, Lola supports students with 24/7 information on admissions, course offerings, and key deadlines. Since its launch, Lola has answered over 38,000 questions with over 91% accuracy, reducing the load on administrative teams.
- *Automated grading and course recommendations*: AI tools assist educators with routine assessments and offer learners personalised course suggestions.
- *Learning analytics*: AI monitors learner behaviour, identifies students at risk, and enables more personalised teaching strategies and timely interventions.

This comprehensive approach improves both learner experience and internal efficiency, while allowing educators to focus on meaningful interactions and pedagogical quality.

CASE STUDY 2

FOOD FOR THOUGHT

The University of Murcia's example illustrates that real AI leadership isn't just about adopting tools - it's about shaping a culture that supports digital transformation with responsibility and inclusion at its core.

Like the VHS in Germany, UMU went beyond one-off pilots and developed a strategic, institution-wide vision.

Yet leadership in AI also brings questions:

- How do we ensure that AI helps rather than overwhelms?
- Who sets the direction for what tools are used and why?
- How do we build trust and inclusion while navigating rapid digital change?

KEY INSIGHTS

1. **Vision beyond tools.** Strategic AI integration requires leadership that looks beyond individual applications and supports systemic change.
2. **Collaboration drives success.** Digital transformation is not just an IT project - it involves educators, administrators and students working together.
3. **Ethics must be embedded.** Responsible use of AI includes transparency, fairness and ensuring learners' autonomy and trust.
4. **Start small, think big.** Even large-scale change can begin with practical steps like chatbot support or automated scheduling - if guided by a broader vision.
5. **Build momentum through shared learning.** Peer training, internal champions and a culture of experimentation can help organisations move from isolated use to meaningful, long-term integration.

REFERENCES

Wooclap Team (2025) The University of Murcia and AI: Innovation in Education [Case Study], Wooclap. Published Online: 4 March 2025. Available at: https://www.wooclap.com/en/blog/universidad-murcia-ai/

Module 5.
ROADMAP

PLAN FOR LONG TERM

Help build a lasting strategy for AI use - one that adapts over time and supports continuous growth

LEAD BY EXAMPLE

Encourage others by sharing positive uses, raising awareness and supporting ethical experimentation

CONNECT AI WITH YOUR VALUES

Make sure AI use reflects your organisation’s mission - supporting fairness, accessibility and quality learning

START CONVERSATIONS

Discuss AI needs, concerns and opportunities with colleagues to build shared understanding and momentum

EXPLORE THE POSSIBILITIES

Understand how AI can support your organisation's goals - from improving workflows to enriching learning experiences

CONCLUSION

The AI-ADU Competency Framework provides a structured yet flexible tool to support adult education professionals in navigating the opportunities and challenges of artificial intelligence. The framework defines the key competences, skills and attitudes needed for responsible and effective AI integration across educational and organisational contexts.

By presenting each competence at three progressive levels - Explorer, Practitioner, and Innovator - the framework supports individual and institutional self-reflection, capacity-building and long-term strategic planning. Whether you are just beginning your journey or already leading innovation, the levels help you identify where you are now and what growth could look like.

Across all five modules - from technical foundations to ethical leadership - the framework emphasises the human side of AI. It highlights the importance of intention, inclusion, collaboration and long-term vision. Case studies and reflection questions provide real-world grounding and spark critical thinking, ensuring that the framework is both aspirational and practical.

We invite adult educators and organisational leaders to use this framework not as a checklist, but as a compass - guiding ongoing development, peer learning and thoughtful digital transformation in a rapidly evolving world.

AI–ADU project management team

BIBLIOGRAPHY

1. Axon Park. (2023). How effective is AI in education? 10 case studies. Axon Park. https://axonpark.com/how-effective-ai-education
2. Be My Eyes. (2024). Be My AI: A New Era of Visual Assistance. https://www.bemyeyes.com/be-my-ai
3. Council of Europe. (n.d.). Regulating AI in Education. Council of Europe Standing Conference of Ministers of Education.
4. Cukurova, M., Kralj, L., Hertz, B., & Saltidou, E. (2024). Professional development for teachers in the age of AI: European Schoolnet Academy thematic seminar report. European Schoolnet.
5. Duan, H., & Zhao, W. (2024). The effects of educational artificial intelligence-powered applications on teachers' perceived autonomy, professional development for online teaching, and digital burnout. International Review of Research in Open and Distributed Learning, 25(3).
6. European Commission. (2021). 2030 Digital Compass and AI Act. https://artificialintelligenceact.eu/
7. European Commission. (2022). DigComp 2.2: The Digital Competence Framework for Citizens. https://publications.jrc.ec.europa.eu/repository/handle/JRC128415
8. Google AI Blog. (2023). Project Euphonia: AI for Speech Accessibility.https://sites.research.google/euphonia/about/
9. Herdem, M. S., & Nathwani, J. (2024). Navigating the digital transformation and AI in education and peer review. Balsillie Paper, 6(2).
10. High-Level Expert Group on Artificial Intelligence. (2019). Ethics Guidelines for Trustworthy AI. European Commission.
11. iTransition. (2024). AI in education: 8 use cases & real-life examples. iTransition. https://www.itransition.com/ai/education
12. Klopov, I., Shapurov, O., Voronkova, V., Nikitenko, V., Oleksenko, R., Khavina, I., & Chebakova, Y. (2023). Digital transformation of education based on artificial intelligence. TEM Journal, 12(4), 2625–2634. https://doi.org/10.18421/TEM124-74
13. Pedro, F., Subosa, M., Rivas, A., & Valverde, P. (2019). Artificial intelligence in education: Challenges and opportunities for sustainable development. (UNESCO Working Papers on Education Policy 07). UNESCO.
14. Quy, V. K., Thanh, B. T., Chehri, A., Linh, D. M., & Tuan, D. A. (2023). AI and digital transformation in higher education: Vision and approach of a specific university in Vietnam. Sustainability, 15(14), Article 11093. https://doi.org/10.3390/su151411093
15. UNESCO. (n.d.). AI Competency Framework for Educators. https://www.unesco.org/en/articles/ai-competency-framework-teachers
16. VKTR. (2024). 5 AI case studies in education. VKTR. https://www.vktr.com/ai-disruption/5-ai-case-studies-in-education/

AI-ADU

BUILDING PATHS TO THE FUTURE

Published in 2025 by the AI-ADU Consortium
As part of the AI-ADU: Building Paths to the Future Erasmus+ KA2 Cooperation Partnership Project (https://aipaths.eu/)

Co-funded by the European Union

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the National Agency. Neither the European Union nor National Agency can be held responsible for them.

Socialinių inovacijų centras

KINITRO

DORSA
EDUCATIONAL INSTITUTE

FONDAZIONE
AREZZO INNOVAZIONE