

Coventry University Group

Artificial Intelligence (AI) Competencies Framework and AI Literacy Competence Development Model for Educators

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1. Institutional Statement

At Coventry University Group, we are embracing AI with ambition, confidence and purpose. By combining leading research with practical, sector-informed teaching, we aim to give students, professionals and leaders the knowledge, confidence and ethical grounding to navigate, adapt and succeed in an AI-driven world. Our vision is to become an institution where AI is woven into education, research and professional practice, enhancing creativity, widening opportunity, and strengthening impact.

Achieving that vision is dependent on supporting our staff to develop their AI knowledge, skills and competencies in the context of their subject areas. Through inclusive AI skills pathways, this framework is a key tool to support our teaching and learning community engage with AI from first exploration to leadership and innovation. We will support their development journey through professional development opportunities and engagement with champion-led communities of practice.

This framework signals our readiness and for change and the excitement for what is possible when people, pedagogy and technology advance together.

2. Purpose

As Artificial Intelligence (AI) becomes embedded across disciplines and professions, in Higher Education, we have a responsibility to ensure students and staff can engage with these technologies critically, ethically and effectively.

AI plays a vital role in University Teaching and Learning by enabling more personalised and inclusive educational experiences, supporting data-informed pedagogy, and expanding how content is created, assessed, and applied. When used thoughtfully, it can enhance student engagement, improve feedback and learning support, and equip graduates with the critical skills needed to participate responsibly and effectively in an AI-shaped society. Across the Coventry university group, students and academics have already responded to this shift by exploring AI's potential, its associated risks, and the opportunities it presents.

With the University's ambition to become an AI Academy, we need to accelerate and coordinate the work already underway. This led to discussions with the AISG about the potential value of using a framework to help focus activities. After reviewing several frameworks produced by different government agencies and institutions ([AI Frameworks](#)) and with the absence of a national framework for higher education, the AI in Education Committee has concluded that there is a need for an AI literacy framework at Coventry Group level.

The aim of the framework is to provide a shared foundation for understanding how AI systems work, where their limitations lie, and how they reshape the learning environment for our staff and students Without a clear framework, AI use in teaching and learning risks being uneven, opaque, or uncritical. Establishing an AI literacy

framework helps Coventry Group to align curricula, support faculty and students, and prepare graduates to navigate an AI-driven world with confidence and responsibility.

AI is reshaping teaching and learning in universities, and this imposes new demands on staff competencies in pedagogical design, ethical judgment, and digital fluency. Academic and professional staff must be able to critically evaluate AI tools, integrate them meaningfully into curriculum and assessment, and guide students in responsible use. Developing staff competencies in AI enables institutions to harness its benefits for learning while maintaining academic integrity, equity, and educational quality. With this context in mind, the following AI Literacy has been tailored and developed. Inspired by The DigCompEdu (3.0) Framework, developed by the European Joint Research Centre, https://joint-research-centre.ec.europa.eu/digcompedu_en, this framework addresses educator roles, their professional competencies, their pedagogic competencies and the competencies required of learners.

This document presents an Artificial Intelligence Competencies Framework and an AI Literacy Competence Development Model for Educators that will support them in seizing the potential of AI to facilitate conversations with students to develop their understanding and expand their use of these emerging technologies.

3. Introduction

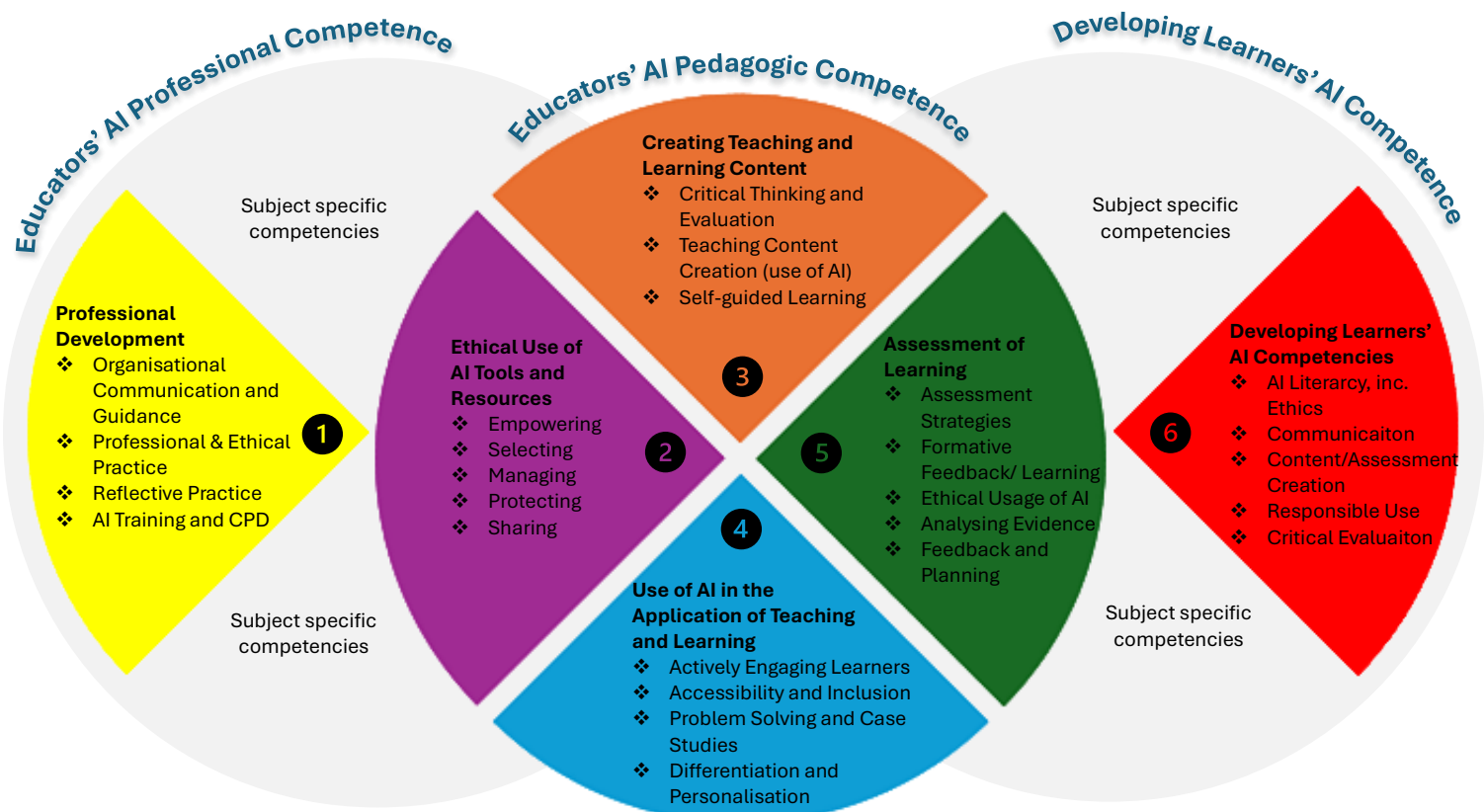
The University Group recognises¹ the potential of AI tools in teaching, learning and assessment and in the workplaces that students will be entering. It is therefore important that we support the use of AI tools in a considered and transparent way that also recognises the associated risks. We need to be future-focused and ensure we take advantage of what AI has to offer. One of the most significant advantages of AI is its ability to provide students with a personalised learning experience. AI technologies enable students to access learning materials more quickly and efficiently than ever before, which will support students with assessments.

However, whilst taking advantage of what AI has to offer our students, we need to ensure we educate and guide students in the importance of ethical and academic integrity when using AI. Understanding these principles will ensure responsible use of AI, promoting academic integrity and transparency in academic work. By emphasising integrity, educators will help students to develop critical evaluation, promote accountability and the responsible use of AI. All of which are essential skills when using AI in both academic and professional settings.

4. AI Competencies Framework

The Artificial Intelligence Competencies Framework focuses on different aspects of an educators' professional activities:

¹ <https://teach.coventry.domains/coventry-university-group-artificial-intelligence-position-statement/>



Use of this framework should be in conjunction with relevant disciplinary or national standards

The Artificial Intelligence Competencies Framework covers the following six aspects relating to educators' AI competencies:

1 Professional Development

Professional Development focuses on how educators' AI competence is expressed in their ability to ethically use AI technologies to enhance teaching, their individual professional development and for the collective good and continuous innovation in teaching and learning.

2 Ethical Use of AI Tools and Resources

Educators are faced with a wide range of AI resources that can be used for teaching and learning. One of the key competences any educator needs to develop is to come to terms with this variety, to effectively identify ways in which to use resources that best work with their teaching and learning needs and develop their use of AI resources to support their teaching.

3 Creating Teaching and Learning Content

AI technologies can enhance and improve teaching and learning strategies in many different ways. However, whatever pedagogic strategy or approach is chosen, the educator's specific AI competence lies in effectively orchestrating the use of AI technologies in the creation and development of teaching and learning content.

4 Use of AI in the Application of Teaching and Learning

AI technologies have the ability to help shift the focus of teaching and learning from teacher-led to student centred. An educator with developed AI competencies will be able to guide students in progressively more autonomous learning endeavours by designing new ways to provide guidance and support to students and initiate, support and monitor both self-regulated and collaborative learning activities.

5 Assessment of Learning

When integrating AI technologies into teaching and learning, educators must consider how AI technologies can enhance existing assessment strategies, maintain academic integrity and how they can be used to create or to facilitate innovative assessment approaches.

6 Developing Learners' AI Competence

The ability to facilitate the development of learners' AI competence is an integral part of educators' AI skillset. Therefore, educators need to be able to communicate expectations of using AI within their disciplinary context and have the appropriate competence levels to help develop learners' AI capabilities.

The core of the AI Competencies Framework is defined by aspects 2-5. Together these aspects explain an educators' AI pedagogic competence, i.e. the AI competencies that educators need to develop active, applied, social, inclusive and innovative teaching and learning strategies. Aspects 3, 4 and 5 are anchored in the characteristics of the teaching process. The competences listed in these aspects detail how to make efficient and innovative use of AI technologies when planning (Aspect 2), creating (Aspect 3) applying knowledge (Aspect 4), and assessing learning (Aspect 5). Aspect 6 looks at the role of educators in the development of learners' capabilities to understand and make use of generative AI in their subject area.

5. AI Literacy Competence Development Model

The AI Literacy Competence Development Model is intended to help educators understand their current level of expertise in the use of AI technologies, acknowledge their strengths and weaknesses and determine areas that would benefit from further development.

To encourage educators to use the AI Competencies Framework as a tool for their professional development, the following AI competency descriptors have been established:

1. Newcomers

Newcomers are aware of the potential of AI technologies for enhancing pedagogical and professional practice. However, they have had very little contact with AI technologies and use them mainly for lesson preparation, administration or organisational communication. Newcomers need guidance and encouragement to expand their repertoire and to apply their existing AI competence in the pedagogical realm.

2. Explorers

Explorers are aware of the potential of AI technologies and are interested in exploring them to enhance pedagogical and professional practice. They have started using AI technologies but without following a comprehensive or consistent approach. Explorers need encouragement, insight and inspiration.

3. Integrators

Integrators experiment with AI technologies in a variety of contexts and for a range of purposes, integrating them into many of their practices. They creatively use them to enhance diverse aspects of their professional engagement. They are eager to expand their repertoire of practices. They are, however, still working on understanding which tools work best in which situations and on fitting AI technologies to pedagogic strategies and methods. Integrators just need some more time for experimentation and reflection, complemented by collaborative encouragement and knowledge exchange to become Experts.

4. Expert

Experts use a range of AI technologies confidently, creatively and critically to enhance their professional activities. They purposefully select AI technologies for particular situations and try to understand the benefits and drawbacks of different AI strategies. They are curious and open to new ideas, knowing that there are many things they have not tried out yet. They use experimentation as a means of expanding, structuring and consolidating their repertoire of strategies. Experts are the backbone of any educational organisation when it comes to innovating practice.

5. Leader

Leaders have a consistent and comprehensive approach to using AI technologies to enhance pedagogic and professional practices. They rely on a broad repertoire of AI strategies from which they know how to choose the most appropriate for any given situation. They continuously reflect on and further develop their practices. Exchanging with peers, they keep updated on new developments and ideas. They are a source of inspiration for others, to whom they pass on their expertise.

6. Pioneer

Pioneers question the adequacy of contemporary AI and pedagogical practices, of which they themselves are Leaders. They are concerned about the constraints or drawbacks of these practices and driven by the impulse to innovate education even further. Pioneers experiment with highly innovative and complex AI technologies and/ or develop novel pedagogical approaches. Pioneers are a unique and rare species. They lead innovation and are a role model for younger teachers.

These AI literacy competency descriptors are intended to motivate educators at all levels to positively appreciate their achievements and to look forward to expanding them further. The AI Progression and Proficiency Statements in the table below will support educators in better understanding what it means to be AI competent in their context and to assess and further develop their own pedagogical AI competency skills through training and continuous professional development.

AI Progression		Proficiency Statements					
Level	Progression	1 Professional Development	2 Ethical Use of AI Tools & Resources	3 Creating Teaching & Learning Content	4 Use of AI in the Application of Teaching & Learning	5 Assessment of Learning	6 Developing Learners' AI Competence
Newcomer	Making little use of AI technologies	I know I need to enhance my AI skills but I am unsure how and where to start	I abide by the legal requirements i.e GDPR	I do not, or only very rarely, use AI created content in my teaching	I do not, or only very rarely, consider how students could use AI technologies in learning activities	I do not, or only very rarely, use AI in assessments	I do not, or only very rarely, consider how I could foster learners' AI competency
Explorer	Being aware and making basic use of AI technologies	I am aware of the limits of my own AI competence and my training needs	I am aware of the legal, ethical and accountability implications for my practice in the selection and application of AI.	I make basic use of AI technologies in creating teaching content	When implementing classroom activities, I encourage learners to use AI technologies	I plan for students' use of AI technologies in assessment tasks	I encourage learners to use AI technologies for information retrieval
Integrator	Using AI technologies in an effective and responsible way	I seek to improve and update my AI pedagogical competence through experimentation and peer learning		I integrate the use of AI in the creation of content and resources for teaching	I design and implement collaborative activities, in which AI technologies are used by learners	I use some existing AI technologies for formative or summative assessments	I implement learning activities in which learners make use of AI technologies
Expert	Using AI technologies for reflecting on and enhancing practices	I actively seek out best practices and advice to improve my own AI pedagogies and wider AI competences	I am aware of other relevant standards, frameworks and guidance.	I use AI to assist in developing content for learning sessions and other activities	I use AI technologies to enable learners to share insights with others in the classroom	I use a range of AI tools for formative and summative assessments	I use a range of different pedagogic strategies to enable learners to effectively use AI
Leader	Evaluating and discussing AI technologies	I follow innovations on AI technologies and integrate them into my practice	I provide leadership and guidance on the ethical use of AI	I structure and manage learning content with assistance from AI technologies	I design and manage diverse learning activities through the use of AI technologies	I critically reflect on my use of AI technologies for assessment and adapt my strategies accordingly	I incorporate learning activities which require learners to effectively and responsibly use AI technologies
Pioneer	Using AI technologies to facilitate innovative practice	I develop, individually or collaboratively a vision for improving educational practice through the use AI		I experiment with AI to develop new formats and pedagogical methods for instruction.	I use AI technologies to invent new formats for collaborative learning.	I develop, with AI, reflective and innovative pedagogic approaches allowing the assessment of transversal skills	I reflect, discuss, re-design and innovate pedagogic strategies for fostering learners' AI skills

6. Activities

The following are activities that educators should consider and can undertake to work on their AI literacy competencies:

Activities	
1 Professional Development	- To critically reflect on one's own AI and pedagogic practice. - To identify competence gaps and areas for improvement. - To seek the help of others in improving one's AI and pedagogical practice. - To seek targeted training and use opportunities for continuous professional development. - To seek to continuously expand and enhance one's repertoire of AI pedagogical practices. - To help others in developing their AI pedagogical competence. - At the organisational level, to reflect on and provide critical feedback on AI policies and practices. - To actively contribute to further developing organisational practices, policies and visions on the use of AI technologies.
2 Ethical Use of AI Tools & Resources	- To formulate appropriate search strategies to identify AI resources for teaching and learning. - To select suitable AI resources for teaching and learning, considering the specific learning context and learning objectives. - To critically evaluate the credibility and reliability of AI sources and resources. - To consider possible restrictions to the use or re-use of AI resources. - To assess the usefulness of AI generated resources in addressing learning objective. - Investigate tools and resources such as: - AI Assistants: - Video Generation: - Research: - Graphic Design: - Music Generation:
3 Creating Teaching and Learning Content	- To critically reflect on AI and pedagogic practice. - To use AI technologies to create learning resources and information for learners - To use AI to create teaching and learning content to share via Aula. - To use AI to design and implement learning activities which generate data on learner activity and performance. - To use AI technologies to synthesize data for learners. - To use AI technologies to generate data that can be used to inform teaching and learning - To consider and respond to potential accessibility issues when creating AI based resources. - To reflect on the suitability of the AI created content to improve accessibility
4 Use of AI in the Application of Teaching and Learning	- To use AI technologies to visualise and explain new concepts in a motivating and engaging way. - To employ AI technologies to create activities which are motivating and engaging. - To adapt teaching practices, based on the data generated by the AI technologies used. - To use AI technologies to allow learners to actively engage with the subject matter at hand. - To select appropriate AI technologies for fostering active learning.
5 Assessment of Learning	- To use AI technology to design and create formative and summative assessments. - To use AI technology to grade and give feedback on electronically submitted assignments. - To use assessment management systems to enhance the effectiveness of feedback provision. - To use AI to enable learners to evaluate and interpret the results of formative and summative assessment.

	• To adapt assessment practices, based on the data generated by the AI technologies used. • To use AI technologies in innovative ways to create knowledge.
6 Developing Learners' AI Competence	• To provide equitable access to appropriate AI technologies and resources. • To use AI to articulate information needs, to search for data, information and content. • To analyse, compare and critically evaluate the credibility and reliability of data generated by AI technologies. • To facilitate opportunities for learners' self-empowerment through appropriate AI technologies. • To enable learners to modify, refine, improve and integrate information and content created through AI technologies. • To understand how to use and share information created through AI while be able to protect oneself and other from damages. • To identify, evaluate, select and use AI technologies to solve a given task or problem.

7. Further Guidance

Educators are encouraged to review the [Staff Guidance for AI](#) on the Coventry University Group's Teaching Knowledge Base.

Workshops covering AI awareness and developing AI competencies are regularly delivered by the university and can be booked the [Academic Enhancement and Professional Development Courses and Workshops portal](#).

8. Glossary

Academic Integrity	Upholding honesty and responsibility in academic work, including AI use.
AI Governance	Policies and frameworks guiding ethical AI use in education.
AI Literacy	Understanding and responsibly using AI technologies.
Artificial Intelligence	Technology that simulates human intelligence to perform tasks like learning, reasoning, problem-solving.
Data Privacy	Protecting personal and sensitive data when using AI tools.
Ethical AI Use	Using AI responsibly, avoiding harm, bias, and ensuring transparency.
Generative AI	AI that creates new content (text, images, audio) based on learned patterns.
Human Oversight	Critically evaluating AI outputs instead of relying on them blindly.
Plagiarism	Using someone else's work or AI-generated content without proper attribution.
Prompt Engineering	Crafting effective instructions for AI to produce desired outputs.
Responsible AI	Designing and using AI systems that align with ethical principles.
Transparency	Disclosing when and how AI tools are used in academic work.