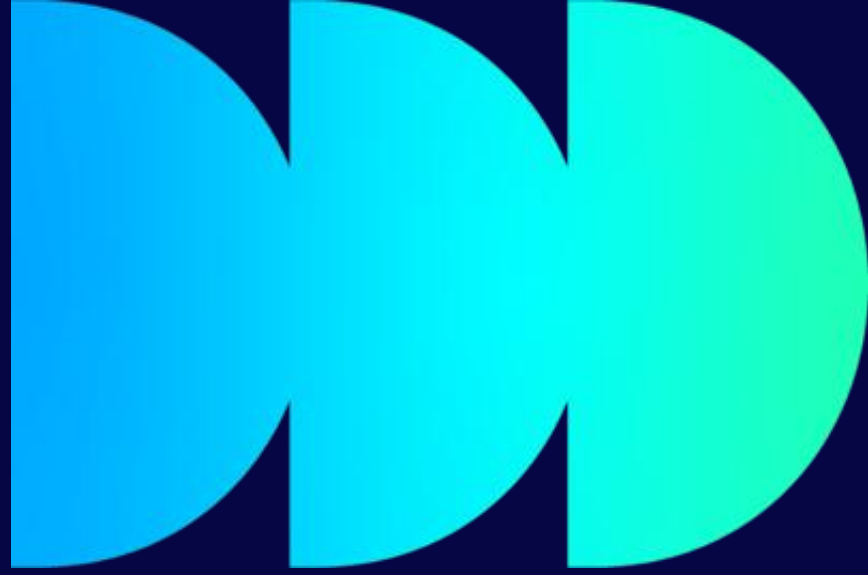




A framework for the Learning and Teaching of Critical AI Literacy

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A framework for the Learning and Teaching of Critical AI Literacy skills

Introduction

This document sets out what Critical AI Literacy is, why it matters for education, and how it can be learned and taught across the curriculum and at all levels. Its purpose is to give students and colleagues a shared reference point for embedding Critical AI Literacy in curriculum, assessment and staff development, and to inform institutional decisions about how AI is procured, governed and used.

Who the framework is for

It is written for students and for colleagues across academic and professional services in a range of educational settings. For students, the six dimensions in 'The framework' describe the capabilities that Critical AI Literacy develops, and colleagues are encouraged to share them. For colleagues who design, teach and support learning, the framework is a shared reference point for embedding those capabilities in curriculum, assessment and staff development. For colleagues who make policy and take decisions about AI in their institutions, including senior leaders and professional services staff, it supplies the questions against which AI governance and procurement can be checked.

How to use it

Teaching colleagues should start with the six dimensions in 'The framework' and the suggestions in 'What staff/educators can do', select the dimensions that fit their course, discipline or role, and embed activities and assessment that develop the relevant capabilities. 'Developing Critical AI Literacy' explains how engagement with the dimensions can deepen over time and will vary by discipline and context. The framework is a learning and teaching framework; its use in governance and procurement is an application of it. Policy makers should read 'Strategic and policy alignment' alongside the key messages below, and use the framework as a check on whether the University's AI governance addresses the questions it raises. Feedback and examples of practice are welcome at GAI-LTA@open.ac.uk.

Key messages

The main messages of the framework are as follows:

- AI is becoming an infrastructure, comparable to the railways, the electricity grid and the internet, built by particular people for particular purposes, with costs and beneficiaries. Critical AI Literacy equips staff and students to challenge these developments, individually and collectively: to reduce the risks, to explore the opportunities, and to benefit from the infrastructure on terms they have had a part in setting.
- Critical AI Literacy extends AI literacy through the lenses of power and of equality, diversity, inclusion and accessibility (EDIA). Of every AI system it asks who is included, who is represented, who benefits and who may be excluded or disadvantaged.

- The language used about AI, including the term 'AI' itself, is a site of literacy, since names shape what institutions and individuals can think, say and do.
- The framework has six dimensions (AI concepts and applications; learning and teaching with AI; AI creativity; AI ethics; AI in society; AI careers), each read through EDIA, and can be engaged with at different levels of depth according to discipline, context and purpose.
- The framework gives pedagogical expression to institutional principles, strategies and policies for AI, such as those in *The Future of Learning* report (The Open University, 2026), and it is designed to be used in concert with them as part of a systems approach to AI in education (Sharples, 2025).

Background



AI is distinct from other digital technologies due to its potential to profoundly reshape societies, economies and education systems. Unlike conventional information and communication technologies (ICTs), AI poses unique ethical and social challenges, such as issues of fairness, transparency, privacy and accountability. Additionally, AI's unique ability to mimic human behavior directly impacts human agency. These challenges require dedicated competencies beyond the scope of traditional digital literacy. (UNESCO, 2025)



Such dedicated competencies, set out in UNESCO's AI competency framework for students (Miao et al., 2024), are not only required regarding the challenges artificial intelligence (AI) poses but also in relation to the unique opportunities it provides. Staff **need to develop their AI literacy** so that they can safely and

effectively employ AI, in its generative, agentic and embedded forms, to support students' learning and achievement of their individual goals.

AI literacy differs from how we currently teach digital literacy. It involves 'a set of competencies that enables individuals to critically evaluate AI technologies; communicate and collaborate effectively with AI; and use AI as a tool online, at home, and in the workplace' (Long & Magerko, 2020, p. 2). These skills help staff and students gain essential transferable abilities in the field of AI. Definitions of this kind describe AI as a tool that individuals pick up and put down.

Since those definitions were written, at least two further developments have joined large language models (LLMs) accessed through a chat window and now coexist with them: agentic systems that plan and carry out multi-step tasks with minimal human direction (Acharya et al., 2025), and AI as infrastructure, present by default in search engines, office software, learning platforms and public services. The educational task has moved with them. Students still need to move beyond a simple input-output approach (instruct, copy, paste, edit) towards iterative and reflective interaction, with the human learner in the central role (Darvishi et al., 2024). They now also need to recognise where AI is operating when nothing has been prompted at all, and to ask who decided that it should be.

AI is becoming a new infrastructure. Like the railways, the electricity grid and the internet before it, it is being built into the fabric of everyday life. Many search services now return an AI overview, followed by an invitation to ask anything, as their default response; assessment platforms, library systems and student support services increasingly incorporate AI. Much of it operates out of sight

(Star, 1999; Edwards, 2003; Plantin et al., 2018). Infrastructure of this kind brings major opportunities and major risks, for education as for society. It also brings infrastructural organisations, from the frontier AI companies of the United States to the Cyberspace Administration of China, whose decisions shape what is possible for institutions and individuals everywhere else. Like every infrastructure it is built by choice and at a cost: its data centres draw on water, energy and physical space, and its models are trained on the labour of annotators and content moderators, many of them in the Global South (Crawford, 2021; Gray & Suri, 2019; Muldoon et al., 2024). Its benefits are unevenly distributed.

AI is therefore a development to be shaped and contested, and the competencies it calls for are collective as well as individual. Staff and students need to be able to challenge these developments, to reduce the risks, to explore the opportunities and to benefit from the infrastructure on terms they have participated in setting. Critical AI Literacy provides these competencies, and it matters most in contexts with many learners from widening participation backgrounds, who have the most to gain from equitable AI infrastructure and the most to lose from the inequitable alternative.

What is Critical AI Literacy?

Critical AI Literacy serves as the foundation for this framework, which **expands the critical thinking and critical evaluation dimensions of AI literacy** described in definitions such as Long and Magerko's (2020) above. Critical AI Literacy shares common ground with Critical Digital Literacy, which highlights the **influence of power in digital spaces**. It explores how **knowledge, identities and relationships are shaped to privilege some while marginalising others** (Darvin,

2017). Digital literacy, in this critical sense, equips individuals with tools and strategies to analyse both linguistic and non-linguistic features of digital media and helps them to identify embedded biases and assumptions (Darvin, 2017).

Critical AI Literacy examines how AI systems, from large language models to the agentic and embedded systems now built into everyday tools and services, contribute to ongoing epistemic injustices. These injustices can lead to significant social and personal harm by undermining an individual's ability to fully participate in knowledge-sharing and decision-making processes. These injustices operate at institutional and societal scale as well as in individual interactions: in what a system surfaces by default and in whose knowledge it treats as authoritative.

Critical AI Literacy applies the lens of equality, diversity, inclusion and accessibility (EDIA) to the use of AI. It is essential for fostering a more inclusive and diverse AI education. Being AI-literate in this critical sense means having the tools and strategies to critically evaluate what AI systems produce, recommend and decide, whether or not a prompt was involved, using EDIA principles, and being able to engage in equitable and inclusive prompting where interaction is possible. Like Critical Digital Literacy, Critical AI Literacy is **context-specific** and treats **'literacy' as a 'social practice'**, i.e. something individuals do, enact and develop through use.

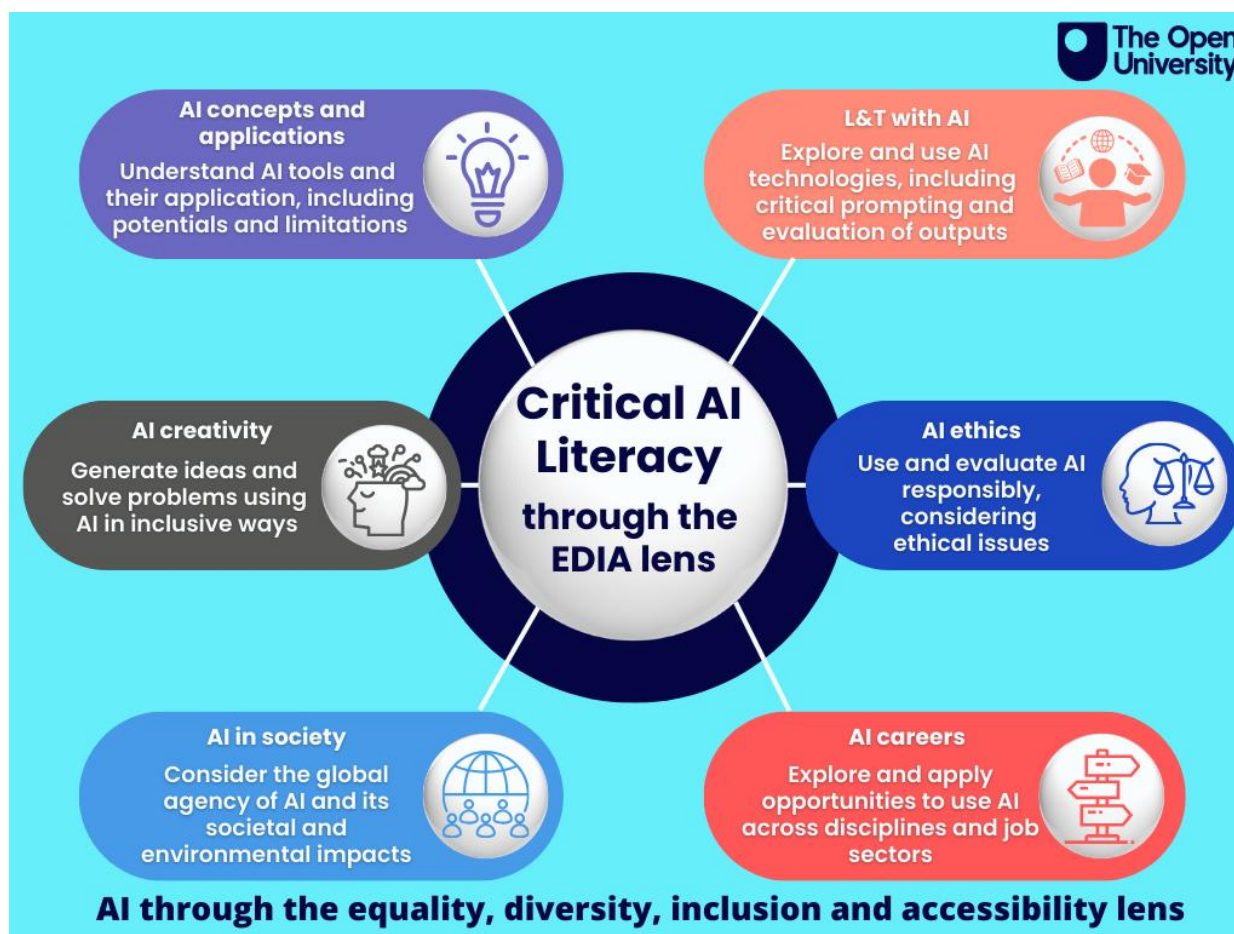
Critical AI Literacy also extends to the term 'AI' itself. A critically literate engagement examines how the language used to describe these systems, including the label 'AI', shapes what learners, staff and institutions can think, say and do about them. Naming is a site of power: the choice to call a system

‘artificial intelligence’, when it could equally be described as ‘a statistical prediction system’, as ‘a chatbot’ or as ‘infrastructure’, is not neutral. Each name carries a history, embeds metaphors that pass as description, and shapes everything from policy and funding to classroom anxiety and student trust in outputs. Examining the language used about AI is itself a critical literacy practice, and the framework that follows reflects this. This applies with equal force to ‘infrastructure’, the framing adopted in this document. ‘Chatbot’ and ‘language model’ place AI in a box that can be opened, critiqued and closed again. Used critically, the infrastructure framing provokes systemic discussion of rights and responsibilities, visibility and scale, cost and benefit, ownership and labour, and sovereignty, at every scale from the family to the transnational organisation. It also changes the institutional question, from ‘which AI tools do we adopt?’ to ‘who manages the AI infrastructure, and for whose benefit?’.

Critical AI Literacy requires ‘self-reflective mindsets’ (Chiu et al., 2024), which educators increasingly view as essential for lifelong learning about emerging AI technology. Consequently, the latest AI competency definitions emphasise learners’ ‘confidence and ability to self-reflect on their AI understanding for further learning’ and focus on ‘how well individuals use AI in beneficial ways’ including for the social or greater good (Chiu et al., 2024). Critical AI Literacy is vital if staff and students are to engage in these developments and to steer them, individually and collectively.

It is in this spirit that educators should apply this framework in learning and teaching across the curriculum and at all levels.

The framework



Equality, diversity, inclusion and accessibility (EDIA) are integral to Critical AI Literacy and run through every dimension of the framework. EDIA should therefore be applied as a critical lens across every dimension rather than treated as a separate area of competence. Across all six dimensions, staff and students should consider who is included and represented, whose knowledge and perspectives are reflected, who benefits, and who may be excluded or disadvantaged. This includes critically examining bias, accessibility, participation, power and unequal access to AI, and considering how AI might be used in ways that support greater inclusion and equity.

AI concepts and applications

- Understand the difference between AI and Generative AI (GenAI).
- Know types of AI products: text, image, video, code, music generators; AI embedded in tools such as search engines; AI analytics and predictive analytics. This includes developments such as agentic AI and retrieval-augmented generation (RAG).
- Explore how AI tools are used and applied in various contexts, such as studying, working and leisure.
- Use basic AI terminology (e.g. algorithm, LLMs, machine learning, neural networks, hallucinations, bias). Use these terms in informed ways, aware that many of them (e.g. 'hallucination') are metaphors that shape how AI systems are understood.
- Interrogate 'AI' as a concept: recognise 'artificial intelligence' as a contested term with a specific history, and examine how the metaphors built into everyday AI language (e.g. 'intelligence' and 'hallucination') shape what individuals and institutions can think and say about these systems.
- Know basic principles for assessing the robustness and reliability of AI applications. Adopt a 'think first, AI second' approach: craft EDIA-enabled prompts and critique the outputs.
- Explore different AI applications and their potentials and limitations.
- Raise awareness of the embeddedness of AI in everyday applications and its impact on control and user agency.

- Understand what an agentic AI system can access and act on (e.g. files, accounts, other tools) before delegating a task to it, and decide which tasks are appropriate to delegate.
- Check the actions an agentic AI system has taken as well as the outputs it has produced, and retain responsibility for the result.

Learning and teaching with AI

- Engage in authentic assessment activities that foster critical evaluation of AI tools and facilitate the recognition of skill development in using AI.
- Use AI as a study buddy, a motivator, and/or as a dynamic assessor and critically evaluate the associated benefits and limitations.
- Treat engagement with AI as a social process of conversation and exploration (Sharples, 2023): use it as a possibility engine, a critical opponent or a co-designer, and reflect on what each of these roles contributes to learning.
- Use AI to explore new knowledge, test existing knowledge and consider topics from different perspectives.
- Develop prompting as a critical and reflective practice: consider how questions and concepts are framed, whose perspectives and assumptions are represented, and how different prompts may shape AI-generated outputs.
- Critically evaluate AI-generated outputs and dialogues for accuracy, reliability, omissions and potential bias.
- Cross-reference AI-generated information with appropriate online and offline sources to assess its reliability, identify omissions or bias, and

recognise where alternative perspectives or sources of knowledge are needed.

- Include evidence of human-AI interaction in the self-evaluation of learning, developing and demonstrating Critical AI Literacy and documenting responsible AI use.

AI creativity

- Engage in iterative human-AI creative processes, making clear what has been generated, adapted or developed by each.
- Use AI tools to support ideation, experimentation, prototyping and the development of new and original ideas in fields such as visual art, music, writing or storytelling.
- Compare outputs from different prompts or tools to identify limitations and omissions, and to mitigate potential bias.
- Document the role of AI in the creative process in ways that support transparency, academic integrity and critical reflection.
- Engage in conversations with AI to challenge assumptions, test creative possibilities and address detected biases.
- Use AI to explore alternative formats, perspectives and modes of expression, including visual, audio, written, interactive and accessible outputs.

AI ethics

- Use key criteria to evaluate AI tools and systems (e.g. functionality, accessibility, reliability, privacy, data security and use, copyright, bias, misinformation and deepfakes, environmental impact and inequity).

- Question who controls the AI infrastructure and for what purposes.
- Critically consider the relationship between human users and AI systems, including questions of agency, trust and dependence.
- Consciously take account of ethical issues by acting in a way that promotes responsible use of AI, e.g. asking for consent before using personal data and refraining from spreading misinformation.
- Use AI in ways that support human agency and informed decision-making, and critically evaluate AI outputs and recommendations before acting on them.

AI in society

- Consider the environmental impact of using AI and apply relevant sustainability competencies, e.g. the carbon footprint created through over-reliance/excessive use, and the exploitation of labour in the Global South.
- Consider the social, educational and EDIA impact of different AI models and tools (closed/open source, country of origin, ownership).
- Evaluate the societal impact of AI in terms of both workforce exploitation and the impact of the digital divide on users.
- Explore the agency of AI with consideration of control and power across the globe.
- Be mindful of biases in AI outputs, such as gender, cultural, disability or racial bias, and address them by analysing outputs, cross-referencing sources, and prompting for inclusivity.

- Consider the role of AI in the wider information ecosystem, including the spread of synthetic media and misinformation, and develop strategies for verifying AI-generated content.
- Explore emerging approaches to AI governance and regulation (e.g. the EU AI Act) and their implications for education and society.

AI careers

- Explore how AI is used in specific disciplines and job sectors, such as Health and Social Care, Banking and Finance, and Transport and Distribution, while applying EDIA principles.
- Understand how real-world AI applications are changing the job market and what this means for career opportunities.
- Apply relevant human skills, e.g. creativity, curiosity, decision-making, empathy and openness when interacting with AI.
- Apply relevant employability skills, e.g. problem-solving, communication and collaboration when interacting with AI.
- Consider opportunities to use AI to enhance employability prospects in a responsible and ethical manner.
- Explore how agentic AI and AI assistants are reshaping workplace roles, and identify the human skills that gain value as a result.

Working with the framework

The framework's structure is based on insights from Sharples' (2024) 'What to teach about AI? Individual colleagues and course or module teams should draw on relevant dimensions of the framework to upskill themselves in Critical AI Literacy. They should also embed **Critical AI Literacy skills development into materials and content whenever opportunities arise, across the curriculum and at all levels.**

The process will be iterative and cyclical, fostering greater awareness of how AI developments affect education and life, both positively and negatively, especially in the context of EDIA-related challenges.

The aim is to develop a bank of concrete implementation examples from all subject areas and levels as they become available. Your feedback is welcome, and your collaboration is essential to ensure rigorous quality assurance.

We are also interested in exploring and capturing the experiences of individuals who are committed to engaging more actively with the framework. Please contact us at GAI-LTA@open.ac.uk if you are willing to share your experience(s).

What staff/educators can do

The following suggestions are structured to match the dimensions of the framework. As with the framework itself, EDIA should inform practice across all six dimensions and be considered throughout the design, facilitation and evaluation of learning and teaching with AI.

AI concepts and applications

- Identify key opportunities to introduce or discuss AI concepts and applications, using case studies and examples to illustrate them.
- Introduce GenAI-related activities in a scaffolded way, ensuring that students can practise necessary skills before assessments.
- Provide context and explanations related to disciplines and employability to highlight AI's significance.
- Provide guidance on resources for finding information about AI.
- Know where to find information on the latest developments in AI and education through sector-leading organisations such as Jisc, QAA, ALT and Advance HE in the UK, their equivalents in other countries, and international bodies such as UNESCO.
- Build a short activity that surfaces the term 'AI' itself, for example, asking learners to compare how a claim reads when 'AI' is replaced with a plainer description such as 'statistical prediction system'.
- Provide opportunities for students to identify where AI is embedded in everyday tools and services, and to consider its implications for user agency and control.
- Support students to develop and apply criteria for assessing the robustness, reliability, potential and limitations of different AI applications.
- Introduce agentic AI in ways that enable students to understand what systems can access and act on, to make informed decisions about appropriate delegation, and to critically review both the actions taken and the outputs produced.

Learning and teaching with AI

- Embed AI competencies into course material and signpost to institutional guidance on learning and teaching, and on responsible use.
- Develop student activities that require identifying and addressing AI challenges, making the AI dimension of the task transparent
- Promote activities that encourage students to critically evaluate AI content through communicative and reflective exercises.
- Support students in crafting effective prompts and refining AI content to improve their final output.
- Develop online resources (e.g. readings, videos, tutorials) on AI topics.
- Use case studies to explore how AI can support or hinder EDIA, including examples of AI designed to address accessibility, language or other barriers to participation.
- Recognise that students may be unable, or may reasonably choose not, to use a particular AI tool, and design learning and assessment so that they are not disadvantaged as a result.
- Design learning activities in which students use AI in different roles, for example as a study partner, critical opponent, possibility engine or co-designer, and reflect on the benefits, limitations and implications of these different forms of interaction.
- Design activities that encourage students to use AI to explore and test knowledge, critically evaluate and cross-reference outputs, and reflect on how prompting and framing can influence the responses generated.
- Make the process of human–AI interaction visible within learning and assessment, providing opportunities for students to document, evaluate and reflect on their use of AI and the contribution it makes to their learning.

AI creativity

- Create opportunities for students to practise AI-related skills and offer guidance and examples on prompt creation and adaptation with a focus on EDIA principles.
- Invite AI experts to contribute to courses or offer guest lectures.
- Design opportunities for students to engage in iterative human–AI creative processes, including ideation, experimentation, prototyping, critique and refinement.
- Encourage students to compare and critically evaluate creative outputs generated through different prompts, tools or approaches, including identifying omissions, assumptions and potential bias.
- Support students to distinguish and document human and AI contributions to creative work, reinforcing transparency, academic integrity and critical reflection.
- Provide opportunities to explore how AI can support different formats, perspectives and modes of expression, including accessible forms of creative work.

AI ethics

- Offer activities which explore opportunities and challenges of AI, e.g. discussion activities on ethical implications.
- Encourage students to identify and address potential biases in AI-related tasks.
- Help students to consider AI's ethical, societal and environmental impacts.
- Encourage students to evaluate the credibility and reliability of online sources.

- Emphasise the importance of copyright and intellectual property compliance.
- Survey and take account of student attitudes to their engagement with AI-enhanced tools and activities.
- Empower students to make informed individual and collective decisions about using AI in their education and working life.
- Create opportunities for students to examine questions of human agency, trust and dependence in relation to AI, and to practise critically evaluating AI-generated outputs and recommendations before acting on them.

AI in society

- Offer activities that consider the environmental impact of using AI (e.g. the carbon footprint due to over-reliance; the exploitation of labour in the Global South) and encourage engagement with sustainability competencies.
- Encourage students to examine AI's societal impact, such as workforce exploitation and the digital divide, and explore ways to address these issues.
- Offer opportunities to consider the agency of AI (e.g. control and power across the globe).
- Take steps to address the non-inclusive nature of AI outputs.
- Provide opportunities for students to examine AI within the wider information ecosystem and to develop strategies for verifying AI-generated content.

- Introduce relevant examples of AI governance and regulation and support students to consider their implications for education, society, power and individual rights.

AI careers

- Provide examples of how AI is used in specific disciplines and job sectors.
- Provide opportunities for students to use human skills such as creativity, empathy and decision-making when using AI.
- Offer opportunities for students to apply relevant, sector-specific employability skills when interacting with AI.
- Explore and critically evaluate the use of AI throughout the career development cycle, including skills development, career exploration, labour market research, applications, recruitment and professional development.
- Apply AI knowledge to real-world challenges, showcasing its workplace importance and practical use through employer-informed activities.
- Explore how employers use (or don't use) AI in the recruitment process.
- Provide opportunities for students to explore how AI is changing the labour market, career opportunities and workplace roles, tasks and responsibilities, including developments such as agentic AI and AI assistants, and to identify the human and employability skills that may become increasingly important as a result.

Developing Critical AI Literacy

Staff and students may engage with the six dimensions of the framework at different levels of depth according to their existing knowledge and experience, discipline, educational context and purpose. Across all stages of development,

Critical AI Literacy involves engaging critically with questions of power, equality, diversity, inclusion and accessibility. These are integral aspects of the framework and should inform engagement with each of its six dimensions, in keeping with the OU's widening participation mission.

As Critical AI Literacy develops, staff and students can move from recognising and critically evaluating the opportunities, limitations and implications of AI towards deeper examination of how AI shapes knowledge, agency, participation and power. This can include considering how AI may reinforce existing inequalities, as well as how its development and use might be challenged or shaped in support of greater equity and social justice, in the same way that Critical Digital Literacy leverages digital technologies for social justice-oriented action and change (Jiang & Gu, 2022; Mirra & Garcia, 2020). The framework is therefore intended to support continuing development rather than prescribe a linear progression. How Critical AI Literacy is developed and demonstrated will vary across disciplines, contexts and forms of learning and teaching.

Strategic and policy alignment

The framework is designed to align with the principles, strategies and plans that educational institutions adopt for AI, and to give them pedagogical expression. Institutions can map it to their own documents in the following ways.

Institutional principles for the use of AI. Many institutions have agreed principles to inform policy development, academic practice and decision-making relating to AI. Where these include a commitment to embedding AI skills and Critical AI Literacy development in curriculum and assessment, the framework names the capability that commitment exists to build. It also gives practical expression to

principles on harnessing AI to support equitable student outcomes while proactively mitigating unintended consequences such as bias in some large language models, on responsible, ethical and environmentally sustainable approaches to AI use, and on supporting all colleagues to engage with and use AI confidently in line with the expectations of their roles.

Institutional strategy. Institutional strategies increasingly commit to the responsible use of AI in education, to strengthening learning, teaching, research and student support while protecting academic integrity, inclusion and human judgement, and to helping people interrogate evidence, think critically and navigate complex information environments. Where a strategy names critical thinking, digital fluency and civic agency among the capabilities students need, or lists critical digital literacy among its graduate attributes, Critical AI Literacy as this framework defines it is the extension of that attribute to AI: it is how critical digital literacy is exercised when AI is embedded in the tools, services and information environments students use.

Institutional enablers. Commitments to strengthening organisational capability in digital fluency and AI describe the staff upskilling the framework supports. Commitments to clear institutional frameworks for the ethical and effective use of AI in teaching, research, student support and administration are where the question this document raises, who manages the AI infrastructure and for whose benefit, is to be answered at institutional level, and Critical AI Literacy is what equips staff and students to take part in answering it. People and culture plans that aim to develop an inclusive and empowering working environment are a further point of alignment. Taken together, these commitments amount to what Sharples (2025) describes as a systems approach to AI in education: institutional

policy, curriculum and assessment, staff development and student support are treated as interdependent parts of one whole, with human judgement and inclusion at its centre. This framework is one of those parts, and it is designed to be used in concert with the others.

Sector and international frameworks. The framework draws on UNESCO's AI competency framework for students (Miao et al., 2024). It also takes account of the five principles agreed on by the Russell Group universities (Russell Group, 2023), created to help universities ensure students and staff are 'AI literate' so they can capitalise on the opportunities that technological breakthroughs provide for teaching and learning. The framework reflects the first three principles in particular:

1. Universities will support students and staff to become AI-literate.
2. Staff should be equipped to support students to use Generative AI tools effectively and appropriately in their learning experience.
3. Universities will adapt teaching and assessment to incorporate the ethical use of Generative AI and support equal access.
4. Universities will ensure academic rigour and integrity is upheld.
5. Universities will work collaboratively to share best practice as the technology and its application in education evolves.

References

- Acharya, D.B., Kuppan, K., & Divya, B. (2025). Agentic AI: Autonomous intelligence for complex goals: A comprehensive survey. *IEEE Access*, 13, 18912–18936. <https://doi.org/10.1109/ACCESS.2025.3532853>
- Bender, E.M., Gebru, T., McMillan-Major, A., & Shmitchell, S. (2021). On the dangers of stochastic parrots: Can language models be too big? *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*, 610–623. <https://doi.org/10.1145/3442188.3445922>
- Chiu, T.K.F., Ahmad, Z., Ismailov, M., & Sanusi, I.T. (2024). What are artificial intelligence literacy and competency? A comprehensive framework to support them. *Computers and Education Open*, 6, 100171. <https://doi.org/10.1016/j.caeo.2024.100171>
- Crawford, K. (2021). *Atlas of AI: Power, politics, and the planetary costs of artificial intelligence*. Yale University Press.
- Darvin, R. (2017). Language, ideology, and critical digital literacy. In S. Thorne & S. May (Eds.), *Language Education and Technology, Encyclopaedia of Language and Education* (Vol. 9, pp. 17–30). Springer.
- Darvishi, A., Khosravi, H., Sadiq, S., Gašević, D., & Siemens, G. (2024). Impact of AI assistance on student agency. *Computers & Education*, 210, 104967. <https://doi.org/10.1016/j.compedu.2023.104967>
- Edwards, P.N. (2003). Infrastructure and modernity: Force, time, and social organization in the history of sociotechnical systems. In T.J. Misa, P. Brey, & A. Feenberg (Eds.), *Modernity and technology* (pp. 185–225). MIT Press.
- Gray, M.L., & Suri, S. (2019). *Ghost work: How to stop Silicon Valley from building a new global underclass*. Houghton Mifflin Harcourt.

- Jiang, L., & Gu, M.M. (2022). Toward a professional development model for critical digital literacies in TESOL. *TESOL Quarterly*, 56(3), 1029–1040.
<https://doi.org/10.1002/tesq.3138>
- Long, D., & Magerko, B. (2020). What is AI literacy? Competencies and design considerations. *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*, 1–16. <https://doi.org/10.1145/3313831.3376727>
- McCarthy, J., Minsky, M.L., Rochester, N., & Shannon, C.E. (1955). *A proposal for the Dartmouth Summer Research Project on Artificial Intelligence*.
<http://jmc.stanford.edu/articles/dartmouth/dartmouth.pdf>
- Miao, F., Shiohira, K., & Lao, N. (2024). *AI competency framework for students*. UNESCO. <https://doi.org/10.54675/JKJB9835>
- Mirra, N., & Garcia, A. (2020). ‘I Hesitate but I Do Have Hope’: Youth speculative civic literacies for troubled times. *Harvard Educational Review*, 90(2), 295–321. <https://doi.org/10.17763/1943-5045-90.2.295>
- Mitchell, M. (2021). Why AI is harder than we think. <https://arxiv.org/abs/2104.12871>
- Muldoon, J., Graham, M., & Cant, C. (2024). *Feeding the machine: The hidden human labour powering AI*. Canongate.
- Plantin, J.-C., Lagoze, C., Edwards, P.N., & Sandvig, C. (2018). Infrastructure studies meet platform studies in the age of Google and Facebook. *New Media & Society*, 20(1), 293–310. <https://doi.org/10.1177/1461444816661553>
- Russell Group (2023). *Principles on the use of generative AI tools in education*.
<https://www.russellgroup.ac.uk/policy/policy-briefings/principles-use-generative-ai-tools-education>
- Sharpley, M. (2023). Towards social generative AI for education: Theory, practices and ethics. *Learning: Research and Practice*, 9(2), 159–167.
<https://doi.org/10.1080/23735082.2023.2261131>

Sharples, M. (2024). What to teach about AI? LinkedIn.

https://www.linkedin.com/posts/mike-sharples-1633153_highered-edtech-aided-activity-7257684262060019714-1T85

Sharples, M. (2025). A systems approach to AI and education in a post-digital world. *Theory Into Practice*, 64(4), 483–491.

<https://doi.org/10.1080/00405841.2025.2528549>

Star, S.L. (1999). The ethnography of infrastructure. *American Behavioral Scientist*, 43(3), 377–391. <https://doi.org/10.1177/00027649921955326>

The Open University (2026). *The future of learning: Skills, technology and innovation in a changing world*. <https://iet.open.ac.uk/files/future-of-learning-report-2026.pdf>

UNESCO (2025). *What you need to know about UNESCO's new AI competency frameworks for students and teachers*. 20 February 2025.

<https://www.unesco.org/en/articles/what-you-need-know-about-unescos-new-ai-competency-frameworks-students-and-teachers>

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Professor Mike Sharples (Emeritus Professor of Educational Technology, The Open University)

Note on intellectual influences

The focus on interrogating ‘AI’ as a concept, integrated in v0.2, draws on intellectual work that has developed alongside and beyond v0.1 of the framework. It is grounded in the ‘Better Words for AI’ project (Mirjam Hauck, Eleanor Moore, Nancy Pontika, Olivia Kelly and Julia Molinari in collaboration with OU students), whose collaborative analysis of AI terminology, including the lexicon project, foregrounded the need to treat the language used about AI as itself a site of literacy work. This focus also reflects continuing critical work on AI literacy across the OU since v0.1, particularly contributions to Critical AI Literacy resources for tutors, OU institutional thinking reflected in the award-winning [‘Responsible by Design’ framework](#) and decolonial approaches to AI. It builds on CAIL’s existing grounding in Critical Digital Literacy (Darvin, 2017) and extends it to the conceptual and lexical surface of AI itself, in keeping with the framework’s commitment to literacy as a social practice. Acknowledgement is also due to the wider scholarly conversation on the political economy and metaphorical structure of AI language reflected in the expanded references list, including work by Bender et al. (2021), Crawford (2021), McCarthy et al. (1955) and Mitchell (2021). The reframing of AI as infrastructure, introduced in v0.2 (September 2026),

responds to advisory feedback from Mike Sharples and draws on infrastructure studies (Star, 1999; Edwards, 2003; Plantin et al., 2018) and on critical accounts of the material and labour costs of AI (Crawford, 2021; Gray & Suri, 2019; Muldoon et al., 2024).

