Navigating the provocation of AI

EDUCATE
VENTURES RESEARCH

For all your AI needs: we help you realise the opportunity of AI



- What is AI and where are we now with AI?
- 3 Lenses framework
- Navigating the provocation of AI; Opportunities and Risks

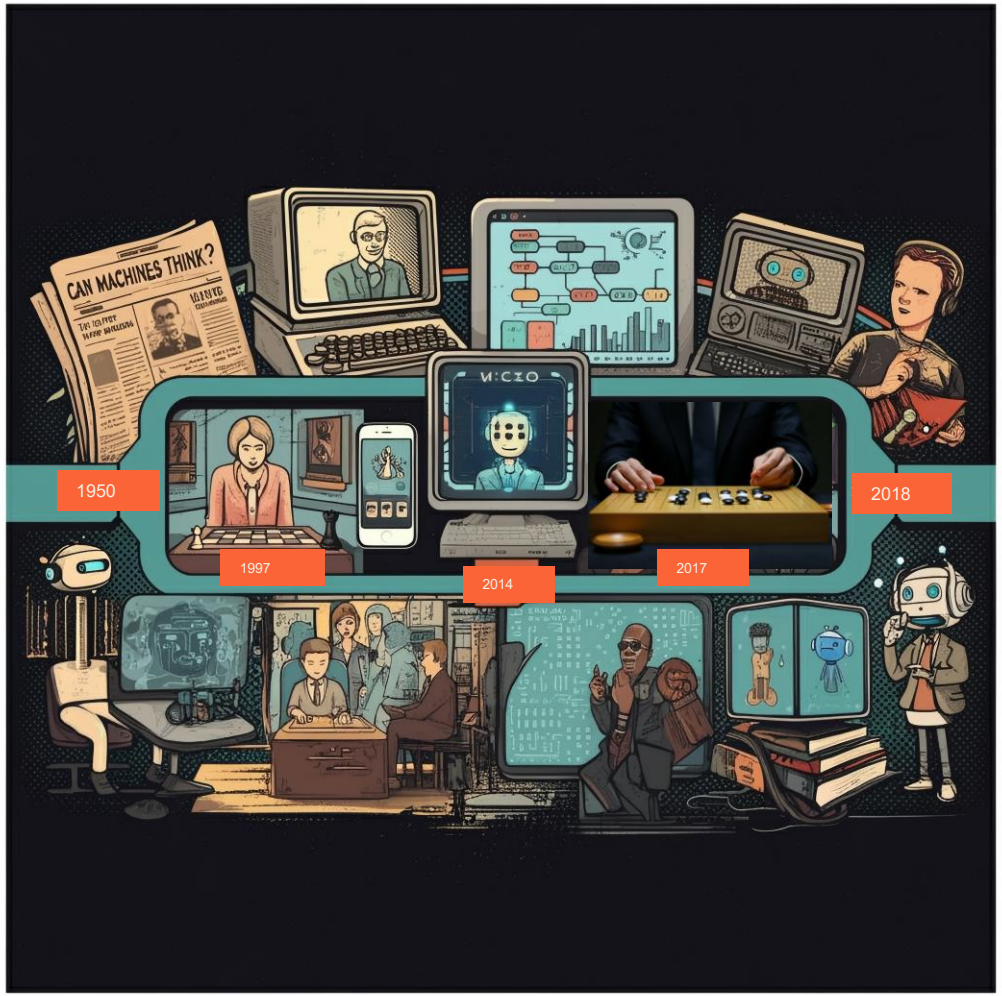
What is AI and where are we now?



What is AI?

Technology that analyses its environment and acts with some autonomy to achieve goals

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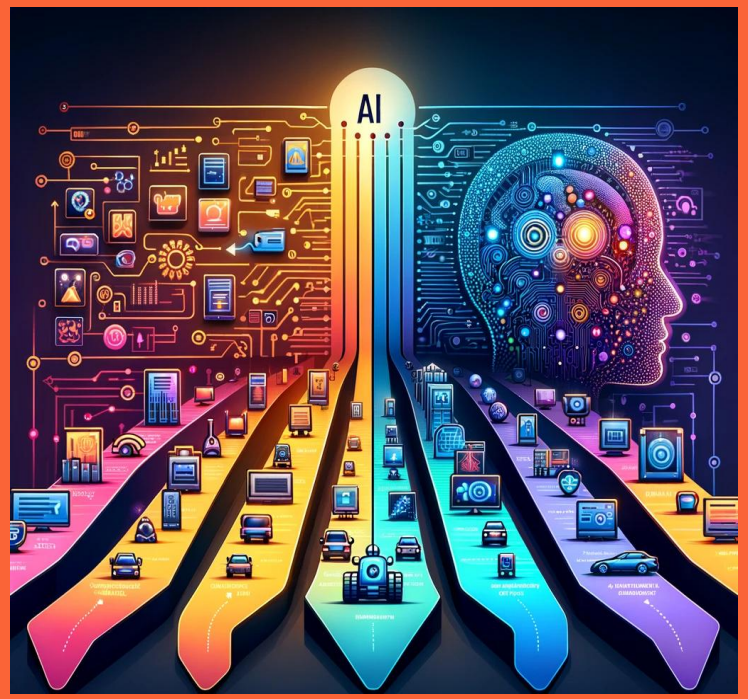


AI is not new

And its history is important

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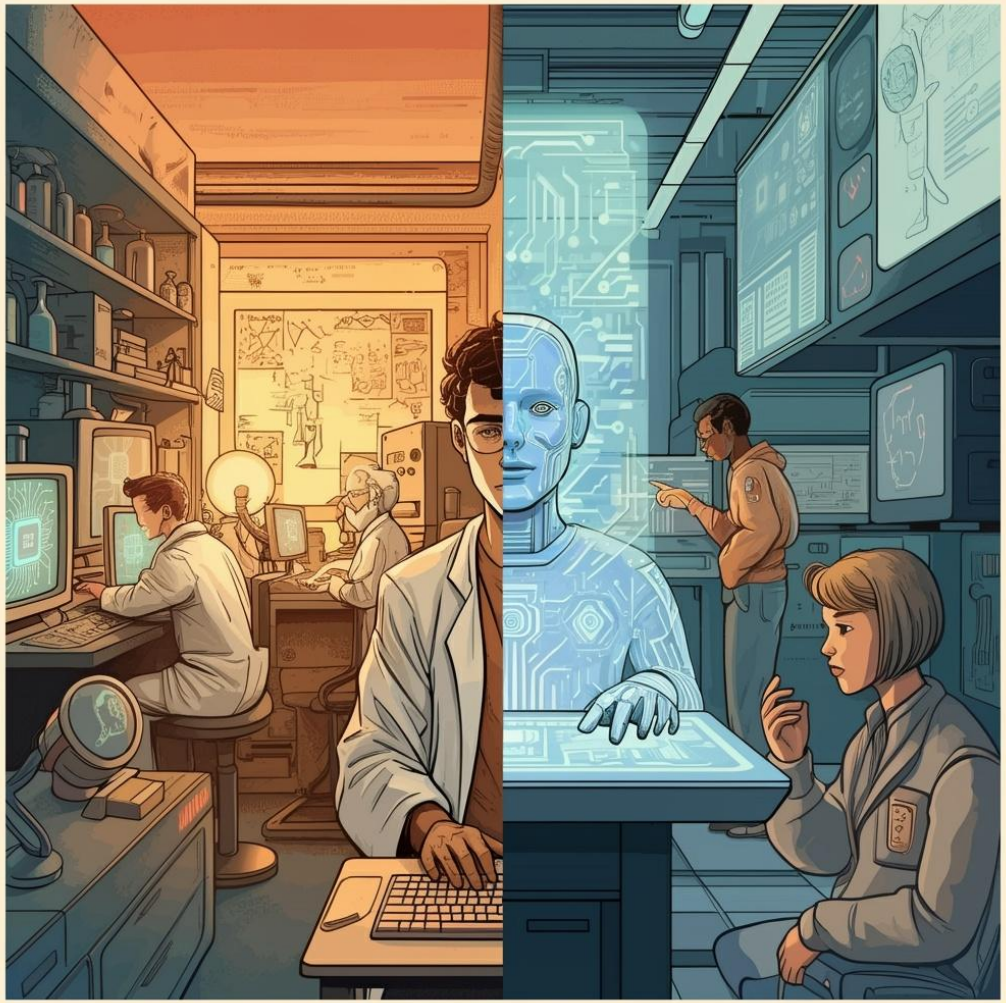
Types of AI



- Good Old Fashioned AI (GOFAI): usually rules based;
- Machine Learning AI: Neural networks, often with many layers;
- Generative AI is a subset of artificial intelligence;
- Uses machine learning algorithms to create new, original content;

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Pre and post November 2022

Scaled, ‘freely’ available AI for anyone with an internet connection

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A perfect storm has brought us here

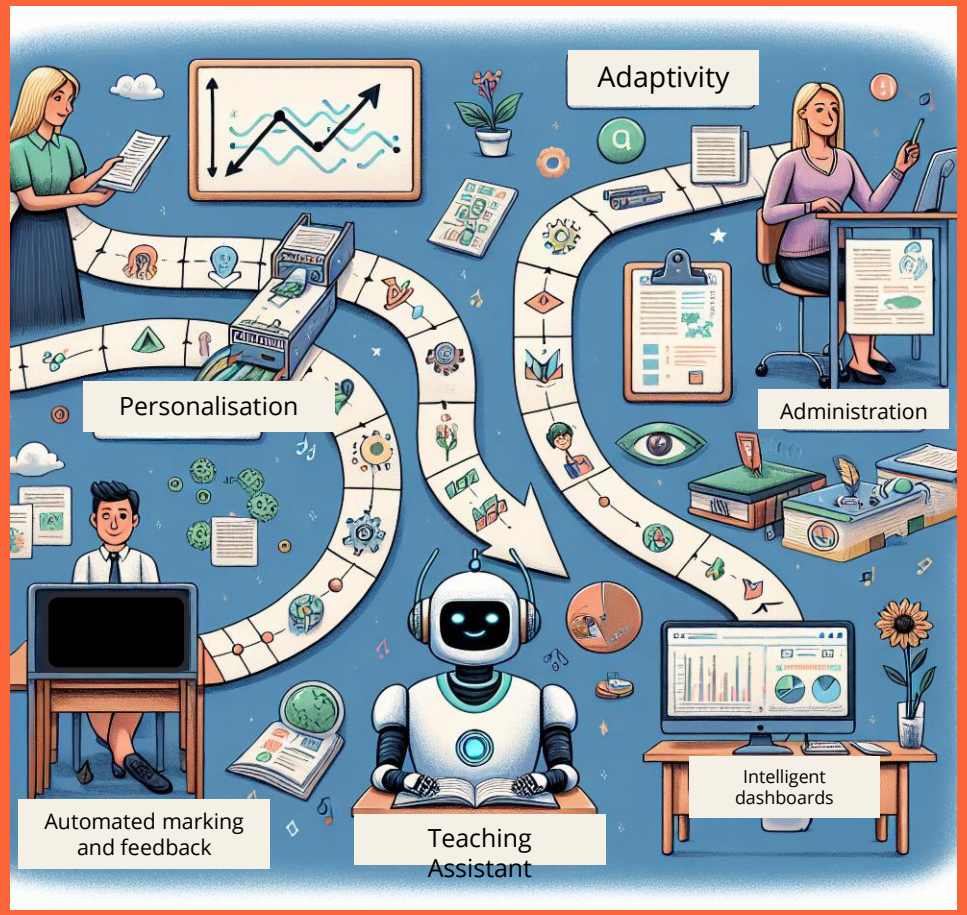




The landscape is changing very quickly...

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AI brings great opportunities



- Adaptive and personalised learning
- Automated marking and feedback
- augmented and virtual reality
- AI powered dashboards for learner analytics
- Content generation
- Teacher and learner assistants

We need to understand exactly how best to drive positive impact from these

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Risks

Protecting young people from mis-placed trust	Protecting young people 's personal data	Protecting young people from becoming "de-skilled"	Protecting young people's agency
Protecting young people’s intellectual property	Protecting young people from inappropriate tools	Protecting young people from "fake" news/images	Protecting young people from profiling
Protecting equal access and opportunity	Protecting young people from bias	Protecting young people from a lack of transparency	Protecting young people from over-reliance

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The 3 Lenses of AI in Education

Artificial intelligence in Education

1

AI tools:

Using AI in Education to tackle some of the big educational challenges

2

Increasing Human Intelligence:

Changing Education so that we focus on human intelligence and prepare people for an AI world

3

Learning about AI:

Educating people about AI so they can use it safely and effectively

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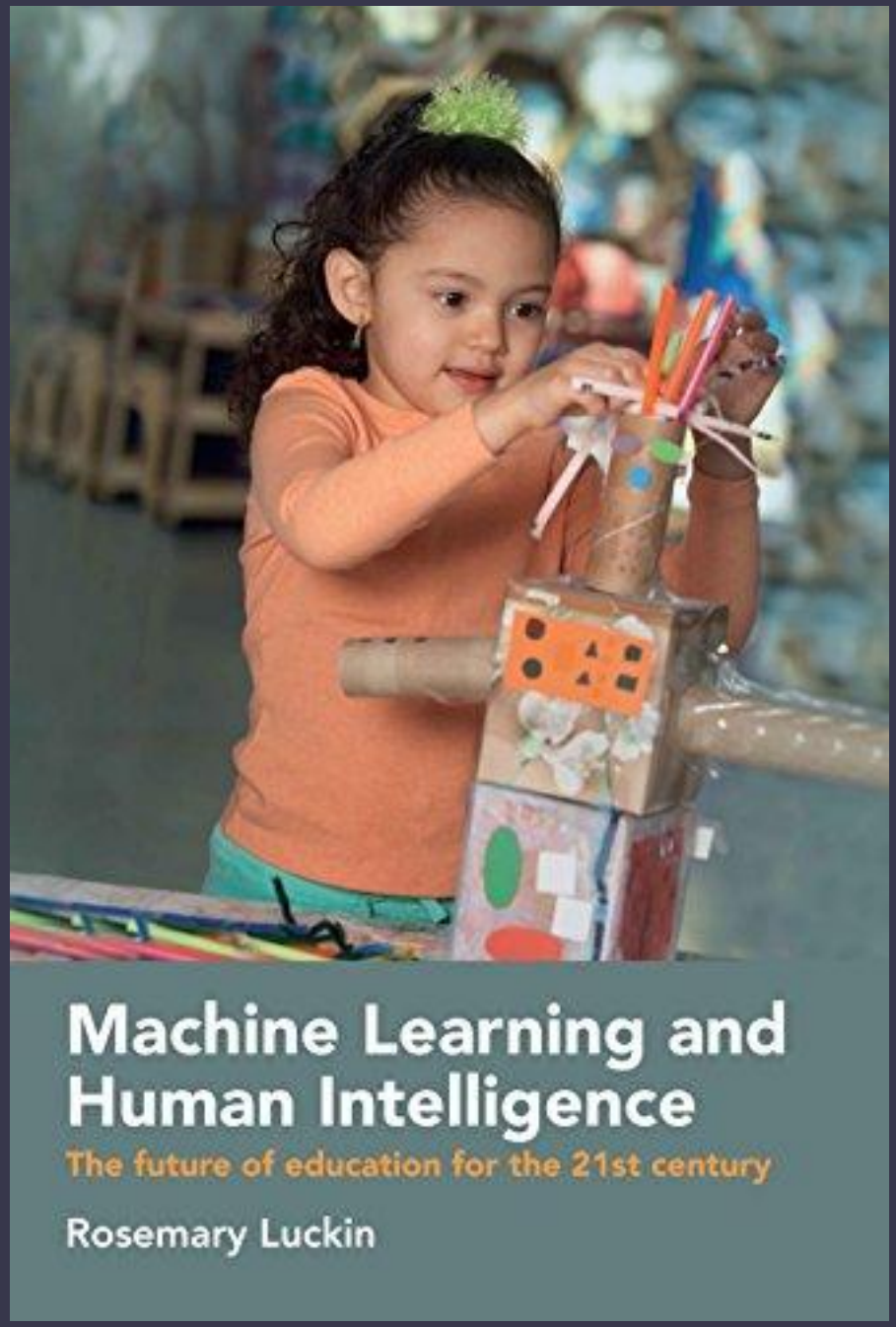
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Learning is Complex

Our ability to learn must continue to evolve to be ever more sophisticated

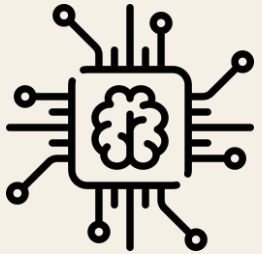
https://www.educateventures.com/_files/ugd/c43582_3950bb11755d4306ba9dc33811bbfc25.pdf





3. Social intelligence

4. Meta-cognitive intelligence





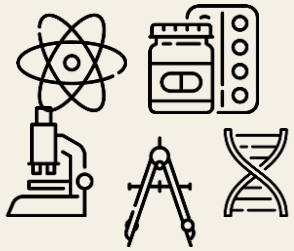
5. Meta-subjective intelligence



2. Meta-knowing intelligence



6. Meta-contextual intelligence



1.Interdisciplinary Academic intelligence





7. Perceived self-efficacy

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This need is not new…

“Unlike most non-human biological cognition, human cognition is changing: our **memory** (Sparrow et al. 2011) is changing due to the Google effect (digital amnesia), **navigation** abilities (McKinlay 2016; Milner 2016) atrophied because satnavs, **cognitive rewards** mechanisms are changing because of gamification, etc. This is a process that is accelerated by technology, and will be magnified by the use of cognitive assistants and cognitive prosthetics, especially for the elderly. AI itself and human-machine hybrids (either as individual cyborgs or as mixed collectives) are progressing in directions that we are not able to compare with the past or extrapolate, in order to understand where all this is leading, and the associated opportunities and risks (research priorities and safety concerns).”

Bhatnaga et al., 2018

A Microsoft study on knowledge workers’ use of generative AI found the tool had changed “the nature of critical thinking” from “information gathering to information verification”, from “problem-solving to AI response integration” and from “task execution to task stewardship”.

Lee et al. (2025)

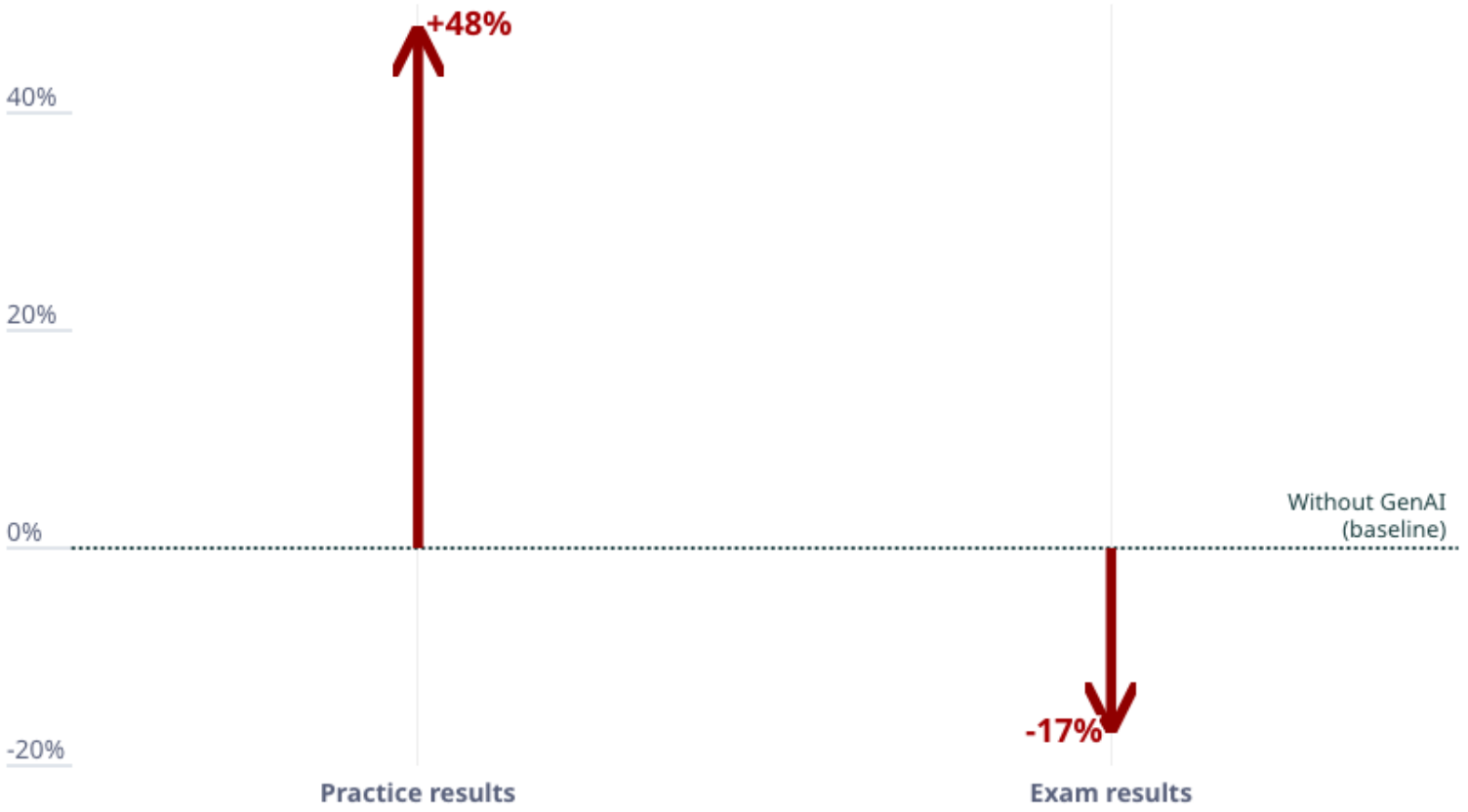
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OECD Digital Education Outlook 2026

Successfully performing a task with GenAI does not automatically lead to learning

Emerging evidence suggests that while general-purpose GenAI tools can enhance students' performance on tasks, they do not necessarily lead to learning gains. Offloading cognitive tasks to general-purpose chatbots creates risks of metacognitive laziness and disengagement that may deter skill acquisition in the long run. Several studies indicate that although students with access to general-purpose GenAI tools produce higher-quality outputs than their peers, this advantage disappears – and sometimes reverses – in exams when access is removed. In contrast, educational GenAI tools designed or used with an intentional pedagogical purpose tend to show sustained improvements in learning.

Student performance when practicing maths with generic GenAI



Randomised controlled trial of high school students in Türkiye in the 2023-24 school year.
Source: OECD Digital Education Outlook 2026, Figure 1.5.

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The 4D AI Strategy Framework

Luckin and Bagshaw (in press) Charting AI in Education: A Multi-Dimensional Framework for Education Strategy Development

4D AI STRATEGY FRAMEWORK

GOVERNANCE & ETHICS:
WHAT ARE THE PARAMETERS IN WHICH AI WILL BE EXPLORED, TESTED, AND IMPLEMENTED?

ITERATIVE UNIT APPLICATIONS:
WHERE WILL AI BE APPLIED? FOR EXAMPLE: 24/7 TEACHING SUPPORT, ADMINISTRATION...

THE VISION: THE AMBITION FOR AI WITHIN THE ORGANISATION

TECHNOLOGY & DATA:
CAN THE ORGANISATION SUPPORT THE TOOLS AND PROCESSES OF AI AND EDTECH?

STAFF CAPABILITY:
WHAT ARE THE IMPLICATIONS OF THE AI STRATEGY FOR ALL STAFF WHEREVER THEY WORK?

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ITERATIVE UNIT ... IONS:
WHERE W... PPLIED? FOR EXA... EACHING SUPPORT, ...DMINISTRATION...

Each dimension is inter-connected. Not mutually exclusive.

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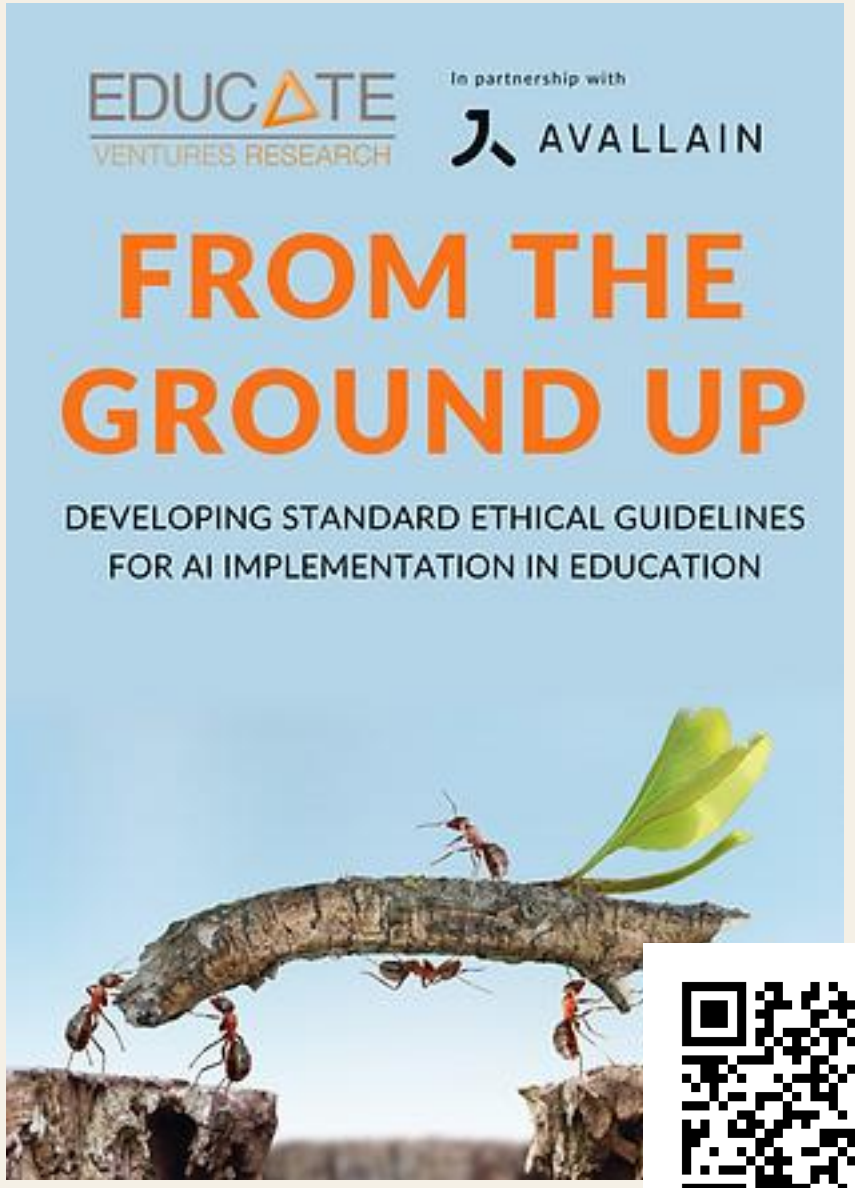
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A Guidelines Framework for Implementing AI in Education

A list of 12 guidelines for teachers, school leaders and parents on the best practices for implementing AI in educational settings



Risk Evaluation Checklist

To help you evaluate the risks and plan mitigations for the use of AI tools in your classroom

How to Use Self-Evaluation Checklist

This evaluation uses a two-phase approach to help you understand and communicate the risk level of an AI tool:

1. **Phase 1: Risk Categorisation (5 minutes)** — Determine the base risk level based on the EU AI Act framework
2. **Phase 2: Detailed Evaluation (15-20 minutes)** — Assess specific aspects that may increase or decrease risk

Understanding Risk Levels

The goal is not to prohibit or mandate any tool, but to help you understand the risks involved so you can make informed decisions about whether your use case justifies those risks.

Risk Level	What It Means
HIGH RISK	Requires careful consideration, robust safeguards, and potentially institutional approval. May not be appropriate for all contexts.
LIMITED RISK	Manageable with standard oversight and transparency. Most educational AI tools fall here.
MINIMAL RISK	Standard best practices apply. Tool poses few concerns for classroom use.

Indicator Legend

- 🔴 **Critical:** A 'No' answer significantly increases risk level
- 🟡 **Important:** A 'No' answer indicates areas needing attention
- 🟢 **Enhancement:** Nice to have, but absence doesn't indicate significant risk

PHASE 2: COMPREHENSIVE EVALUATION

📘 For each category, check the boxes that apply. 'No' answers to 🔴 items may elevate your overall risk level. Each item includes guidance on where to find the information you need.

1. LEARNING OUTCOMES & PEDAGOGICAL ALIGNMENT

Does the tool support genuine learning goals?

🔴 **Tool aligns with curriculum standards and has evidence of learning benefits**

→ Look for: Published research, case studies, or pilot data on the vendor's website or in their documentation. Check if learning objectives match your curriculum standards. Ask the vendor for evidence if not publicly available.

☐ Yes ☐ No ☐ Unknown

🟡 **Supports multiple types of learning outcomes (knowledge, skills, critical thinking)**

→ Look for: Feature descriptions, demo videos, or trial the tool yourself. Does it go beyond simple recall? Does it prompt analysis, creation, or problem-solving?

☐ Yes ☐ No ☐ Unknown

🟢 **Provides meaningful progress tracking beyond simple completion rates**

→ Look for: Teacher dashboard or reporting features. Does it show skill mastery, areas of difficulty, or learning trajectories rather than just 'done/not done'?

☐ Yes ☐ No ☐ Unknown

2. USER AGENCY & CONTROL

Do users maintain autonomy and choice?

🔴 **Users can pause, restart, or exit AI sessions freely without penalty**

→ Test it: Try pausing mid-session, closing the browser, and returning. Is progress saved? Are st penalised for stopping? Can you override AI recommendations?

☐ Yes ☐ No ☐ Unknown

🟡 **Multiple pathways available; users can adjust difficulty or pace settings**

→ Test it: Check settings or preferences. Can students choose different approaches to reach the Can they slow down or speed up? Can they skip content they already know?

☐ Yes ☐ No ☐ Unknown

EVR Risk Evaluation

Aila (Beta)

EDUCATE Ventures Research Ltd.
Risk Assessment

Description

- Aila is an AI-powered 'lesson assistant', designed to help teachers in creating lesson plans and associated resources.
- It is developed by Oak National Academy, and is based on their 6 'curriculum principles', and draws from content aligned with the UK national curriculum.
- The tool is free to use for teachers, and a demo version is available for anyone to use with certain rate-limits in place.

Innovation

- Unlike other AI powered lesson plan designers, Aila is much more 'hands-on'. The lesson planning in Aila is a multi-stage process in which the teacher is prompted to create edit and review different parts of the lesson plan (such as the learning outcomes, learning cycles, quizzes, etc.).
- At the end of the process you are given the option to download the lesson plan and the associated resources (quizzes, slides, etc.)

Data Risk

Low-Medium

- GDPR compliant. Some data (such as inputs and outputs from the system) are collected but only kept for as long as necessary. They might also be analysed to ensure no terms and conditions are being broken.
- Uses OpenAI's GTP4o model but opts out of sharing data with OpenAI (including for training its models).
- Stored data is kept encrypted and deleted when no longer in use (up to 5 years)

Ethical Risk

Low-Medium

- Safety is addressed in multiple ways. Has a separate 'moderation agent' that checks content for appropriateness and adds warning and guidance to the content if necessary. The system also monitors for restricted content, and ends the lesson planning process if it detects something.
- Also uses prompt engineering and Retrieval Augmented Generation to ensure to make sure the content is pedagogically aligned.

Risk Mitigation

- While the safety and data control protections are extensive, the product is still in the beta stage of development, so bugs and issues might still exist. The content being created is also heavily dependent on the teacher orchestrating the process - and the developers themselves stress that the output should be taken as a foundation that can be modified for purpose rather than a complete lesson plan.

EVR Staff Notes

- The tool is fairly easy to use and the step-by-step process is clearly well thought out and useful for ensuring the final output is the best it can possibly be. However the quality of the output varies depending on whether it is drawing from existing Oak lessons or not.
- Additionally, while it currently covers a wide range of subjects up till KS4, some content (such as Math), is still undergoing active improvement.

4D AI STRATEGY FRAMEWORK

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Purpose Driven AI – what outcome do you want to achieve?

Examples of AI tools that you might apply





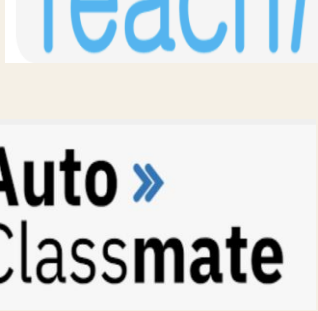


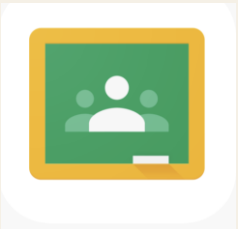










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But what is their purpose? Examples of AI use-cases

	Teacher admin	Lesson planning and enrichment	Lesson delivery	Student assessments	Teacher professional development and feedback
Potential AI use-cases	Streamlining administrative processes to boost productivity	Generate lessons in a range of topics, enrich lessons and boost productivity	Support teachers in lesson delivery through monitoring classroom interactions	Automate assessments, diagnose gaps in learning and recommend tailored interventions	Evidence teacher skills and support mentor-teacher interactions. Identify areas for improvement
Examples of tools	TeachMateAI, Microsoft Copilot	MAGIC SCHOOL, Canva	TeachFX, Microsoft Teams	Class Companion, k!	sibme, Auto Classmate

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Purpose driven AI (PAI)

Luckin, R., Cukurova, M., Kent, C., & du Boulay, B. (2022). Empowering educators to be AI-ready. Computers and Education: Artificial Intelligence, 3, 100076. https://doi.org/10.1016/j.caeai.2022.100076https://oro.open.ac.uk/83662/1/S2666920X22000315.pdf

AHEAD

- Alignment with educational goals: PAI should be developed and used in alignment with well-defined educational objectives.
- Enhancing Human intelligence: The goal of PAI is to augment human intelligence, not to replace it.
- Evidence-based: The development and implementation of PAI should be grounded in learning science research and evidence-based practices.
- Adaptability and personalisation: PAI systems should be adaptable to individual learners' needs, abilities, and contexts.
- Ethical and transparent: PAI must be Designed and used ethically, with transparency about its functionalities, limitations, and potential biases.

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AI Use Case

Description: What is the purpose of the AI and what are the intended impacts of its application?

	Who will benefit and how?
1	
2	
3	
4	

	What are the potential challenges?
1	
2	
3	
4	

	What are the practical steps needed to implement this AI successfully?
1	
2	
3	
4	

	What are the technical and cost implications of implementing this AI?
1	
2	
3	
4	

	What are the ethical implications of this AI and how can they be mitigated?
1	
2	
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	What are the staff training implications for implementing this AI effectively?
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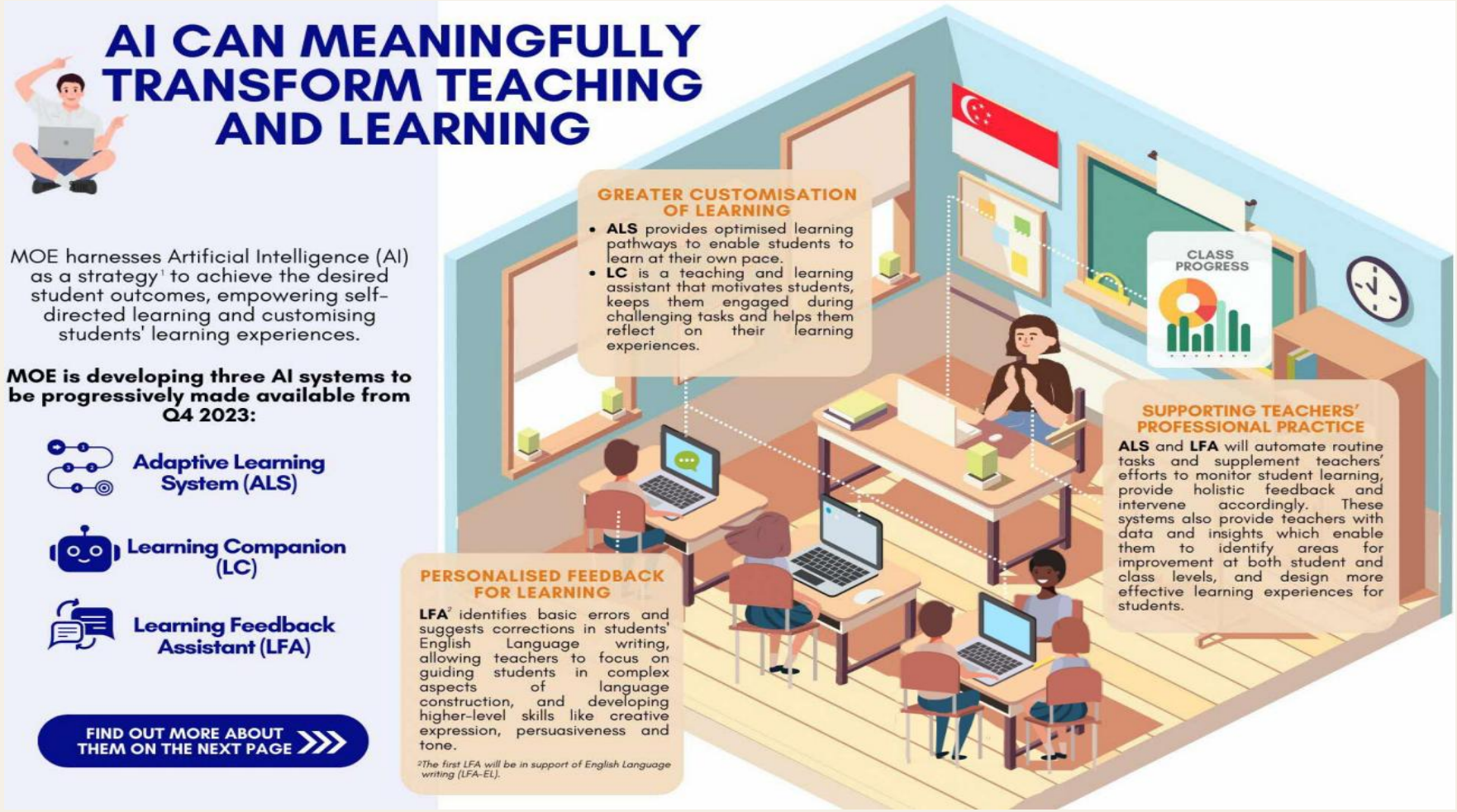
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Enhancing learning using AI

Ministry of Education
SINGAPORE



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Technology and data: getting AI-ready

IT Infrastructure: Does the organisation have sufficient hardware, software and network capability? Do members of staff and students have sufficient levels of access to computing devices?

IT team: Does the organisation have sufficient levels of IT support to maintain and update systems as required?

Data infrastructure: Does the organisation have a data processing pipeline and data storage centre in place?

Data plan: Does the organisation have a strategic plan for collecting and using data, aligned to its overarching vision and AI strategy?

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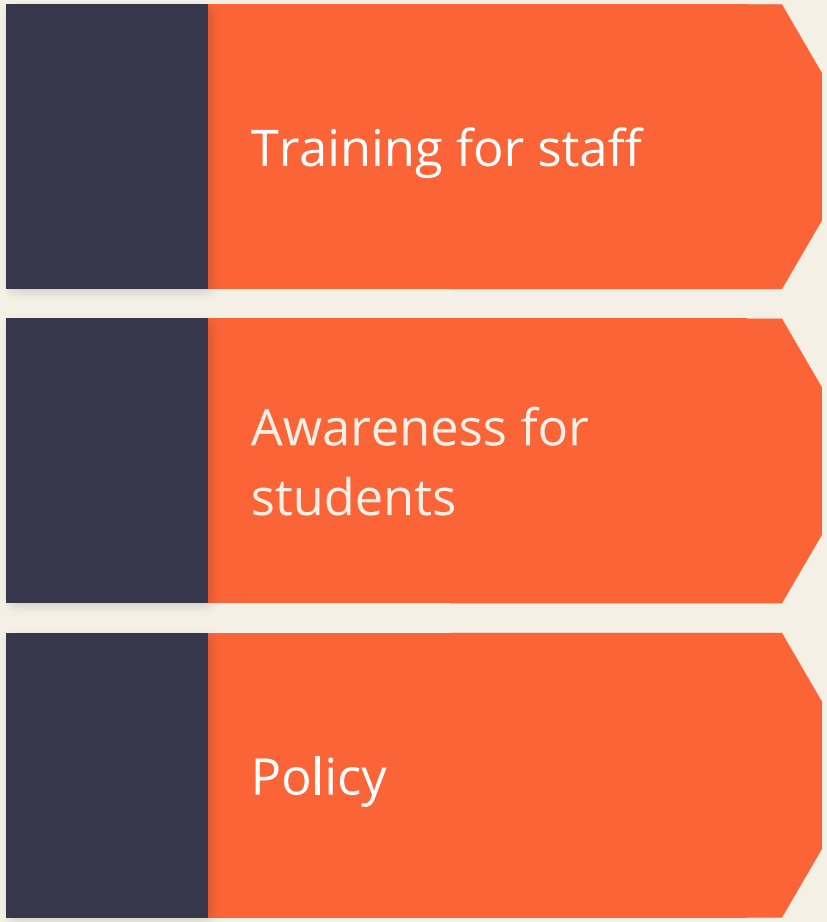
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How might we go about that?



- What is AI? What tools are available?
- How might you use it in your teaching?
- What are the risks?

- What is AI? What tools are available?
- How should you consider using it?
- Will this impact my future?

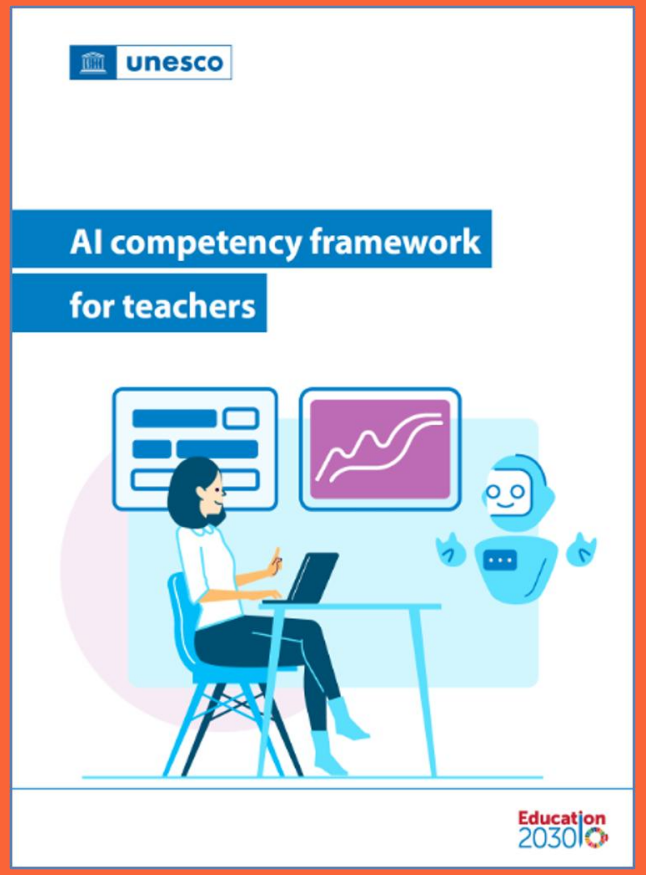
- What is our AI policy as an institution?
- How can we ensure equal access?
- Ethics – NB the IEAIED

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AI literacy for teachers (emergent themes)

Learner Focused	Ethics	AI Tools and Use
AI pedagogy	Professional Development	Facilitating learners AI Literacy

AI Literacy for teachers



Key principles

- Ensuring inclusive digital futures
- A human-centred approach to AI
- Protecting teachers' rights and (re)defining teachers' roles
- Promoting trustworthy and environmentally sustainable AI for education
- Ensuring applicability for all teachers and reflecting digital evolution
- Lifelong professional learning for teachers

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THE SKINNY

on AI for Education

Issue 27, April 2026

Welcome to *The Skinny on AI for Education* newsletter. Discover the latest insights at the intersection of AI and education from Professor Rose Luckin and the EVR Team. From personalised learning to smart classrooms, we decode AI's impact on education. We analyse the news, track developments in AI technology, watch what is happening with regulation and policy and discuss what all of it means for Education. Stay informed, navigate responsibly, and shape the future of learning with The Skinny.

Headlines

- ***Skinny Editorial: Looking Elsewhere***
- ***News***
  - ***AI in Education***
  - ***AI Regulation and Legal Issues***
  - ***AI Ethics and Societal Impact***
  - ***AI Markets and Investment***
  - ***AI Employment and the Workforce***
  - ***AI Development and Industry***
- **Further reading: find out more from these resources**

Looking Elsewhere







https://roseaied-landscape-briefing.netlify.app/

Fancy learning more through one of our webinars or online learning sessions?



Many Thanks

