An Roinn Oideachais
agus Óige
Department of Education
and Youth

Guidance on Artificial Intelligence in Schools

Version 1

October 2025

Contents

Context for this Guidance

The purpose of this Guidance on Artificial Intelligence (AI) in Schools is to support school leaders and teachers to develop an understanding and knowledge of relevant considerations regarding the use of AI in teaching and learning and school leadership. This guidance acknowledges that when used responsibly, in a planned and informed way, AI has the potential to support teaching and learning. It also recognises that there are challenges and risks associated with its use. It is intended to promote a shared understanding of AI to set out principles for its responsible and appropriate use and to support school leaders and teachers in making informed decisions on using AI, having regard to safety and privacy requirements.

In light of the early and emerging nature of research and practice of AI in education, this guidance serves as an initial step toward the safe, effective and responsible use of AI in schools. The Department of Education and Youth (the department) and Oide Technology in Education (Oide TIE) are committed to engaging in ongoing research and practice in this area. This guidance will be regularly reviewed and updated appropriately to take account of ongoing changes, emerging practices and research both national and international as well as feedback from the school system. It is intended to keep this guidance under review with a view to publishing updates as required.

Commitment to ongoing review

To remain relevant and up to date, this guidance is designed as a dynamic document, adaptable to ongoing changes and emerging practices. It will be reviewed periodically to incorporate new developments in AI in education and AI technologies, the experience and feedback of teachers and school leaders, developments in the regulatory environment and lessons learned from real world applications and evaluations.

This Guidance on AI forms part of the ongoing commitment by the Department of Education and Youth to support schools in their effective use of digital technologies in education. The aim of the Digital Strategy for Schools to 2027[1] and its associated Implementation Plan is to empower schools to harness the opportunities of digital transformation and enhance digital competence in both teachers and learners. This Guidance on AI forms part of the suite of supports and resources provided under the strategy in relation to teacher professional learning and to assist school leaders in embedding digital technology in education.

1 Digital Strategy for Schools to 2027

Resources and supports currently available in relation to AI can be found on the Oide TiE website, where there is a dedicated AI in Schools Hub[2]. Further supports and resources will be developed in this area to reflect latest research findings, feedback from teachers and school leaders and outcomes from pilot projects. The implementation of the EU AI Act over the coming years will also be monitored to ensure the guidance aligns with associated guidelines, regulations and recommendations.

While this document provides guidance on the use of AI in schools for teaching and learning, it should be noted that the State Examinations Commission (SEC) will shortly publish a consolidated document drawing together all of the existing rules and procedures on the completion of coursework which will include their guidance on the use of AI software and applications in the context of coursework for assessment for the purposes of certification. In relation to such coursework, the work undertaken by a student (referred as a candidate for State examination purposes) is designed to be completed over an extended period of time, and is intended to be integrated into the regular teaching and learning experienced by students.

The SEC has previously updated its general and subject specific documentation in respect of the use of AI software and applications as it relates to coursework.

The National Council for Curriculum and Assessment (NCCA) has published guidelines, developed in collaboration with the SEC, to support the completion of additional assessment components (AACs) in new and revised Leaving Certificate specifications[3]. Since the 2023 examinations, the SEC has updated its general and subject specific documentation to include an instruction in relation to material generated by AI software[4]. The instruction makes clear that any material generated by AI software will be treated in the same way as any other material that the candidate has not generated themselves. The inclusion in the AAC guidelines of a requirement for any material generated by AI software or applications to be appropriately referenced and acknowledged is therefore in line with the approach currently taken by the SEC in other subjects.

The SEC has recently placed a contract with the University of Limerick to commission research on the impact of Generative AI (GenAI) on assessment for the purposes of certification in the context of both teacher based and external assessment. The findings from this research may, as appropriate, also be reflected in future iterations of this guidance.

2 AI in Schools Hub - Oide Technology in Education

3 The Guidelines to support the completion of AACs in the relevant Tranche 1 subjects were piubished in December 2024 and those specific to each of the Tranche 1 subjects can be found here: https://curriculumonline.ie/senior-cycle/senior-cycle-subjects/. Equivalent guidelines will be published for relevant subjects in subsequent tranches annually.

4 The arrangements for the acceptance and authentication of coursework for the state examinations are outlined in SEC Circulars S69/04, S68/08, S76/22, and S52/24, which contains specific instructions in relation to the use of AI software in coursework. See www.examinations.ie

Supporting AI in Schools

2021

PROJECT APPROVAL FOR AI4T (Artificial Intelligence for and by Teachers).

An Erasmus + K3 project designed by France, Slovenia, Italy, Ireland and Luxembourg to contribute to training on AI in education for and by teachers and school leaders.

2022

Digital Strategy for Schools to 2027.

The vision is to empower schools to harness the opportunities of digital transformation and build digital competence in both teachers and learners. The strategy identifies the need to recognise the strengths and limitations of AI and address the ethical considerations and risks. Publication of EU Ethical guidelines on the use of artificial intelligence and data in teaching and learning for educators.

2023

A4T Training Pathway Development.

Implementation of MOOC, professional learning and open access textbook for teachers.

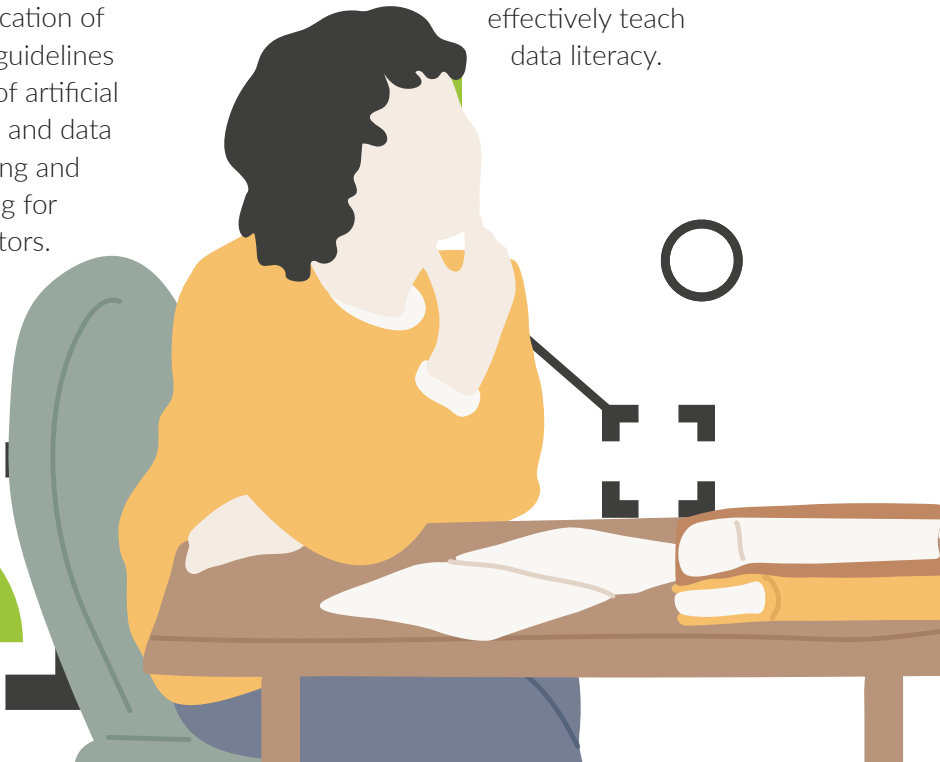
2024

Embedding the Learning from the AI4T Project

Development of AI in Schools Hub.

Launch of online course on AI for Schools.

Project approval for DALI4US (Erasmus+) project "Data Literacy in Upper Primary Education" dedicated to equipping primary school teachers to effectively teach data literacy.



2025

Support the development of knowledge around AI.

Publication of Guidance on AI in Schools

Launch of Technical Support Instrument from the European Commission on Futureproof Education: Supporting Schools in the AI evolution.

Publication of revised EU ethical guidelines on the use of artificial intelligence and data in teaching and learning for educators.

ACT-AI: project establishing a pan-European Academy dedicated to advancing AI adoption in education.

Artificial Intelligence – Digital Literacy (AI)DL) project focused on fostering data literacy competences in the context of using GenAI in the post-primary classroom.

2026

Publication of updated Guidance of AI in Schools

Collaboration and engagement with stakeholders in relation to TSI project to include As Is analysis.

Design and develop practical use cases and accompanying toolkits to support teachers and school leaders.

Foreword from Secretary General Bernie McNally

This Guidance on AI in Schools is an important part of the Department of Education and Youth's package of supports to assist schools with both the opportunities and challenges Artificial Intelligence (AI) presents.

The Digital Strategy for Schools to 2027 sets out the need to build awareness of new and emerging technologies. It also states that we must be prepared to take advantage of the benefits and opportunities they bring, as well as to be cognisant of the challenges and risks.

We are living in an ever-changing digital world, with the role of digital technology in education becoming increasingly important. Technology itself is advancing at a rapid pace and nowhere is this more evident than the use of AI, in particular Generative AI (GenAI) and its transformative force in society and perhaps education.

To this end, the Department of Education and Youth, in conjunction with Oide Technology in Education (TiE), are publishing this Guidance on AI in Schools. Given AI is a rapidly growing and changing area, with international research and evaluation on its potential benefits in education still in its early stages, this is intended to be a living document which will be updated regularly.

When used responsibly, in a planned and informed way, AI has the capacity to support teaching and learning, and to help students achieve their potential. This first iteration of the guidance provides some initial background and context on AI in teaching and learning, and information on the opportunities and risks associated with its use. It highlights relevant factors and suitable resources to inform schools and support teachers in planning for the possible use of AI in teaching and learning and supports good decision making around AI tools and practice. The guidance is intended to enable AI, where it is deployed, to be used in a safe, ethical and appropriate manner. Like any other digital tool used in education, AI should enhance and not replace human led teaching and learning, with the teacher overseeing any output and acting as the final checkpoint given the potential for bias and misinformation.

As the European Commission states, "AI tools can be used to complement and support human output and judgement, but not to replace it".

I would urge those teachers and school leaders who are interested in the potential use of AI in education to engage with the resources and supports developed by Oide TiE and contained on their website / AI Hub, as well as the frameworks listed in the Appendix of this guidance. I also wish to signpost any teachers or schools leaders who have questions about the use of AI in State examinations to the publication of relevant material by the State Examinations Commission (SEC).

In summary, it is our intention that this guidance will provide a foundation for teachers and school leaders who wish to engage with AI to do so in an informed manner. We will continue to engage and collaborate with our local stakeholders, as well as our European colleagues, on the use of AI in education to ensure evidence informed policy making and supports. We are committed to updating this guidance and continuing to develop supports so that teachers and school leaders who choose to use AI can do so safely, appropriately and ethically.

Bernie McNally
Secretary General

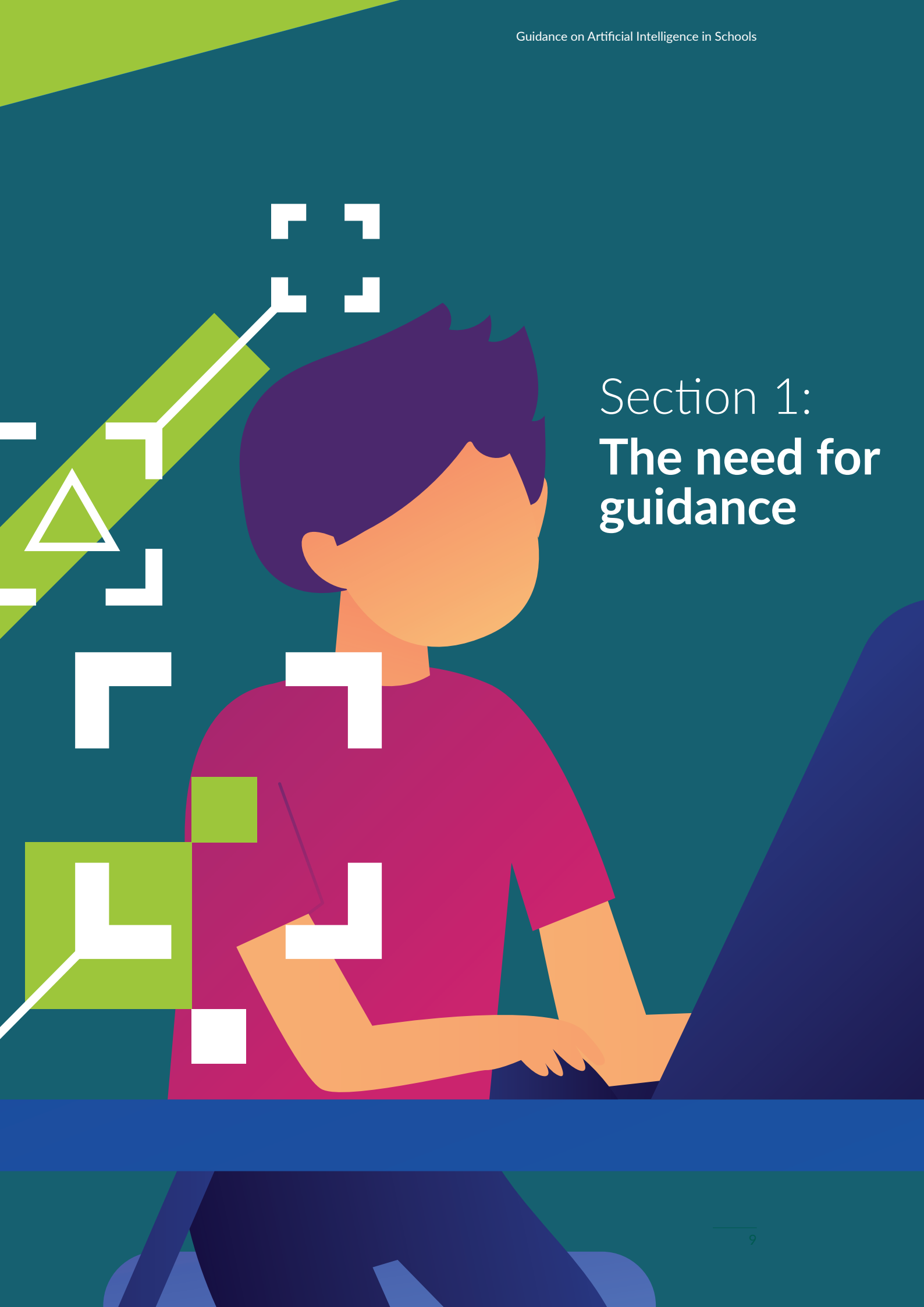
Introduction

For teachers and school leaders considering the use of AI, this guidance is designed to achieve two primary objectives:

- provide teachers and school leaders with a common understanding of AI, its potential applications in education and establish principles for its responsible and appropriate use.
- support teachers and school leaders in making informed decisions on the use of AI, having regard to safety and privacy requirements.

Section 1 explains the rationale for this guidance and introduces some core concepts. Section 2 discusses how AI could be used in schools to support teaching, learning and school leadership and notes important considerations for its successful implementation.

Appendices are also provided, with a glossary of key and frequently used terminology relating to AI, links to resources on the use of AI in learning and teaching, further information on the ethical use of AI and on the history and evolution of AI, relevant regulations, policies, reports and frameworks, as well as the sources used to develop this guidance, which may be useful for further reading.



Section 1: The need for guidance

The need for guidance

Although the general public has interacted with AI for many years, the launch of ChatGPT in late 2022 and other similar large-language models subsequently triggered a marked increase in public awareness and interaction with these tools.[5] AI development is advancing rapidly and impacting many aspects of our daily lives. However, it remains uncertain how AI will impact education, how it will affect teaching and learning, and how it might change the roles of teachers and learners - (Holmes, 2023).

In navigating this uncertainty it is vital to acknowledge the foundational importance of digital literacy in equipping individuals with the knowledge and skills to understand, evaluate and use AI technologies, along with all other digital technologies effectively, critically, safely and ethically.

This is reflected in the 2024 Literacy, Numeracy, and Digital Literacy Strategy[6] which is an ambitious 10-year strategy, with a 5-year implementation plan, reflecting the department's ongoing commitment to building an education system that fosters excellence, equity, and inclusion. It is designed to break down barriers and ensure every child can reach their full potential. It aims to promote the development of essential literacy, numeracy, and digital literacy skills, knowledge, and dispositions including successfully navigating the digital world. It calls for updated teaching practices, better use of technology, and more inclusive, culturally responsive classrooms, ensuring no child is left behind.

What is AI

While AI has many different definitions, under the EU Artificial Intelligence Act 2024,

> 'an 'AI system' means a machine-based system that is designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment, and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments.

Another widely used definition of AI is that provided by the OECD:

> "An AI system is a machine-based system that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments. Different AI systems vary in their levels of autonomy and adaptiveness after deployment."

Artificial intelligence is embedded in a wide range of routine daily activities. For example, predictive text functions utilise AI algorithms to anticipate and propose sentence completions as the user types. Navigation systems apply AI to optimise route selection in response to real-time traffic patterns or weather conditions.[7]

For a glossary of common terms used in relation to AI, please see Appendix A.

5 For a brief history of AI please see Appendix D.

6 Literacy, Numeracy and Digital literacy Strategy

7 AI for Teachers, An Open Textbook: Edition 1

Generative AI

Generative AI (GenAI) is a type of AI designed to generate content such as text, images, code, audio, video etc based on input data. Examples include AI chatbots, image generation tools and content automation systems. With this capability, it responds to a query based on patterns learned from its training data. Some examples of its outputs include:

- it can compose stories, essays, summaries or other forms of written work based on a given prompt or topic
- it can generate unique images, illustrations, or music developed from a description or prompt provided by the user
- it can write new code, solve programming challenges, or develop functional applications tailored to specific needs.

Of the current GenAI models, ChatGPT, created by a company called OpenAI, was the first to dominate the headlines. It was released in late 2022 and was the first easy-to-use GenAI tool widely available to the public. With its development, AI became visible to the public and raised fundamental questions about tasks and skills where the activity of humans and machines complement and/or substitute for each other.[8] Other prominent examples of Gen AI models include Microsoft's CoPilot, Google's Gemini and Anthropic's Claude (OECD, 2023).

Benefits and Risks of Generative AI

In its Guidance for Generative AI in education and research, UNESCO outlines that GenAI is now widely accessible, poised to become increasingly sophisticated and presents both significant challenges and unique opportunities for education. UNESCO highlights that these tools, by automating specific lower-order cognitive tasks, have the potential to reshape our understanding of human intelligence and learning processes profoundly. At the same time, GenAI also raises multiple immediate concerns related to issues such as safety, data privacy, copyright, and manipulation. Some of these challenges are extensions of broader risks inherent to artificial intelligence, while others have newly emerged with this latest generation of tools.[9]

8 OECD Digital Education Outlook 2023, Towards an Effective Digital Education Ecosystem

9 UNESCO, Guidance for generative AI in education and research

Ethical Approach and Challenges

While acknowledging there may be potential benefits of AI in schools, the introduction of GenAI, as in other sectors, brings a range of compliance and ethical challenges. The introduction of the EU AI Act, 2024 establishes a broad regulatory framework to govern AI across the EU. In parallel with this regulation, it is essential for users to adopt an ethical approach grounded in sound principles and carefully consider the ethical implications of using AI in schools.

Ethical guidelines on the use of artificial intelligence (AI) and data in teaching and learning for educators were developed by the EU Commission in 2022 with an updated version expected at the end of 2025. These guidelines outline how the use of AI raises important questions in relation to personal data, data protection, and privacy and suggest key considerations when using AI and data in education. These include ensuring that the AI systems used are reliable, fair, safe, and trustworthy and ensuring the management of educational data is secure, protects the privacy of individuals, and is used for the common good. Educators must be aware of these questions about the AI systems they are using, ensuring that they are used in ways that are responsible, just, and fair.[10]

Ethics

The ethical considerations when using AI and data in education include ensuring that the AI systems used are reliable, fair, safe, and trustworthy and that the management of educational data is secure, protects the privacy of individuals, and is used for the common good.

Understanding the following is required to establishing a pathway for the ethical, safe and responsible implementation of these technologies.

Government commitment to ethical AI

AI tools used in the civil and public service must comply with seven key requirements:

10 Ethical guidelines on the use of artificial intelligence (AI) and data in teaching and learning for educators

11 Guidelines_for_the_Responsible_Use_of_AI_in_the_Public_Service_20250918.pdf

Human Agency and Oversight

According to the European Commission, AI systems should empower human beings, allowing them to make informed decisions and safeguarding their fundamental rights. At the same time, proper oversight mechanisms need to be ensured. AI tools can be used to complement and support human output and judgement, but not to replace it. Given that the accuracy of GenAI outputs cannot be guaranteed, all responses require careful verification.

Despite its fluent and convincing output, GenAI can be subject to hallucinations. Hallucinations are a phenomenon wherein outputs are created that may seem plausible but lack any factual basis. If an AI model is trained on a dataset comprising biased or unrepresentative data, it will reflect these biases in its outputs. Certain groups in society are not systematically represented by this data, which means that the content generated takes little account of their contexts and realities. Additionally, GenAI has accelerated the production of disinformation and misinformation by enabling content to be created more easily, more quickly and at a greater scale.

To mitigate the risks of hallucinations and incorrect or biased information, teachers and schools leaders **must** act as the final checkpoint, systematically reviewing and validating all AI-generated outputs to ensure accuracy and reliability. This process can be supported by effective prompt design, which includes providing explicit instructions and complete contextual information when designing prompts.

The key general principle of 'humans in the loop' in AI is used for educational purposes and in educational settings. This principle asserts that AI systems should not operate autonomously without human oversight and control, particularly in scenarios where AI decisions could have significant consequences for individuals or society. By embedding **human oversight** at the core of AI practices, its development and use can align with and prioritise fundamental human values, including well-being, dignity, and equity.

Technical Robustness and Safety

Any AI systems under consideration for deployment at school level should be dependable, perform as expected and be secure.

The EU's recently adopted AI Act, 2024 is the world's first comprehensive AI law. It sets uniform rules to create a single market for trustworthy AI applications that fully respect fundamental rights, including children's rights. It has entered into force and will apply in full from 2 August 2027. The Act classifies AI systems as high risk for some areas of education, such as access or admission to education, systems to evaluate learning outcomes, assessment of educational levels, and detection of students' prohibited behaviour. General provisions will also benefit children once implemented, such as a requirement to watermark deepfakes and other AI-generated materials and to inform children when they are interacting with AI. Work is underway in the Department to determine the implications of the Act on the education system.

Privacy and Data Governance

The content used in a request to GenAI is generally not confidential by default. The information given to the system to generate content can be used to train the model or even shared with a third party. In the absence of clarity about the conditions of its use, all data provided should be considered public. The inputting of sensitive, proprietary or personal data[12] should be avoided and GDPR applies. In this context, it is increasingly important to protect privacy through robust data protection measures and compliance with all data protection regulations.[13]

If that data being input does not fall under the above definition of personal data and is data that is entirely non-personal in nature then the GDPR (2018) does not apply. Also if the data is properly anonymised and cannot be reconfigured to link back to an individual, then it may not be subject to the GDPR principles also.

Transparency

Transparency in the use of AI, particularly GenAI is essential in building trust. Clearly communicating about when and how GenAI can be used helps establish shared expectations.

Age Restrictions

It is important to be aware that Generative AI tools that require an account to be created have minimum age requirements. These can range from 13, 16 and up to 18 years old. Many commonly used GenAI tools also require parental consent for under 18s to set up an account, for example ChatGPT.

It is essential to check the age restrictions and parental consent requirements with the relevant platform and be aware that this information is often subject to change. The AI in Schools Hub will provide access to an up to date list of age restrictions to the main AI tools.

Diversity, Non-discrimination and Fairness

AI intended for classroom use must be carefully reviewed and tested in advance to detect and mitigate inherent biases. Due diligence, both prior to and during deployment, is essential to ensure outputs are accurate and reliable.

As referred to under the Human Agency and Oversight heading, an AI model may be trained on a dataset comprising biased data that is not representative of certain groups in society. Therefore, it is vital that a teacher/school leader review and validate any AI-generated output to ensure it is accurate, appropriate and reliable.

12 Definition of personal data as set out in the GDPR (2018) means “any information relating to an identified or identifiable natural person; an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identify of that natural person

13 Data Protection Toolkit for Schools | Data Protection Commission]

Societal and Environmental Wellbeing

Every aspect of the AI life cycle consumes natural resources, including energy, water, and minerals. This increase in computing power, electricity and water consumption contributes to higher carbon emissions. While it is difficult to determine precisely how much energy AI systems consume, it's prudent for educators to reflect in an environmentally conscious way on whether resources or tools that do not use AI can achieve comparable objectives. If, following such reflections, an AI solution is deemed to optimise the opportunity for teaching and learning and school leadership, then when using GenAI, queries and prompts should be carefully considered to limit their number and optimise their output. A useful approach to prompting can be accessed here[14].

While the use of AI could positively impact students' social wellbeing and engagement, consideration must also be given to the potential negative impacts on their physical and mental health. The EU seeks to secure children's online rights. The Digital Services Act (2022) (DSA) requires digital platforms to prioritise children's safety and privacy and protect them from illegal content. Measures that must be put in place include age verification and not showing advertisements based on profiling of minors. The EU's Better Internet for Kids (BIK+)[15] strategy seeks to boost digital literacy, provide awareness raising material, information and educational resources, and create a safer internet environment for young people.

Accountability

Having clear, accessible, and regularly updated policies (such as Acceptable Use Policies) is fundamental to fostering accountability. These policies help all stakeholders understand their roles and the consequences of misuse, thereby promoting responsible AI use.

14 RASE Framework

15 https://better-internet-for-kids.europa.eu/en

Section 2:
AI in Schools

The Digital Learning Framework (DLF), is a strategic framework designed to guide schools in embedding digital technologies. It complements the *Looking at Our School Quality Framework* (2022)[16], acknowledging and respecting the professional agency and autonomy of teachers and school leaders in the use of digital technologies. Regarding AI, teachers and school leaders in many jurisdictions, including Ireland, are already using it in their professional practice.

AI applications can be used to support:

- teacher planning and preparation
- teaching and learning
- school leadership and management.

Current Uses of AI in Education

Current Uses of AI in Education

Whilst taking into account the considerations and requirements as set out in Section 1, AI can have the potential to support teachers and school leaders in many areas, some of which are set out below, with more detailed examples available on the AI in Schools Hub.

Teacher Planning and Preparation

Supporting Learning Design by:

- Assisting with curriculum and lesson planning
  Example: The Geography department is reviewing their literacy and numeracy actions. To support this process they use GenAI to brainstorm ideas on how to embed these skills into their schemes of work. As a department they discuss the usefulness of these ideas and agree actions.

16 https://www.dlplanning.ie

- Generating tailored teaching and learning resources
  Example: A second class teacher wants to make better use of the physical teaching resources available to them. They photograph items such as cubes, cylinders, and scales, and upload them to a GenAI tool. Using the Oide RASE prompt framework, they generate activity ideas that align these resources with curriculum outcomes. They review the ideas and adapt them for their context.
- Clarifying and unpacking learner outcomes
  Example: A science teacher uses an online quiz tool with built-in AI analytics to gauge students' (anonymised) understanding of a topic. The tool automatically generates insights and charts, highlighting which curriculum outcomes most students have mastered, and which require further teaching. The teacher uses this and other information to help identify gaps and adjust lesson planning.
- Streamlining and organising content
  Example: A fifth class teacher uses GenAI to generate images that accompany an Irish story from Dúchas.ie, with the goal of supporting learners' understanding of the text. The images are intended to provide visual support for engagement and comprehension.
- Scaffolding learning materials to meet diverse learner needs
  Example: A modern foreign languages teacher aims to assist students in composing short dialogues. The teacher utilises GenAI to produce model conversations at varying levels of complexity as well as sentence starters and vocabulary lists. The generated content is reviewed by the teacher for accuracy and appropriateness prior to being provided to students as support in developing their own dialogues.

Data Exploration: GenAI can assist with the systematic monitoring of performance data. Insights from this data can assist teachers and school leaders in their evidence-informed decision-making. Data privacy and regulations apply.

> *Example: As part of the formative feedback process, the teacher uses anonymised rubric scores aligned to clear learning intentions and success criteria. The GenAI tool processes the data to generate a summary of which criteria most students have mastered (Feed-Back) and which require further teaching (Feed-Forward). The teacher then uses this insight to inform their planning.*

Virtual assistants: GenAI can be deployed to produce initial drafts of reports, proposals, and correspondence, thereby streamlining administrative processes. In addition, its capacity to translate text across multiple languages enables more inclusive communication with parents, guardians, and other stakeholders, particularly those from diverse linguistic and cultural backgrounds.

> *Example: A teacher uses a GenAI tool to help draft an email communication to parents about an upcoming field trip. They then use a translation tool to convert the email into the home languages of all students. While the translation may not be perfect, it helps ensure that all parents can access the key information.*

Professional Development: GenAI can provide insights into emerging pedagogical strategies, evaluate teaching methodologies, and provide tailored feedback. When applied responsibly, these tools can complement existing professional development frameworks.

> *Example: A CPD coordinator has curated resources for a staff meeting on wellbeing. Based on these publicly available resources, they use GenAI to generate case-study-style scenarios for discussion. The coordinator reviews the scenarios for suitability, accuracy and alignment with key messages from these resources, before including them in the staff meeting.*

Teaching and Learning

Formative assessment practices: Gen AI can support teachers in unpacking learning outcomes, thereby enabling the clear articulation of learning intentions and the design of success criteria. In addition, AI tools can assist teachers in providing timely and personalised feedback to learners.

> *Example: In a brainstorming session, students provide individual ideas on a topic. GenAI is used to organise these inputs into categories and generates a visual mind map. The teacher then uses the mind map for questioning, group discussion, and connecting new material to existing knowledge.*

Personalised learning: GenAI can help teachers to design customised lessons and recommend resources that are responsive to individual learning needs. This may include interactive content, choice boards, visual stimuli, and differentiated reading materials that promote learner engagement and progression.

> *Example: A SEN teacher uses a GenAI tool to create reading passages on the same topic at different levels of complexity. After reviewing and adjusting the content as needed, the teacher provides these materials so that all students can engage with the material in a way that suits their learning needs.*

Inclusion: GenAI can support inclusive practices by tailoring tasks to better ensure that all learners are appropriately challenged and able to progress at their own pace. It can assist in implementing Universal Design for Learning (UDL) principles by offering multiple means of representation, expression, and engagement.

> *Example: A teacher uses GenAI to identify strategies for supporting a student on the Level Two Learning Programme (L2LP), ensuring they can achieve the intended learning outcomes. GenAI suggests differentiated activities and practical classroom supports tailored to the lesson and broad goals of the L2LP. The teacher reviews these outputs carefully, adapting them to the student's individual needs and school context before implementation.*

Teaching resources: GenAI can assist teachers in the process of producing a variety of teaching materials, including text summaries adapted to different reading abilities, texts that reflect diverse or opposing viewpoints, localised texts, writing examples across varied genres, and assessment tools such as quizzes aligned with the curriculum.

> *Example: A sixth class teacher wants to select challenging vocabulary from a chapter of a novel being studied in class. They use GenAI to generate vocabulary lists tailored to different abilities. The teacher selects the words they consider most appropriate from these lists and plans extension activities using them.*

School Leadership and Management

Planning: GenAI can assist in summarising documents and support interactive engagement which can help with school improvement planning and strategic planning.

> *Example: An Assistant Principal (AP) reviews the school's current mathematics equipment. They use GenAI to analyse this inventory alongside the Primary Mathematics Curriculum. This analysis reveals any gaps or additional resource needs, helping the AP determine the necessary resources and guide future spending decisions to support effective teaching and learning.*

Policy development and review: GenAI can assist with the drafting and review of school policies. It can provide summaries relating to policies, guidelines, and frameworks, streamlining

administrative processes while maintaining the integrity of governance and compliance.

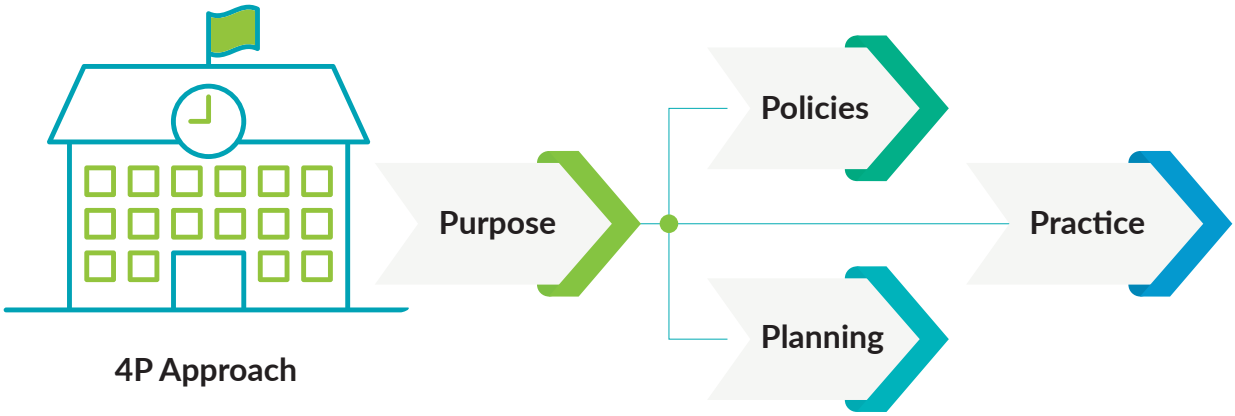
Example: A principal is reviewing a new publication relevant to their role. They use GenAI to create audio conversations in a podcast format, enabling a more accessible and efficient overview of the publication. This approach effectively primes them to engage with the full document independently and with greater understanding.

School Improvement Planning/DEIS action planning: GenAI can retrieve and process information from forms and documents. It can also support the design of data collection tools, such as focus group questions and surveys.

Example: A post-primary leadership team uses AI to develop a survey form for their school community to gather student and parent feedback on the topic of digital learning. This helps to identify trends and areas for improvement. The information gathered is used to inform the revision of the school's Digital Learning Plan.

Communication: GenAI can support communication with stakeholders by automating responses to common queries through chatbots or email filters and by assisting in the drafting of newsletters and reports.

Example: A principal collects updates from staff regarding school activities and events. GenAI assists in synthesising this information into a coherent and engaging newsletter draft. The principal subsequently reviews and revises the draft to ensure the tone reflects the school's ethos and highlights priorities relevant to the local community.



4P Approach

Some good practice videos can be found on the AI Hub.[17]

An AI Roadmap for Schools – 4P Approach

Oide TiE provides a comprehensive suite of resources to support teachers and school leaders in effectively integrating AI particularly GenAI. The Artificial Intelligence in Schools Hub offers an introductory online course, 'AI for Schools' that highlights key policies and considerations. Additional resources include support provided directly to schools through the school support

17 Good Practice Videos – Oide Technology in Education

18 AI in Schools Hub – Oide Technology in Education.

application process, an AI for Schools Video Series featuring expert insights and resources from Webwise including an updated Acceptable Usage Policy generator.[18]

If implementing AI technologies, schools may find the following 4P approach to be a practical and effective framework:

- **Purpose:** Teachers and school leaders should establish a clear purpose for using AI by identifying specific needs or challenges to address. This involves defining the desired outcomes and ensuring its use aligns with teaching and learning goals. This initial step is similar when considering the use of any digital technologies in school.
- **Planning:** All schools are required to have a digital learning plan as a condition of the grant scheme for ICT infrastructure. Schools should ensure that the implementation of AI aligns with this digital learning plan, which guides teachers and school leaders in embedding digital technologies. The digital learning framework provides a structure for this planning.
- **Policies:** Schools should ensure that current relevant policies explicitly address ethical, legal and operational considerations related to AI. As part of the planning process, existing ratified policies should be reviewed to identify potential overlaps or conflicts. Where gaps or inconsistencies exist, schools should work collaboratively to update policies to ensure responsible and effective implementation. A separate AI policy is not required.
- **Practice:** This sets out expectations for the practical use of AI in schools. The effective use of AI should aim to optimise student learning while ensuring alignment with the curriculum, safeguarding student wellbeing, and maintaining the central role of the teacher.

Purpose

All technologies, including AI, should be implemented with a clear purpose that directly supports teaching and learning and/or leadership and management. This purposeful integration should reflect the priorities identified in the digital learning plan, which articulates the school's vision for digital learning and outlines the current context and needs. The Digital Learning Planning Guidelines and a template for the Digital Learning Plan are available on the Oide TiE website.

Planning

As detailed in the Digital Strategy for Schools to 2027, schools are required to develop and implement their Digital Learning Plans and align their ICT grant expenditure. (DS P.43).

The Digital Learning Framework (DLF), supported by comprehensive Digital Learning Planning Guidelines, provides schools and teachers with a structure to support them in embedding digital technology in teaching, learning and assessment and creating their digital learning plan.[19] As part of the digital learning planning process, the following questions should assist if considering the use of AI.

- How could AI improve teaching and learning or leadership and management in our school?
- How could AI support school self evaluation and digital learning goals?
- How does our digital learning plan reflect the use of AI technologies?

19 DLPlanning.ie

- How will any changes to our digital learning plan align with whole-school planning and teaching and learning approaches in the school generally?
- What specific learner outcomes or learner experiences could be enhanced using AI technologies?
- What specific leadership and management areas could be enhanced using AI technologies?
- What potential risks and challenges may arise from implementing AI in the school? How will these risks be identified, managed, and mitigated?
- What expertise or experience in using AI for teaching and learning or leadership and management is available in our school?
- What digital technology-related advice, resources and support can we access?
- How will our AI usage integrate with existing systems?
- How will the ethical use of AI be approached, and how will we ensure that students understand and uphold ethical standards?
- How will parents and the wider school community be appropriately informed about the school's use of AI?
- How will we implement a structured process for ongoing monitoring and review of implementation?

Policy alignment

While some schools may wish to issue standalone AI guidance or develop a discrete policy, in addition to updating the digital learning plan, reviewing existing policies first can help identify overlaps, gaps, or conflicts that might arise with introducing AI-specific guidance. The following relevant mandatory and organisational policies should be reviewed to consider if they should be updated based on the use of AI in the school and further resources will be developed to support schools in this regard where relevant:

- **Privacy and Data Protection Policy:** This policy should ensure that all data collected and used by AI systems is handled in a manner that respects individual privacy and complies with data protection regulations. Further information on data protection and policy development is available in the Data Protection Commission's Toolkit for Schools.[20]
- **Acceptable Use Policy:** This policy should outline the ethical use of AI, including issues such as fairness, transparency, and accountability. A useful tool, the Webwise AUP generator, has been updated to incorporate AI in education and its use in the school environment.
- **Code of Behaviour:** This policy should be reviewed to ensure it reflects the ethical use of AI.
- **Bí Cineálta Policy to Prevent and Address Bullying Behaviour:**[21] This policy should be reviewed to address the potential misuse of AI technologies for bullying purposes. AI introduces unique safeguarding challenges. It can generate harmful deepfakes, fake images, or voices. It can make bullying more covert and widespread, with the ability to create large volumes of harmful content under fake identities.

20 Data Protection Toolkit for Schools | Data Protection Commission

21 Cineáltas: Action Plan on Bullying

Practice

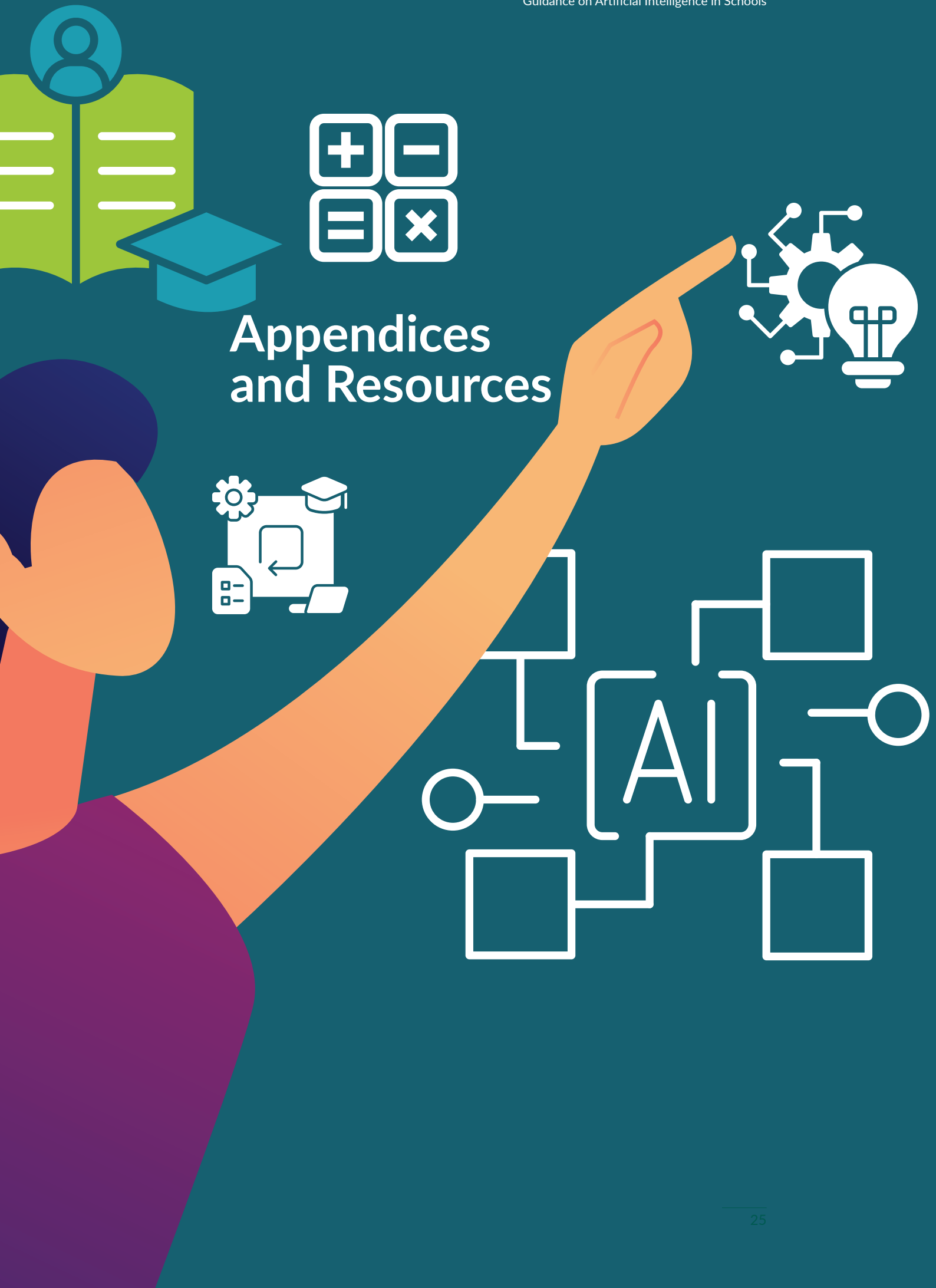
Before considering the use of AI, teachers and school leaders should consider the following key questions regarding practice.

- How would the use of AI support the learning outcomes of the curriculum/subject specification?
- How would the use of AI align with the methodologies used to achieve the learning outcomes in the curriculum/subject specification?
- How would AI support inclusion and increase access to the curriculum for all students?
- How would I ensure that potential risks such as bias, inaccuracies, or overreliance on AI are mitigated?
- How would AI literacy be promoted in teaching and learning?
- What supports do students need to use AI effectively and critically in their learning?
- How can I support students to analyse content generated by AI tools?
- How can I help students understand the limitations of AI tools?
- How would human decision-making when using AI be maintained?
- How would I ensure a critical stance when using AI?
- How would I ensure that AI use is reliable, fair, safe, and trustworthy?
- How would the impact of AI use be monitored and evaluated?
- How would I evaluate whether the use of AI has actually improved learning outcomes or classroom practice?

Conclusion

This guidance sets out the principles and key considerations for teachers and school leaders in the use of AI. It is designed to support teachers and school leaders in making informed decisions in the potential use of AI and safeguard against potential risks. Given that AI technologies are advancing rapidly, it is essential that school policies and practices remain flexible and responsive to these emerging developments. Although uncertainty surrounds the future of these developments, adherence to the principles outlined here will enable schools to realise the benefits of AI responsibly, ensuring its use is safe, ethical, and aligned with the rights and wellbeing of all members of the school community.

The publication of this guidance on AI marks an important step in a continuous process of review and reflection as the Department of Education and Youth and Oide Technology in Education explores and researches the role of AI in education. Findings from this work will inform the development of future supports and resources, ensuring their relevance and responsiveness. This document will be updated, providing schools with evolving guidance that reflects emerging evidence and practice.



Appendices and Resources

Appendix A: AI Terminology

This section provides definitions for common AI terminology.

Adaptive Learning: AI-powered adaptive learning platforms analyse student data, such as performance and learning pace. Based on this information, the system can provide personalised learning pathways for each student, offering appropriate content, resources, and activities.

Algorithm: Algorithms are the step-by-step list of instructions or rules that determine the actions taken by the AI system.

Bias: In the context of AI, bias refers to the assumptions made by an AI system in order to simplify the process of learning and performing the task(s) it was designed for. AI technologies tend to reproduce real-world prejudices or various kinds of research bias.

Chatbot: A chatbot is a software application that is designed to imitate human conversation through text or voice commands.

Data: Data are units of information about people or objects that can be used by AI technologies.

Deepfake: A deepfake is a piece of media, image, video or audio created by deep learning or other AI technology to misrepresent reality, for example, by showing someone doing or saying something that they did not do or say.

Deep Learning: Deep learning is a computational model that uses multiple layers of interconnected nodes, which are organised into hierarchical layers to perform data processing tasks.

AI Act (EU AI Act, 2024): Legislation enacted by the European Union to ensure that AI systems are used in a safe, transparent manner that is aligned with fundamental human rights. It categorises AI systems by risk levels and sets compliance principles accordingly.

Expert System: A computer system that emulates the decision-making ability of a human expert.

Explainability: The ability of an AI system or algorithm to provide understandable explanations or justifications, forced decisions, predictions or recommendations, particularly in the context of transparency and accountability.

GDPR (General Data Protection Regulation): European regulation governing data protection and privacy, critical for AI systems handling personal data.

Generative AI (GenAI): A type of AI designed to generate content, such as text, images, code, audio, video etc based on input data. Examples include AI chatbots, image generation tools, and content automation systems.

Hallucination: Hallucination refers to an incorrect response from an AI system or false information in an output that is presented as factual information.

Human Agency and Oversight: A principle ensuring human control and intervention in AI systems, prioritising ethical decision-making.

Intelligent Tutoring Systems: A computer system or digital learning environment that is designed to give instant and custom feedback to students. An intelligent tutoring system offers a learning environment that adapts to student's needs.

Large Language Model: A large language model (LLM) is an AI model trained on large amounts of text to understand language and generate humanlike text.

Machine Learning: This is where computers are taught to identify rules and patterns in data without a human specifying those rules and patterns. These algorithms build a model for decision-making.

Natural Language Processing: This is where computers understand and interpret human language.

Neural Networks: These are computational models inspired by the structure and functions of the human brain. They consist of layers of interconnected nodes (neurons) designed to process and learn patterns of data, make decisions and solve problems.

Personalised Learning: AI algorithms can analyse vast amounts of data, including a student's past performance, interests, and goals, to generate personalised recommendations for educational resources, books, articles, videos, and other learning materials.

Privacy and Data Governance: A principle focusing on protecting personal data, ensuring secure data handling and processing in compliance with regulations like GDPR.

Prompt: A prompt is an input that a user feeds to an AI system to get a desired result or output. The clearer and more detailed your prompt, the better the GenAI's response.

Recommendation Engine: A recommendation engine is a system that gives recommendations based on behaviour patterns and similarities to people who might have shared preferences.

Supervised Learning: Supervised learning is a type of machine learning in which classified output data is used to train the machine to predict outcomes in new situations.

Token: A small piece of text. Words or parts of words that the AI breaks inputs into. AI tools often have limits on how many tokens they can handle at once.

Transparency: The principle that AI systems are explainable, clear, and understandable to users and stakeholders.

Turing Test: The Turing test was created by computer scientist Alan Turing to evaluate a machine's ability to exhibit humanlike intelligence. The key idea behind the Turing Test is that if a machine can convincingly simulate humanlike conversation to the point where an observer cannot consistently tell the machine apart from a human, then it can be considered to possess a form of artificial intelligence (AI) or humanlike intelligence.

Appendix B: Oide TiE Resources

Oide TiE provides comprehensive support for teachers and school leaders on the use of AI, particularly Gen AI in education. A dedicated hub, Artificial Intelligence in Schools, provides access to resources.

Notable among the resources mentioned is a self-paced, introductory online course, 'AI for Schools'. This course helps teachers and school leaders understand AI, highlighting key policy documents and ethical considerations as outlined in the Digital Strategy for Schools to 2027.

Resources also include:

1. Bespoke school support: this is where a digital technologies team professional learning leader provides support tailored to the specific needs of each school, focusing on the use of AI in teaching and learning.
2. AI for Schools Video Series: this is a series of interviews with experts on the topic of AI in the Irish and European education context.
3. Webwise resources for online safety and AI.
4. Webwise AUP Generator: this has been updated, providing 21 statements that guide the appropriate use of AI tools in your school.
5. Artificial Intelligence: Five Considerations for Teacher Use Infographic: a concise guide to support responsible, effective, and inclusive integration of AI into teachers' practice.
6. The RASE Prompt Framework for Implementing AI in Teaching: a practical resource designed to help educators craft clear, effective prompts for interacting with GenAI tools.
7. Resources on Scoilnet Resources: Collections from teachers showcasing examples of classroom activities that integrate generative AI.

Appendix C:
Ethical guidelines on the use of artificial intelligence (AI) and data in teaching and learning for educators

These guidelines are designed to help educators understand the potential that the applications of AI and data usage can have in education and to raise awareness of the possible risks so that they can engage positively, critically and ethically with AI systems and exploit their full potential.

Guidance on Trustworthy AI for Educators and School Leaders

The key requirements for Trustworthy AI, as recommended by the Ethical Guidelines, are:

1 **Human Agency and Oversight including fundamental rights, children's rights, human agency, and human oversight.**

Recommended guiding questions for educators under this requirement are:

- Is the teacher's role clearly defined to ensure that there is a teacher in the loop while the AI system is being used?
- Are the decisions that impact students conducted with teacher agency, and is the teacher able to notice anomalies or possible discrimination?
- Are there monitoring systems in place to prevent overconfidence in or overreliance on the AI system?

2 **Transparency including traceability, explainability and communication.**

- Recommended guiding questions for educators under this requirement are:
- Are teachers and school leaders aware of the AI methods and features being utilised by the system?
- Do teachers and school leaders understand how specific assessment or personalisation algorithms work within the AI system?
- Are the instructions and information accessible and presented in a way that is clear both for teachers and learners?

3 **Diversity, non-discrimination and fairness including accessibility, universal design, the avoidance of unfair bias, and stakeholder participation.**

Recommended guiding questions for educators under this requirement are:

- Is the system accessible to everyone in the same way without any barriers?

- Are there procedures in place to ensure that AI use will not lead to discrimination or unfair behaviour for all users?
- Does the AI system documentation or its training process provide insight into potential bias in the data?

4 **Societal and Environmental Well-being including sustainability and environmental friendliness, social impact, society, and democracy.**

Recommended guiding questions for educators under this requirement are:

- How does the AI system affect the social and emotional well-being of learners and teachers?
- Are students or their parents involved in the decision to use the AI system and support it?
- Does use of the system create any harm or fear for individuals or for society?

5 **Privacy and data governance including respect for privacy, quality and integrity of data, and access to data.**

Recommended guiding questions for educators under this requirement are:

- Are there mechanisms to ensure that sensitive data is kept anonymous? Are there procedures in place to limit access to the data only to those who need it?
- Are learners and teachers informed about what happens with their data, how it is used and for what purposes?
- Does the AI system comply with General Data Protection Regulation?

6 **Technical robustness and safety including resilience to attack, security and general safety, accuracy, reliability, and reproducibility.**

Recommended guiding questions for educators under this requirement are:

- Is there sufficient security in place to protect against data breaches?
- Are the appropriate oversight mechanisms in place for data collection, storage, processing, minimisation and use?

7 **Accountability including auditability, minimisation and reporting of negative impact, trade-offs, and redress.**

Recommended guiding questions for educators under this requirement are:

- Who is responsible and accountable for final decisions made regarding the procurement and implementation of the AI system?
- Who is responsible for the ongoing monitoring of results produced by the AI system and how the results are being used to enhance teaching, learning and assessment?
- How is the effectiveness and impact of the AI system being evaluated and how does this evaluation consider key values of education?

Appendix D:
Brief history and evolution of AI (Article written for Webwise)

While few topics have captured the collective attention and ignited as much curiosity as Artificial Intelligence, AI has, believe it or not, been a real part of daily routines for 30 years now. This fact often surprises many, but washing machines and other domestic appliances with 'Fuzzy Logic' intelligence emerged from Japan in the 1980s, and the mass embrace of the Internet from the mid-1990s lead to an information explosion that required AI to tame the masses of data.

As a result, the most prominent examples of AI in our daily lives are probably internet search and product recommendations. Indeed, the best of 1990s AI search research led to the now ubiquitous web search experiences of Google and Bing. While the suggestions delivered to you by Netflix, YouTube, Amazon, and even your social media feeds, come from Recommender Systems AI research that was prominent in the early 2000s.

Other every-day applications of data-driven AI are the speech recogniser running on your mobile phone, or the grammar-hints provided in Microsoft Word. All these tools were once bleeding-edge AI research domains, but their mainstream acceptance has, by definition, normalised them.

The last three years have however seen advances in self driving AI and generative AI that make us again question what AI is, and ask what its impact will be on society, education, and the future of work.[22]

Written by **Robert Ross**, Adapt Centre

22 Robert Ross, Adapt Centre, Guest Article 'AI Explained – what is AI?'

Appendix E: Regulations, Policies, Reports and Frameworks

The EU Artificial Intelligence (AI) Act

The EU Artificial Intelligence (AI) Act is an EU regulation which entered into force on 2 August 2024 and is directly applicable across the EU. The regulation is designed to provide a high level of protection to people's health, safety and fundamental rights and to promote the adoption of human-centric, trustworthy AI. It will provide a harmonised regulatory framework for AI systems placed on the market, or deployed, in the EU.

Ireland's National AI Strategy AI – Here for Good (Refresh 2024)

The National AI Strategy serves as a roadmap for how Ireland can leverage the potential of AI for unlocking productivity, for addressing societal challenges, and for delivering public services. It envisions a future for Ireland as an international leader in using AI to the benefit of business, public services, and – most importantly – for people, through a people-centred, ethical approach to AI development, adoption and use.

Guidance for generative AI in education and research – UNESCO

This global guidance on GenAI in education aims to support countries to implement immediate actions, plan long-term policies and develop human capacity to ensure a human-centred vision of these new technologies.

AI competency framework for teachers – UNESCO

Guiding teachers on artificial intelligence (AI) use and misuse in education, this publication defines the knowledge, skills, and values teachers must master in the age of AI.

AI competency framework for students – UNESCO

This publication aims to help educators integrating artificial intelligence learning objectives into official school curricula to prepare students to be responsible and creative citizens in the era of AI.

AILitFramework_ReviewDraft.pdf

This draft EU and OECD AI Literacy framework is designed for teachers, education leaders, education policymakers, and learning designers. It outlines competences and learning scenarios to inform learning materials, standards, school-wide initiatives, and responsible AI policies for primary and secondary education settings.

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