New Era: How Artificial Intelligence (AI) is Supporting Teaching and Learning

The opportunities and challenges of AI in schools and PRUs in Wales and how leaders should respond

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Publications Section
Estyn
Anchor Court
Keen Road
Cardiff
CF24 5JW or by email to publications@estyn.gov.wales

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Executive summary

This thematic report explores how artificial intelligence (AI), and generative AI (GenAI) in particular, is currently being implemented and its emerging impact in schools and pupil referral units (PRUs) across Wales. The evidence base includes visits to a broad range of schools, conversations with school leaders, teaching staff, and pupils, as well as an extensive survey of staff in schools and PRUs. The report aims to help schools and policymakers understand and address the opportunities and challenges of AI and to provide real-world examples of effective engagement.

The report concludes that a coherent national approach is necessary to ensure the security of data and maximise the potential of AI to support teaching and learning, inclusion and effective leadership in schools and PRUs in Wales, and to mitigate the challenges and risks. This includes clear national guidance and support frameworks alongside structured professional learning. These will be crucial in ensuring that AI enhances teaching and learning: sustainably, equitably, safely and ethically.

Overall, many schools are still in the early stages of exploring AI. In most cases, initial use is driven by individual staff members who have an interest in digital innovation and see the potential benefits of AI on their professional practice. However, a few schools have begun embedding AI strategically within their broader digital strategies and school improvement plans, demonstrating clearly how AI can effectively support teaching and learning and school leadership and management. At present, schools are largely exploring the potential and challenges of AI independently and with limited support and collaboration within and across Wales' 22 local authorities.

Teachers across the sectors included in this review consistently reported substantial workload reductions resulting from AI use, notably in areas such as lesson planning, resource creation, differentiation of learning materials, and report writing. For example, teachers describe how AI-generated scaffolds, worksheets, and creative prompts enable them to focus more on the quality and personalisation of their teaching. In many cases, teachers note how AI allows them to produce better quality resources that are more closely linked to the needs and interests of pupils. Staff in special schools and PRUs particularly highlight the benefits of AI-generated communication stories and bespoke literacy pathways, which enhance engagement and inclusivity for pupils with complex additional learning needs. **Crucially, where the use of AI is proving most beneficial, it is within the context of a clear understanding of effective pedagogy and child development.** However, teachers also highlight concerns that an overreliance on AI could deskill less experienced teachers, for example in ensuring that lessons and activities are

well-linked to the next steps in pupils' learning. Digital innovations in education rarely succeed without a clear focus and reflection on the impact on pupils.

Pupils show interest in the creative opportunities provided by age-appropriate AI tools, especially in primary and special schools. Engagement is strongest when pupils participate in collaborative, creative projects such as digital storytelling, podcasting, and visual arts. At secondary level, pupils use AI effectively for independent learning, including summarising revision notes and generating personalised quiz questions. However, many secondary teachers expressed concerns about potential over-reliance on AI, stressing the need to guide pupils in critical, ethical use of these tools. Leaders stressed the necessity to adhere to malpractice guidance regarding the use of AI in assessments leading to qualifications.

A few schools have integrated AI into their assessment, feedback, and reporting policies. Where this occurs, it is often through individual experimentation rather than strategic planning. Teachers using AI in assessment contexts find it promising for formative feedback and summarising assessment data but consistently emphasise the necessity for professional scrutiny to ensure accuracy and fairness. Some schools have begun using AI to draft letters and pupil reports, substantially reducing administrative workloads, freeing up staff time for more strategic and pupil-focused activities.

Schools increasingly recognise AI's potential to support equity and inclusion, especially for pupils from disadvantaged backgrounds or with additional learning needs. However, there is also the risk of a digital divide, as pupils who can afford paid-for AI tools may gain advantages that others cannot. Despite the potential benefits of AI, schools also identify challenges including limited digital confidence among staff, uneven access to training, ethical concerns around AI bias, and safeguarding and data protection issues. Staff highlight the need for clear guidelines, structured professional learning, and a national approach to ethical AI use.

Strategic leadership in a minority of schools has driven successful AI implementation through comprehensive professional learning and clear policies. In a few cases, collaborative cluster-based professional learning has proven effective in developing staff confidence and a unified approach. In many schools, professional learning around the use of AI has been limited to the informal sharing of practice. While this is beneficial, it has not substantially improved staff confidence compared to strategically driven professional learning programmes.

AI is being used effectively in school administration to streamline routine tasks, such as drafting letters to parents, summarising reports and the creation of new school policies. A few schools have introduced robust procedures to ensure data protection and compliance with General Data Protection Regulation (GDPR) requirements. Overall, however, too many

schools that have begun to explore the use of AI remain unclear of their statutory duties regarding the protection of personal data.

In Wales, the Hwb platform and Digital Competence Framework (DCF) have underpinned efforts to embed digital learning and equity since 2012, with recent Welsh Government guidance and training materials further supporting schools, practitioners, and parents to address the opportunities and challenges of AI.

Introduction

In response to the rapid growth of artificial intelligence (AI) and generative AI (GenAI) in particular, Estyn undertook a thematic review at the request of the Welsh Government to explore the engagement of schools and PRUs in Wales. The review aimed to identify how providers are using these tools in practice, the benefits and challenges they have encountered, and how schools are developing the knowledge and confidence of staff and pupils. It also sought to identify examples of effective practice and offer insights to inform future policy and professional learning.

To inform the review, we administered a national survey to schools and PRUs. The survey collected both quantitative and qualitative responses from over 300 practitioners across Wales. This provided a valuable insight into staff confidence, professional learning needs, and the range of AI uses being trialled in schools. The detailed outcomes of this survey can be found on page 32 of this report.

Following the conclusion of the survey, inspectors visited a total of 21 schools across Wales, selected due to their use of AI[1]. These visits included primary, secondary, all-age and special schools, and involved meetings with leaders, teachers, support staff, and pupils. Inspectors looked at pupils' work, reviewed documentation, and explored how schools are using GenAI to support teaching, learning, administration and school improvement.

Further details on the methodology are provided in the Methods and Evidence Base section later in the report.

We outline Estyn's guiding principles, our position on key considerations relating to AI and its impact on our work in our Ambitions for AI document.

The examples of effective practice included in this report are intended to illustrate how some schools are currently using AI. Inclusion of these examples does not imply that Estyn has assessed or verified the practices for data protection compliance. Providers should ensure that any use of AI complies with relevant legal and regulatory requirements. Similarly, mention of specific AI tools and platforms does not represent an endorsement by Estyn.

[1] At the end of the survey, the respondents were asked to provide details on the use of AI in their setting to inform case studies. Some visits were to providers where recent inspection had shown interesting use of AI.

Background

The rapid development of AI, particularly GenAI, is increasingly influencing many aspects of daily life, including education. Since the public release of widely used tools such as ChatGPT, Microsoft Copilot, DALL·E, and Adobe Firefly, schools and education systems worldwide have begun exploring how GenAI might enhance teaching and learning, reduce workload, and support pupils. At the same time, these developments have raised important questions around ethics, safety, data protection, and the nature of learning in the future.

To inform and guide this thematic review, we undertook an analysis of the growing body of national and international literature on AI in education. This included academic studies, government and policy briefings, and practitioner-focused projects. Key examples include United Nations Educational, Scientific and Cultural Organization's (UNESCO) guidance on the ethical use of AI (UNESCO, 2022), the Education Endowment Foundation's (EEF) trial of ChatGPT in lesson planning (EEF, 2024), and the UK Parliament's briefings on AI in schools. We have included links to a selection of these sources on page 55.[2]

Recent data suggests that pupils are engaging with AI tools in diverse ways. Ofcom's Online Nation 2024 report found that over half (54%) of children aged 8–15 had used GenAI in the past year, with usage rising to 66% among those aged 13–15. ChatGPT and Snapchat's My AI were the most commonly used tools (Ofcom, 2024). While most pupils used AI for entertainment, over half also used it to support schoolwork. Despite this high level of use, there was considerable variability in the extent to which children trusted or questioned the information provided by GenAI tools, reinforcing the need for schools to develop pupils' digital literacy and critical thinking skills and their ability to use AI critically and wisely.

This thematic review took place during a period of rapid technological innovation and evolving policy. International organisations such as the Organisation for Economic Co-operation and Development (OECD), UNESCO, and the Alan Turing Institute have highlighted both the potential and risks of AI in education (OECD, 2021; UNESCO, 2023; Alan Turing, no date). While many researchers and practitioners emphasise AI's capacity to support more personalised, inclusive, and efficient teaching, there is strong consensus that this must be underpinned by professional expertise, ethical oversight,

[2] This is a fast-moving area of development. We undertook a further literature search following the fieldwork stage of the review. Ofsted's (2025) report on early adopters of AI in education provides insight into how they have navigated the challenges of AI and their perceptions of the benefits. The DfE (2025) published a policy paper: Generative artificial intelligence (AI) in education - GOV.UK.

and clear guidance. Reviews such as the Ada Lovelace Institute's A Learning Curve? (2025) and the UK Parliamentary Office of Science and Technology's 2024 briefings underscore the importance of investing in infrastructure, policy, and professional learning to support responsible implementation.

This report aims to help schools, policymakers, and the inspectorate in Wales to navigate the opportunities and challenges that AI presents. It offers an evidence-informed overview of current practice, highlights areas for development, and provides real-world examples to support strategic planning and professional dialogue. By focusing on pedagogy, leadership, ethics, and pupil safety, the report seeks to help ensure that the use of AI in Welsh education enhances experiences and outcomes for all pupils.

What is artificial intelligence (AI)?

In its Explanatory memorandum on the updated OECD definition of an ai system (OECD 2024), the OECD defines artificial intelligence as:

> 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 (page 4).

In simpler terms:

- AI is a computer system designed to achieve certain goals or tasks by mimicking the abilities of people.
- It uses the information it receives to work out what to do, for example to predict, recommend, or create something.
- Its actions can affect the world around it, either digitally or in real life.
- AI systems can vary in how much they can work independently or learn and adapt over time.

What is generative AI (GenAI)?

Generative AI (GenAI) is one of the most frequent applications of AI in education. The OECD defines GenAI as "A category of AI that can create new content such as text, images, videos, and music."

In this report, we use the term 'AI' to refer broadly to all forms of artificial intelligence, including generative AI (GenAI). When we are referring specifically to generative AI

applications or issues, we use the term 'GenAI'. Examples of what GenAI in education looks like include:

Teaching and learning

- Generate differentiated learning materials tailored to pupil needs
- Create model answers or WAGOLLs (What A Good One Looks Like)
- Provide writing scaffolds or prompts to support literacy
- Develop quizzes, comprehension questions, and revision resources
- Generate images or visual prompts to support creativity and understanding
- Assist pupils in structuring written assignments or projects
- Translate content for pupils with English as an additional language (EAL)
- Help pupils summarise research or revise key concepts

Planning and assessment

- Design lessons aligned to Curriculum for Wales
- Create schemes of work and long-term curriculum maps
- Support with marking by suggesting feedback phrasing or criteria-based comments
- Generate reading materials at varied complexity levels
- Summarise pupil assessment information into clear reports

Leadership and management

- Draft school policies, governor reports, or improvement plans
- Automate routine communications such as letters to parents or newsletter items
- Assist in analysing self-evaluation information and presenting findings
- Generate funding bids or grant applications
- Prepare training materials or presentations
- Summarise education research or policy updates
- Suggest classroom strategies linked to pedagogical goals

Pupil use and engagement

- Enable pupils to experiment with digital storytelling, art, and music
- Support oracy by generating debate questions or role-play scenarios
- Help pupils plan revision schedules or summarise learning
- Encourage critical thinking by comparing AI-generated content with human work

The Welsh context

The Hwb platform was launched by the Welsh Government in 2012 to support digital learning and teaching across Wales. It provides free access to a wide range of digital tools, resources, and cloud-based services for all maintained schools. Hwb has played a

role in enabling schools to embed digital technology in the curriculum and in everyday classroom practice. Alongside Hwb, the Digital Competence Framework (DCF) was introduced in 2016 as a cross-curricular framework designed to develop pupils' digital skills in areas such as citizenship, collaboration, creativity, and computational thinking. Together, Hwb and the DCF have formed the foundation for promoting digital innovation and improving digital equity in education across Wales.

The Welsh Government has published several relevant guidance documents to support schools in addressing the challenges of AI, including:

Generative artificial intelligence in education – Hwb (Welsh Government 2025)

Generative AI: keeping learners safe online – Hwb (Welsh Government 2025)

Generative AI: guide for parents and carers – Hwb (Welsh Government 2025)

In addition, Welsh Government has worked with external organisations to develop training materials about AI, including:

AI foundations: training module for education practitioners (Welsh Government and Common Sense Education 2024)

Recommendations

R1 Develop national guidance on the strategic implementation of AI in education

The Welsh Government should:

- Provide schools and PRUs with clear, up-to-date guidance on the strategic implementation of the ethical, safe, and inclusive use of AI
- Support this national guidance with model policies, templates, and practical tools to help schools/PRUs develop consistent, compliant approaches to AI use

Local authorities and school improvement services should:

- Support school/PRU leaders in implementing national guidance and embedding AI into digital strategies and improvement plans that align with their overall priorities

Schools and PRUs should:

- Use national guidance to build on local authority support to develop whole-school approaches to the safe, ethical, and inclusive use of AI
- Involve staff, governors, pupils and parents in shaping expectations and practice around the use of AI
- Integrate AI into school improvement planning and digital strategies where there is clear value, aligning with broader aims for teaching, learning and well-being

R2 Ensure high-quality professional learning on AI

Through the National Professional Learning and Leadership Education Wales Body, the Welsh Government should:

- Build on the widespread use of the Hwb platform and the availability of common AI tools across Wales, to co-ordinate a national programme of professional learning and enquiry on AI
- Ensure that the national programme of professional learning on AI supports effective pedagogy and aligns with data protection and safeguarding principles

Local authorities and school improvement services should:

- Deliver the national programme of professional learning on AI and support schools/PRUs to apply it to their context

- Facilitate collaboration and peer support for improvement through AI-focused networks and professional learning communities
- Integrate the use of AI into wider professional learning opportunities to support all aspects of school improvement

Schools and PRUs should:

- Include AI as a focus in their own professional learning programmes, enabling staff to explore how AI can support teaching, learning and school improvement
- Encourage reflective practice on the appropriate use of AI tools to support effective teaching and learning

Initial Teacher Education providers should:

- Prepare student teachers to use AI to support their professional practice and develop their ability to prepare pupils to engage with AI safely, ethically and critically

R3 Ensure that the curriculum provides pupils with the digital literacy skills to engage ethically and critically with AI

The Welsh Government should:

- Update the Digital Competence Framework (DCF) to incorporate AI-related digital literacy, including critical evaluation, ethical understanding and developmentally appropriate guidance for pupils

Local authorities and school improvement services should:

- Provide guidance and examples to support the teaching of AI-related digital literacy across the curriculum, aligned with the updated DCF

Schools and PRUs should:

- Implement the requirements of the DCF to teach pupils the risks, challenges and benefits of AI in education and society
- Use AI tools in teaching and learning only where there is clear evidence of a positive impact on pupils' progress and well-being
- Ensure that pupils develop an understanding of the importance of referencing AI use, its impact on academic integrity, and its potential to limit critical thinking when misused

To address these recommendations effectively, the Welsh Government should establish clear lines of governance and accountability, including a single point of contact with overall responsibility for their implementation. This individual or team should co-ordinate the work of relevant departments within the Welsh Government and external bodies such as Estyn, ensuring a coherent and aligned approach. It will also be important to work closely with the Welsh Government's newly established Strategic Artificial Intelligence Advisory Group to ensure that actions align with national priorities for the development and use of AI. Given the unique and fast-moving challenges presented by the rapid rise of AI, it is essential that these actions are implemented with urgency. Welsh Government should also put in place robust mechanisms to monitor and measure the progress and effectiveness of their response, maintaining a clear and consistent focus on the impact of their actions on learners and the education system.

AI in the Classroom: Impact on Teaching, Learning and Well-being

How AI is being used in practice

Most of the schools and PRUs we visited were in the early stages of exploring the benefits of AI, with pockets of experimentation led by digitally confident and curious staff. Overall, many staff we spoke to, as well as those who completed our survey, were excited by the potential of AI but wary of its use. In a few of the schools we visited, AI tools were well integrated into teaching, learning and school administration, but in most cases engagement was limited to early-stage experimentation by a small number of staff.

> *"I'm very curious but cautious—I worry about pupils becoming overly reliant on AI or receiving inaccurate information" – survey response*

The most used platforms included ChatGPT, Copilot, Adobe Express, Canva, and other education specific AI platforms. Teachers reported using these tools to support lesson planning, create differentiated resources, translate text for Welsh-medium delivery, and generate ideas for learning activities. They noted how AI often provides a useful starting point that they can use their professional judgement, knowledge and experience to mould into useable resources and lesson ideas. Where staff were engaging in the use of AI to support their professional practice, they recognised the need to edit and improve AI outputs to make them appropriate for their intended use.

In several schools, digital leads or senior leaders had modelled potential uses of AI and supported informal professional learning sessions. Often, more digitally confident staff shared their knowledge and experience of AI with colleagues on an informal basis. A few schools were developing strategic approaches to integrating AI ethically and purposefully into their work, involving input from staff and pupils. However, in most cases, AI adoption was ad hoc, and usage varied considerably between individuals, phases of learning and departments.

Embedding the use of AI to support teaching and learning

Heronsbridge Special School has embedded AI strategically and inclusively, aligning it with their broader digital vision and culture of enquiry. The school implemented a phased approach, starting with an exploration of AI's potential by a few staff, then extending to wider staff training and the development of whole school policies and guidance. Leaders consider AI integral to teaching and learning. They have a robust AI policy that is integrated within their wider digital safety guidelines, backed by strict

access protocols and bespoke internal filtering. Professional learning around AI is a core strength and has included twilight training, INSET workshops, and peer coaching.

As a result of the careful integration of AI, teachers note significant workload reductions. Staff feel empowered by the creative possibilities of AI and pupils show increased engagement, motivation, and independence when using tailored, AI-generated resources. Leaders have addressed challenges around staff confidence, filtering restrictions, and ethical practice through targeted training and clear guidance. Leaders emphasise that the successful integration of AI to support teaching and learning, relies on the creativity of teachers and the inclusion of pupil voice.

Use by pupils was highly variable across the phases of learning and sectors but was far more evident among older pupils. In those primary schools that were already engaged in the use of AI by pupils, this often took the form of image creation to support pupils' literacy or numeracy skills. For example, in one school, pupils used digital microscopes to identify fractals in nature and then used age-appropriate AI tools to create images of gardens that contained fractals as part of the design.

AI was also being used by secondary pupils to summarise revision notes, create quiz questions tailored to exam content, and experiment with generative tools as part of their computer science and creative media studies. They used it to conduct research, help structure written assignments and generate and debug their own code. Pupils in some schools showed increasing independence in using AI to refine their work and reported that it helps them work more efficiently and stay motivated, particularly during exam preparation.

A few Welsh-medium schools noted the benefit of using AI to broaden access to resources by using AI to assist with translation. They also expressed the need to check the outputs carefully to ensure that they accurately reflect Welsh linguistic and cultural contexts.

It is worth noting that the response to our survey was heavily weighted towards English-medium schools with a smaller response from Welsh-medium providers. This points to the potential need for further development and support for the use of AI by Welsh-medium providers to ensure equitable access and benefit across language settings.

Impact on teaching and learning

Teachers consistently reported that one of the main benefits of AI is the time saved in preparing and adapting learning materials. In early-adopter schools where teachers had fully embraced the use of AI, they frequently reported a beneficial impact on their workload. Many described how it assists lesson planning, allowing them to focus on the quality of their teaching and refining content to meet the needs and interests of their

pupils. AI was frequently used to generate scaffolds, worksheets, creative writing prompts, or thematic planning ideas. It also supported the differentiation of resources to suit a wide range of abilities.

"Instead of writing a WAGOLL for half an hour, AI can do that for me in three minutes." – Survey response

"Saves a lot of time planning, makes quick cross curricular links that maybe I wouldn't have initially thought of" – Survey response

Some practitioners explained how they use AI to quickly differentiate learning resources for mixed-ability groups or to ensure that reading materials are appropriate for pupils' literacy levels. Others used AI to create questions aligned with success criteria or to adapt content for specific curriculum areas.

In special schools and primary settings, staff used AI-generated visual prompts to aid understanding and spark discussion, particularly for pupils with specific learning needs or limited verbal communication. In one school, teachers used AI to create personalised resources such as communications stories and literacy pathways for pupils with particular needs, such as Profound and Multiple Learning Difficulties (PMLD) and Autism Spectrum Condition (ASC).

Supporting pupils and reducing workload through AI

At **Ysgol Y Deri Special School**, staff use AI purposefully to meet the diverse needs of pupils and reduce workload. In a PMLD class, a teacher uses AI to generate communication stories and specialist software to create personalised images, enabling pupils to see themselves reflected in the learning materials. This approach helps to increase engagement and inclusivity. Senior leaders also use AI effectively to support administrative and planning tasks. The headteacher employs speech-to-text software to streamline documentation during professional development meetings, while the Individual Development Plan (IDP) manager uses AI tools to generate tailored learning plans based on individual pupil needs. These practices have improved the quality of provision and substantially reduced workload. Staff reflect that the use of AI is most effective when it supports creativity, improves efficiency, and enhances the learning experience for pupils with complex needs.

Where schools used AI most effectively, they recognised the need to maintain a clear focus on the quality of teaching and its impact on pupils' progress and well-being. In these schools, leaders and staff did not view AI as a replacement for effective teaching, but as a tool to support and enhance it. Leaders and teachers ensured that they underpin the use of AI with sound pedagogical principles aligned with clear curriculum goals. Staff used AI to generate ideas, draft resources or support assessment, but always applied professional

judgement to adapt and refine outputs to meet the specific needs of their pupils. Teachers reported that this helps them to plan more efficiently and create more personalised, engaging learning experiences, particularly for pupils with additional learning needs.

> *"I use AI to help me plan learning activities that meet the needs and interests of pupils, but I don't use it to create worksheets. It's important that these pupils learn through authentic, hands-on experiences not sitting at desks with pen and paper – they need to be learning through play, going outside and getting muddy!" – nursery practitioner*

Effective practice includes encouraging pupils to engage critically with AI, for example by questioning its accuracy or comparing its outputs with other sources. This supports the development of independent learning and digital literacy. Leaders play a key role in setting expectations for the ethical and purposeful use of AI, and in ensuring that staff have the confidence and guidance to use it appropriately. Where schools retain a strong focus on the quality of teaching and learning, pupils benefit from more inclusive, responsive teaching that supports their progress and well-being. Despite growing enthusiasm for the use of AI to aid lesson planning and the creation of resources, few schools in our sample had taken a whole-school strategic approach to the integration of AI to support effective teaching and learning.

While the primary focus of AI use to date has been on easing workload and improving the efficiency of planning and resourcing, schools were beginning to recognise its potential to enrich the learning experience itself. In settings where teachers used AI creatively and thoughtfully, pupils benefited from more personalised and engaging content. The next section explores how these approaches are influencing pupil engagement, motivation, and outcomes across a range of settings and phases.

Learner engagement and outcomes

Pupils across phases and sectors showed a high level of interest in AI and the use of generative AI tools to support their learning and interests. Engagement was particularly strong where staff provided opportunities for pupils to use AI in creative, collaborative projects such as podcasting, digital storytelling, or visual art. For example, primary pupils have used age-appropriate AI tools to generate songs for class assemblies, design posters for enterprise activities, and create voiceovers for historical characters in thematic work. In some cases, pupils have developed class calendars or contributed to group presentations using AI tools. Several primary schools noted that pupils are motivated by the novelty and the ability to personalise outputs, especially when AI enables them to express their ideas visually or through storytelling in ways that were previously difficult. Pupils also enjoyed experimenting with prompts and refining outputs, which can support their independence and critical thinking.

"We write sentences about dragons or princesses to say what they look like and then change them to make the pictures better." – Year 2 pupil

Teachers highlighted improvements in oracy, digital skills and critical thinking when pupils worked together to evaluate AI outputs or engage in structured debates. In one school, Year 6 pupils scripted and recorded podcasts exploring the question of whether AI could replace humans. This helped pupils to begin to develop a sound understanding of the opportunities, limitations and risks of AI.

Developing pupils' understanding of potential, challenges and risks of AI

At **Ysgol Cei Newydd**, pupils are developing a mature and reflective understanding of the benefits and limitations of AI. Teachers, particularly in the older classes, plan thoughtful lessons that incorporate AI as both a learning tool and a stimulus for critical thinking. Through these lessons, pupils learn not only how to use AI tools like Adobe Express, but also how to evaluate their outputs with a questioning mindset.

Pupils articulate both the advantages and risks of using AI. For example, they describe how AI can help "generate information without you doing the work", but also acknowledge that "it doesn't always get things right". During a topic on VE Day, pupils questioned a misleading AI-generated statement and independently sought more reliable sources to verify the information, demonstrating strong digital literacy and a critical approach to technology use.

Teachers regularly discuss online safety and ethical AI use with pupils, including the importance of not sharing personal data and recognising bias. As a result, pupils are confident in identifying potential inaccuracies and reflect on the quality of AI-generated work. They view AI as a helpful tool, but not a replacement, for their own thinking, research, and creativity.

Pupils in secondary settings used GenAI to summarise revision notes, generate quiz questions, and support project planning. They reported that these tools help them organise their learning more effectively and revise with greater independence. In some cases, pupils used AI to convert class notes into simplified summaries or flashcards, and to create personalised revision materials tailored to specific exam topics. Others used AI to generate exam-style questions or practice tasks, which they then shared with peers as part of collaborative study. Teachers noted that some pupils, particularly in key stage 4 and post-16, were more motivated to engage in independent learning when supported by AI tools. Although pupil use is developing, early examples suggest that AI can help pupils to take more ownership of their learning, particularly when combined with guidance on how to use these tools critically and ethically. However, a few secondary teachers raised concerns about pupils' over-reliance on AI and the integrity of their usage. Some pupils had submitted work partially or fully generated by AI without

understanding the content or referencing its use. Many secondary teachers who responded to the survey expressed concern that pupils' use of AI may negatively affect their independence or critical thinking, particularly when AI is used to complete tasks without sufficient understanding or reflection. Teachers raised particular concerns around the growing use of 'humanisers' by pupils to refine AI-generated text so that it better matches their personal writing style, improves readability, or avoids detection by AI-content checkers.

"You can ask it to write your work for you but then you won't learn anything." – Year 10 pupil

In a few cases, secondary school staff were beginning to teach pupils how to use AI tools responsibly and critically. Where this was effective, teachers provided guidance on evaluating the reliability of AI-generated content and promote ethical use, particularly in relation to plagiarism and examination malpractice. In some cases, digital competency or ICT lessons included discussion of the benefits and limitations of AI, helping pupils to develop a more balanced understanding of its role in learning. Pupils were encouraged to question AI outputs and consider multiple sources when researching topics. A few schools also reported that pupils were becoming more aware of bias in AI and understand the importance of not relying on it to complete work independently. This emerging practice supports the development of pupils' digital literacy and helps to ensure that AI is used in a way that promotes, rather than undermines, independence and critical thinking. Overall, however, feedback from secondary pupils indicates great variability in their attitude and confidence in the use of AI to support their learning. This varied from those pupils who were keen to engage and frequently use AI to help with revision and assignments, to those who were more fearful, concerned about what use is permissible and worried that teachers will accuse them of cheating if they do use it.

In a few special schools, the use of AI was beginning to have a positive impact on pupil engagement, confidence, and access to learning. Teachers reported that pupils, including those who are non-verbal or have low literacy levels, benefit from the personalised and creative features of AI tools. In a few cases, pupils have used AI to generate stories, songs, or visual content that reflect their interests and identities, helping them feel more included and motivated. Staff noted that they can tailor resources more effectively to the learning needs of autistic pupils. AI has also supported improvements in emotional well-being, as pupils experienced success in tasks that might otherwise have been inaccessible. For example, in a few cases, pupils have used speech-to-text tools or image generators to express their ideas more confidently. Although evaluation of impact was mostly informal at this stage, staff observations and pupil responses suggested that AI can play a valuable role in supporting progress and engagement for pupils in special schools.

While many schools reported distinct benefits from pupils' engagement with AI tools, a small number of staff expressed concerns about children's increasing interaction with digital resources, particularly generative AI, at a very early age. These practitioners questioned whether pupils, especially in the foundation phase, are developmentally ready to engage meaningfully with such technology, and raised concerns that early exposure could promote surface-level engagement over deeper thinking and potentially hinder the development of pupils' critical thinking skills. A few leaders emphasised the need for schools to reflect more carefully on when and how AI is introduced, and to balance digital learning with rich, play-based and experiential activities. This echoes international research from UNESCO and the OECD highlighting that early and excessive digital exposure may negatively influence attention, creativity, and social development if not carefully managed (Guidance for generative AI in education and research UNESCO, 2023; From playgrounds to platforms – childhood in the digital age OECD, 2021). While digital competence remains a key element of Curriculum for Wales, there is a growing need for clearer age-appropriate guidance, including on the use of AI, to support schools in making informed decisions that promote both engagement and developmental well-being.

Overall, pupils' growing engagement with AI highlights its potential not only to enhance creativity and independence, but also to support their progress through more responsive teaching approaches. As pupils begin to interact with AI tools more regularly, particularly in research and revision tasks, there are emerging opportunities for schools to use AI to inform assessment and provide more personalised feedback. The following section explores the extent to which teachers are beginning to use AI to support assessment, reporting and the wider evaluation of learning.

Assessment, feedback and reporting

The use of AI to support assessment and feedback was less well developed than other applications of AI, such as planning or resource creation. While many teachers were beginning to explore how AI can enhance their day-to-day practice, its use in assessment remained largely exploratory, with few examples of consistent or strategic implementation. In most cases, teachers were trialling AI to support formative assessment or to help reduce the administrative burden associated with providing feedback. Where used effectively, AI was helping staff to save time, personalise responses, and plan more effectively for the next steps in learning.

In a few schools, teachers used AI to support assessment for learning by generating questions, exit tickets, or short feedback prompts to consolidate understanding. For example, staff in one school used AI to create bespoke assessments during regular pitstops at the end of a topic or unit, helping them to evaluate pupils' understanding and tailor future teaching accordingly. Similarly, staff in another school used AI to generate personalised questions that targeted specific misconceptions identified during the week's

learning. In one special school, staff used AI to generate ideas for home learning activities following assessments and feedback in class. Although at an early stage of development, and often limited to individual classes rather than whole-school practice, staff told us that these approaches help them to respond more flexibly to pupils' needs and make better use of assessment information.

There were a few examples of emerging practice in the use of AI to support reporting and data analysis. In one school, teachers used AI to summarise phonics data or draft next steps in learning for young pupils. In special schools, some staff used AI to generate learning targets for pupils with complex needs, including personalised learning plans based on diagnostic profiles. These uses can reduce workload and support greater individualisation, though staff stressed the need for professional scrutiny of these AI-generated outputs.

Teachers across the sectors in this review were beginning to use AI to assist with the writing of pupil reports to reduce workload and make the process more manageable. In several schools, staff input key phrases or bullet points into AI tools to generate narrative drafts, which served as a starting point for the pupil's report rather than a final product. Teachers emphasised the importance of reviewing and editing this AI-generated content to ensure that each report accurately reflects the individual pupil. Staff told us that this approach allows them to focus more on the substance and accuracy of the message, rather than spending excessive time on refining the language or structure.

"It's helpful for summarising phonics data and writing next steps, but you still need to check everything" – primary school teacher

In a few cases, pupils themselves were beginning to use AI to support assessment and reflection. For example, older pupils in one secondary school used Notebook LM to convert their notes into revision prompts and summaries. Other pupils used tools such as Reading Progress to track and evaluate their own fluency and provide them with feedback about where they hesitate or misread words. These uses are currently limited, but teachers suggest that they show early promise in supporting pupil independence and self-assessment.

Despite these developments, there are still clear limitations. Many teachers and leaders remained cautious about using AI in this area, particularly for summative assessment. Concerns included the reliability of outputs, potential bias, and issues of fairness or malpractice. Staff also emphasised that AI cannot replace the professional judgement required to interpret assessment evidence and respond to pupils effectively. In addition, secondary teachers also stressed the necessity to adhere to malpractice guidance (specifically referencing AI) from the examination regulatory bodies including JCQ (AI Use in Assessments: Your role in protecting the integrity of qualifications and JCQ 2025) and

Qualifications Wales (Our updated position statement on artificial intelligence – Qualifications Wales 2024). This is particularly important where AI could be used in assessments leading to qualifications.

In summary, while the use of AI to support assessment, feedback and reporting is still emerging, early evidence suggests that it can promote greater personalisation and improve efficiency when used thoughtfully. When integrated into classroom practice with care, AI has the potential to reduce teacher workload and enhance formative assessment. Continued professional learning and the development of whole-school approaches will be important to ensure that AI complements rather than replaces the professional judgement central to effective assessment. The next section explores how AI is influencing pupil experience, including its role in supporting inclusion, equity and access to learning.

Inclusion, equity and accessibility

A few schools were exploring how AI can help them differentiate teaching and learning to meet the diverse needs of their pupils. Teachers reported that AI tools are particularly effective for creating tailored resources that match the individual abilities, interests, and learning profiles of pupils. For example, in some schools, staff used AI to generate different levels of questioning or problem-solving tasks around a shared theme, allowing all pupils to access the learning at an appropriate level. In special schools, AI is used to create communication stories, scaffolded literacy tasks, or bespoke visual resources that engage pupils with complex additional needs, including those who are non-verbal or have limited motor skills.

"Image generation and creative writing resources are positively impacting pupil motivation and engagement" – special school teacher

In several schools, AI tools such as immersive readers, speech-to-text, and text simplification were supporting pupils with ALN. These tools allow pupils to access content more independently and reduce reliance on adult support. Teachers reported that AI is helping to differentiate lesson resources and create vocabulary mats or simplified texts to support pupils who might otherwise struggle to access the same content as their peers. This use of AI supports increased engagement, particularly for neurodiverse pupils and those with low literacy levels.

"A pupil with fine motor skills difficulties was able to dictate and then use speech-to-text software to improve independence and motivation" – special school teacher

Teachers also valued the way AI enables quicker adaptation of resources. In one primary school, teachers used AI to generate differentiated challenges in mathematics by specifying the different skills required for groups of varying abilities. These time-saving

strategies allowed teachers to respond more quickly to assessment information and adapt tasks to better match pupils' needs. While these approaches remained at an early stage in most schools, they were already helping to reduce workload and improve the precision of classroom support. Some staff also reported using AI to support the creation of learning targets and to adapt lessons for pupils with specific diagnoses or additional learning needs. In schools with high proportions of pupils learning English as an additional language (EAL), staff used AI to translate classroom instructions or provide dual-language resources.

While many schools are making progress in using AI to support differentiation, there was also growing awareness of how pupils' home circumstances, particularly in relation to poverty, may affect their ability to engage with AI tools. Several schools noted that, although older pupils often used AI tools at home, this was not consistent across all pupils. Many schools were aware of these challenges but very few had made progress in ensuring that all pupils can access tools safely and effectively regardless of their background. This is an issue that schools, local authorities and the Welsh Government will need to grapple with as the use of AI in education expands.

Overall, while the use of AI for differentiation is still developing, many schools were already seeing its potential to improve access, engagement, and personalisation. The most effective examples highlight the importance of combining AI tools with professional judgement, enabling staff to tailor support in a way that is responsive to pupils' needs and context. As schools continue to refine their approaches, there is a growing recognition that equitable access and inclusive practice must remain central to how AI is used in education.

Making an Impact: How Teachers are Using AI to Enhance Learning

Reduced workload and time-saving

Teachers across all sectors frequently report that AI helps to streamline lesson planning, resourcing and report writing, allowing them to focus more on teaching quality.

Improved differentiation

AI enables teachers to generate tasks or texts at varied levels of complexity, helping to meet the needs of mixed ability groups or learners with additional learning needs (ALN).

More personalised learning experiences

Staff in special schools and PRUs report that AI tools can be tailored to individualised learners' interests and communication needs, increasing motivation and inclusion.

Enhanced creativity and engagement

Teachers use AI to generate images, writing prompts and project ideas that stimulate pupils' creativity and help them take ownership of their work.

Faster feedback and assessment

In some schools, teachers use AI to generate feedback prompts, question sets and bespoke assessment materials to save time.

Support for multilingual learners

AI helps teachers translate materials or simplify texts to support EAL pupils and make content more accessible.

Greater cross-curricular planning support

Teachers report that AI tools suggest links between subjects and themes, supporting more coherent curriculum design.

Support for professional reflection

Staff use AI to summarise meeting notes, refine reports and co-develop planning documents, contributing to more efficient team collaboration.

Leading the way: Strategic approaches to AI in schools

Planning with purpose: how leaders are driving AI use

Leadership teams across schools and PRUs in Wales were at differing stages of engaging with AI at a whole organisation level. In a few cases, leaders had adopted a strategic approach, recognising the potential of AI to support both educational and operational aims. These schools had begun embedding AI into their digital strategies and school improvement plans, often linking it to wider priorities such as workload reduction, inclusion, and professional learning. For example, one school revised its curriculum vision in collaboration with staff and pupils, using AI to streamline drafts and refine the messaging. In another school, leaders used AI to draft documents such as learning environment audits, risk assessments, and self-evaluation reports aligned to their development priorities. They reflected that this had strengthened the school's strategic oversight and freed up time for staff to focus on improvement activity.

In a small number of the schools we visited, leaders had taken a whole-school approach by co-developing an ethical vision for AI use with governors, staff, and pupils. One school engaged the wider school community to draft a shared set of principles for safe and purposeful AI use, linking this work to curriculum development and digital safeguarding policy. A few schools had begun to align AI implementation with their status as Schools as Learning Organisations (SLO) or their engagement with national pilot programmes on enquiry and digital innovation.

Embedding AI with purpose: a whole-school approach

Barry Island Primary has taken a strategic and research-informed approach to embedding generative AI across teaching and administration. What began as a small-scale enquiry into using AI to support differentiation and reduce workload has grown into a whole-school initiative aligned with the school's ambition to "work smarter, not harder." Leaders introduced AI tools gradually, starting with planning, resource creation, and report writing. Staff soon expanded this to include creative applications, such as generating visual prompts for writing tasks and differentiated texts in English and Welsh.

Leaders ensured a secure and thoughtful rollout by pairing staff for peer coaching, running regular professional learning sessions, and drafting an AI policy focused on safe, ethical use. Teachers report substantial time savings and improved personalisation of learning, particularly for literacy and numeracy tasks. By emphasising teacher judgement and positioning AI as a supportive tool, the school has maintained a clear focus on the quality of teaching and learning. Looking ahead, leaders plan to explore how AI can support digital literacy, ethical awareness, and assessment.

For most schools and PRUs, strategic thinking about AI was still at an early stage. Leadership interest was often driven by individual staff with personal expertise or enthusiasm, rather than through a coordinated or system-wide approach. In these settings, there was limited alignment between AI use and broader school or wider priorities. While some schools had begun to explore AI's relevance to planning, pedagogy, or curriculum design, few had yet incorporated AI into formal strategic documents, such as improvement plans or professional learning frameworks.

Policy development is also limited. At the time of the review, very few schools had developed standalone AI policies. A few had begun to make minor amendments to existing documents, such as safeguarding, digital competency, or acceptable use policies, to reflect emerging practice. Others reported plans to update their policies. In several cases, leaders expressed uncertainty about how to approach policy development and called for clearer national guidance to ensure consistency and to support ethical, inclusive implementation.

Overall, while strategic engagement with AI remained variable across the system, there is clear potential for school leaders to play a pivotal role in shaping safe, inclusive and impactful AI use. Schools that are making the most progress were those where leaders viewed AI not as a standalone tool, but as part of a broader approach to curriculum innovation, professional learning, and school improvement.

Empowering staff: building confidence in AI through professional learning

Staff confidence in using generative AI varies considerably across schools and PRUs and is closely linked to the quality and extent of professional learning available. In schools where leaders ensured structured and comprehensive professional learning, staff were more likely to feel confident about integrating AI effectively. For example, some schools benefited from targeted training sessions delivered by their local authority or through regional consortia.

"We had amazing training on the use of AI which has transformed my understanding." – survey response

In many schools, informal sharing of effective AI practice helped to encourage wider exploration of AI tools among staff. Teachers described how digitally confident colleagues demonstrate how they use platforms, such as ChatGPT, Adobe Express, and Copilot to support their professional practice. For example, in one primary school, teachers regularly shared useful prompts and AI-generated resources like visual story starters and differentiated maths questions, which colleagues then adapt for their own classes. Similarly, staff in one special school shared their experiences of creating communication stories and personalised literacy pathways using AI, which sparked interest and engagement among colleagues. However, although informal exchanges helped to

stimulate school-wide curiosity about AI, this approach alone did not improve staff confidence. In many schools, where professional learning remained limited, self-directed, or informal, teachers reported uncertainty around their confidence in selecting suitable AI tools, developing effective prompts, and ensuring ethical and safe practice. The review findings suggest that careful planning and strategically driven whole-school professional learning are crucial to developing sustained confidence and capability in using AI effectively.

> *"I haven't used it in lessons – but I feel we need to know more about it as pupils may well be using it and we need to stay ahead in our understanding" – survey response*

A small number of schools adopted collaborative approaches to professional learning, including peer coaching, the creation of internal prompt banks, and AI-focused professional learning communities. These practices helped teachers trial new ideas, share effective strategies, and develop collective expertise. For instance, one special school introduced micro-training sessions to support teachers and leaders in developing confidence gradually, particularly around ethical concerns and safeguarding.

In a few cases, clusters of schools worked together to enhance professional learning. For example, one cluster of primary schools collaborated on a shared programme exploring ethical AI use, supported by local authority digital leads. This included twilight sessions aimed at building staff capacity, ethical understanding, and practical skills across the cluster. Staff in these schools valued the consistency, shared practice, and opportunity to collaborate on common challenges.

The increased confidence and collaboration fostered through professional learning has also begun to influence how staff use AI beyond the classroom. In many schools, teachers and leaders applied their growing understanding of AI tools to streamline administrative tasks, reduce workload, and enhance efficiency.

Working smarter: AI in school administration

Schools frequently reported using generative AI tools for administrative purposes. Leaders, administrative staff, and other non-teaching personnel regularly used platforms like ChatGPT and Copilot to streamline routine tasks such as drafting letters, standardising communications, and refining school policies. Staff told us that using AI in this way substantially reduced the time spent on administrative tasks, enabling greater efficiency and consistency. One special school leader described how senior staff routinely used AI to summarise their area of responsibility reports, saving time and allowing them to focus more effectively on strategic priorities.

Across the sectors in this review, a small number of schools have begun to explore the use of AI to support self-evaluation and school improvement processes. In most cases, this work was led by senior leaders who were experimenting with AI tools to analyse feedback, summarise internal monitoring evidence, and generate draft improvement plans. Staff in a few schools described using AI to collate information from observations of teaching and learning, staff or pupil surveys, and intervention records, to help them identify common themes and priorities more efficiently. While this practice was still emerging, early adopters highlighted the potential of AI to reduce administrative workload and improve the clarity and coherence of school improvement documentation.

Using AI to support self-evaluation and improvement planning

At **Bryn Celyn Primary School**, leaders have embedded AI into the school's strategic processes, using it thoughtfully to support self-evaluation and improvement planning. By integrating tools such as Microsoft Copilot and other education specific AI tools, the leadership team has enhanced the way they analyse and present internal data. Staff use AI to collate information from learning walks, staff questionnaires, and intervention monitoring, carefully removing all personal identifiers before input. AI then helps to identify key messages and generate summary narratives, making it easier to inform school improvement and ensure evaluation is both rigorous and efficient.

A few schools have also begun to use AI to support more specialised administrative tasks. For instance, in one special school, the Additional Learning Needs Co-ordinator (ALNCo) regularly used AI to summarise notes from meetings, prepare referrals for external services, and create one-page pupil profiles. The ALNCo described how using AI for these tasks has streamlined administrative processes, enabling the team to maintain high-quality support even during periods of staff absence.

Embedding AI in ALN practice to enhance support and efficiency

At **Eirias High School**, the ALNCo uses AI extensively to streamline processes and enhance the quality of support for pupils with additional learning needs. AI tools assist in summarising notes from meetings with parents, external agencies and staff, as well as compiling staff updates. This supports the preparation of progress reports, referrals to agencies such as Child and Adolescent Mental Health Services (CAMHS) and Speech and Language Therapy (SALT), and Joint Council for Qualifications (JCQ) exam access arrangements.

The ALNCo uses AI to write pupil-centred one-page profiles, co-develop targets for IDPs, and draft tailored strategies to address specific barriers to learning. AI also supports the creation of social scripts for autistic pupils and the development of training materials for teaching assistants in areas such as attention deficit hyperactivity disorder (ADHD), trauma, and speech and language needs.

In addition to saving significant time, AI is used for proofreading, generating job interview materials, and acting as a partner to prompt thinking when considering complex cases. As faculty lead on AI use, the ALNCo has championed its adoption as a key tool in managing workload, enhancing provision, and maintaining high-quality, consistent support for pupils.

The thematic survey responses also highlighted various ways that teachers and leaders were using AI in school to produce routine documentation, manage communications with parents, and create more effective and targeted grant applications. Several respondents specifically noted that AI has helped them draft letters or reports more quickly, freeing up time for more strategic and pupil-focused activities. For example, a few schools reported using AI to generate initial drafts of attendance letters or reminders about upcoming school events, which staff could then adapt and personalise before sending to parents

Despite these clear benefits, schools acknowledge the importance of establishing clear protocols to ensure safe and ethical administrative use of AI, particularly regarding GDPR compliance and data protection. At one secondary school, leaders implemented strict guidelines for using AI, including restricting staff from entering sensitive pupil data and clearly defining procedures to ensure GDPR compliance. These emerging practices highlight a growing awareness that, while AI can enhance efficiency, it must be used with care and accountability.

Ethics, safety and safeguarding

Ethical awareness and responsible use

Most teachers that responded to the survey had started to consider the ethical implications of AI, though in many cases this was still at an early stage. Staff generally expressed caution about AI's potential issues, such as accuracy, bias, and safeguarding risks. Teachers and leaders frequently highlighted the importance of professional judgment when reviewing AI outputs. At one primary school, for example, staff demonstrated cautious use of AI and were particularly conscious about protecting pupil data, although the school acknowledged it had not yet provided comprehensive training or specific guidance on these issues. Similarly, in one secondary school, teachers and leaders showed an awareness of GDPR and data protection issues but recognised that more detailed training and clear policy guidance were needed to ensure safe and ethical practice. In our survey and during visits, staff across schools frequently identified gaps in their own understanding and highlighted the need for clearer, tailored guidance around ethical AI use. Survey respondents often requested clearer national guidelines and structured professional learning opportunities specifically related to ethical and safe AI practices.

A few secondary schools had introduced discussions about the ethical use of AI within their curriculum, particularly in digital competency, ICT, or health and well-being lessons. For instance, older pupils at one school were taught explicitly about ethical considerations, including plagiarism, accuracy, and appropriate uses of AI-generated content. Staff encouraged pupils to critically evaluate AI outputs, highlighting the importance of human judgement and original thought in the creative process. A few primary schools have also developed pupils' ethical awareness, particularly through learning activities that are designed to stimulate thoughtful discussion. For example, by encouraging pupils to critically question the accuracy and reliability of AI-generated information and actively discuss potential biases and errors. This approach helped pupils to develop a critical awareness of AI outputs and reinforces key messages about digital literacy and safe online behaviour.

Our review found limited evidence that schools in Wales are explicitly considering the environmental impacts of AI, either in terms of the impact of their practice or pupils' awareness. School visits and thematic survey responses did not highlight environmental concerns as a common area of staff or pupil awareness. While a few survey responses mentioned ethical concerns broadly, references to environmental sustainability were notably absent. This suggests that the carbon footprint of AI technologies, including the

energy consumption required to train and deploy large language models, is not yet a prominent consideration for most practitioners.

Overall, pupils' understanding of ethical issues around AI was mixed. While some secondary pupils have good awareness, describing how they needed to avoid relying too heavily on AI and the dangers of being misled by inaccurate information, this awareness was variable, particularly in settings where explicit teaching on AI ethics was limited.

Recognising and addressing bias

Staff awareness and understanding of bias in AI-generated content was developing but remained uneven across the schools we visited. Teachers often recognised that AI outputs may contain biases or stereotypes, yet systematic teaching to help pupils identify and challenge these issues was not yet embedded consistently in school curricula, with only a few instances of isolated activities exploring this area. For example, in one primary school as part of their topic work, pupils discussed how AI-generated fictional characters or historical summaries might reinforce cultural or gender stereotypes.

Several teachers noted frequent issues with AI tools, including culturally inappropriate examples or overly Americanised language. Staff in a few Welsh-medium schools specifically raised concerns about the poor quality of AI outputs in Welsh, highlighting a lack of culturally appropriate and linguistically accurate materials. They noted this created an additional barrier to effective and inclusive use of AI in Welsh-medium contexts.

Pupils' understanding of bias varied but, in schools where staff explicitly taught the critical evaluation of AI-generated information, pupils showed growing awareness. At one primary school we visited, for example, pupils had a good understanding of the risks associated with AI, confidently articulating why information generated by AI needed careful scrutiny to identify potential biases.

Data protection and pupil safety

Inspection evidence suggests that while most schools have well-established general online safety policies, only a minority of the schools we engaged with had begun to update safeguarding and data protection policies specifically to address AI-related risks. A few schools had actively reviewed their digital safeguarding strategies, prompted in part by guidance from local authorities or consortia. However, even where schools had begun this process, comprehensive policies and clear procedures specifically relating to AI were typically still at an early stage. For instance, most schools and PRUs had not completed a Data Protection Impact Assessment (DPIA) to evaluate specific risks associated with AI use and to protect personal data.

In the context of schools and PRUs in Wales, the term ‘personal data’ refers to any information that can identify an individual, this includes both pupils and staff. Staff generally understood the importance of safeguarding pupil data, particularly when interacting with AI platforms. Many schools had issued informal guidance cautioning staff not to input sensitive pupil data into AI tools. However, their understanding of the formal legal responsibilities under GDPR remained inconsistent. Staff frequently expressed a need for clearer guidance and structured professional development in this area. Our review found that many staff are unclear about what 'personal data' is and what is safe to enter into AI platforms, despite their good intentions.

Embedding ethics and data protection in AI use

Leaders at **Ysgol Cae Top** have taken a proactive and responsible approach to the ethical use of AI. Their vision for integrating AI into the life of the school is underpinned by strong ethical principles, a commitment to transparency, and robust data protection practices. The headteacher has published a clear public statement outlining how AI is used in the school and where its boundaries lie. This statement explains that no pupil or staff personal data is entered into AI systems and that AI is not used to assess or track pupil progress. These clear parameters help build trust with staff, parents and governors and reflect a strong culture of digital responsibility.

The school has completed a Data Protection Impact Assessment (DPIA) to ensure compliance with GDPR and to evaluate the risks associated with AI use. Staff training has been a key feature of the school’s approach. Through regular staff meetings, leaders have ensured that all staff understand the ethical and safeguarding policies linked to AI, including how to use tools safely and avoid inappropriate data sharing. Additionally, the school’s senior leadership team uses a secure AI platform that includes built-in guidance on safe and responsible practice. This supports consistent implementation and helps staff avoid over-reliance on AI or misjudgements in its application. This carefully considered approach helps ensure that AI use in the school enhances teaching and learning while upholding high standards of ethics and data protection.

While the use of general AI tools, such as ChatGPT and Copilot, by pupils was mostly limited to older pupils, particularly those in secondary schools, this is likely to become a more pressing issue as AI becomes more widely used and accessible. As pupil engagement with AI grows, including among younger age groups, school leaders should remain alert to age-related guidance and ensure appropriate safeguards are in place. Many generative AI tools are rated 13+ in their terms and conditions, and their use by younger pupils may raise compliance concerns, particularly in relation to data protection and safeguarding. It is important that any pupil use of AI aligns with relevant legal and ethical frameworks and that appropriate parental consent and staff oversight are in place where required.

Developing digital literacy and safe practice

Pupils generally demonstrated a sound understanding of broader online safety, but their specific awareness of risks and ethical challenges associated with AI use was relatively underdeveloped. Only a minority of schools explicitly taught AI-related digital literacy skills to highlight risks such as misinformation, AI-generated inaccuracies ("hallucinations"), and data misuse. For example, one primary school found that most pupils understood the need for caution when inputting personal information online but had not yet explicitly considered risks specific to AI platforms. Several primary schools had initiated or were planning specific activities aimed at increasing pupil awareness of safe and ethical AI use. Initiatives in a few schools, such as themed AI safety weeks or pupil-led assemblies helped raise awareness across year groups. At one primary school, Year 6 pupils acted as digital leaders, delivering assemblies and demonstrations on AI tools to younger peers, which increased awareness across the school community.

The responses to the survey have shown that the extent to which secondary schools have been developing pupils' digital literacy skills in relation to AI is variable. While some schools had begun to explore the integration of AI into their digital skills curriculum, often through computer science or technology lessons, many were at an early stage of implementation. A few schools were using AI tools such as chatbots or image generators as part of wider digital projects, which can support critical thinking and creativity. However, there was less consistent focus on explicitly teaching students how to use AI safely and responsibly. Although a minority of schools had started to engage pupils in discussions about the ethical and safe use of AI, these efforts were not widespread.

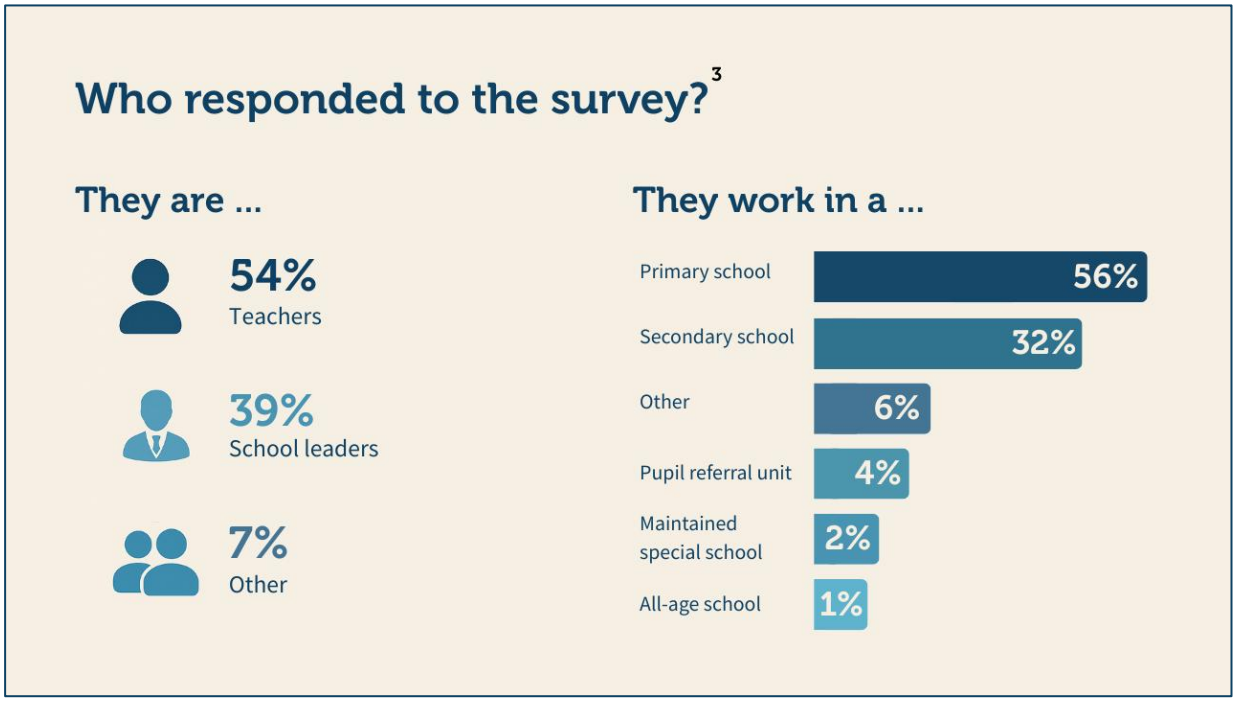
Across all phases, staff frequently expressed the need for clearer guidance and training to help embed these aspects of digital literacy into their teaching. As a result, while there is enthusiasm and some promising practice, there is a clear need for more structured and coherent approaches to supporting pupils' understanding of AI and online safety.

Survey results

There was a total of 324 completed responses to the survey. There were 174 teachers and 127 school leaders. Only 157 respondents provided their school's name, and of these, there were 130 unique schools. This section provides an overview of the main themes from those responses. It should be noted that the survey results cannot be taken to represent the views of the workforce across schools and PRUs in Wales as a whole. Despite the relatively large number of responses, the findings are skewed as the questionnaire responses show that respondents were:

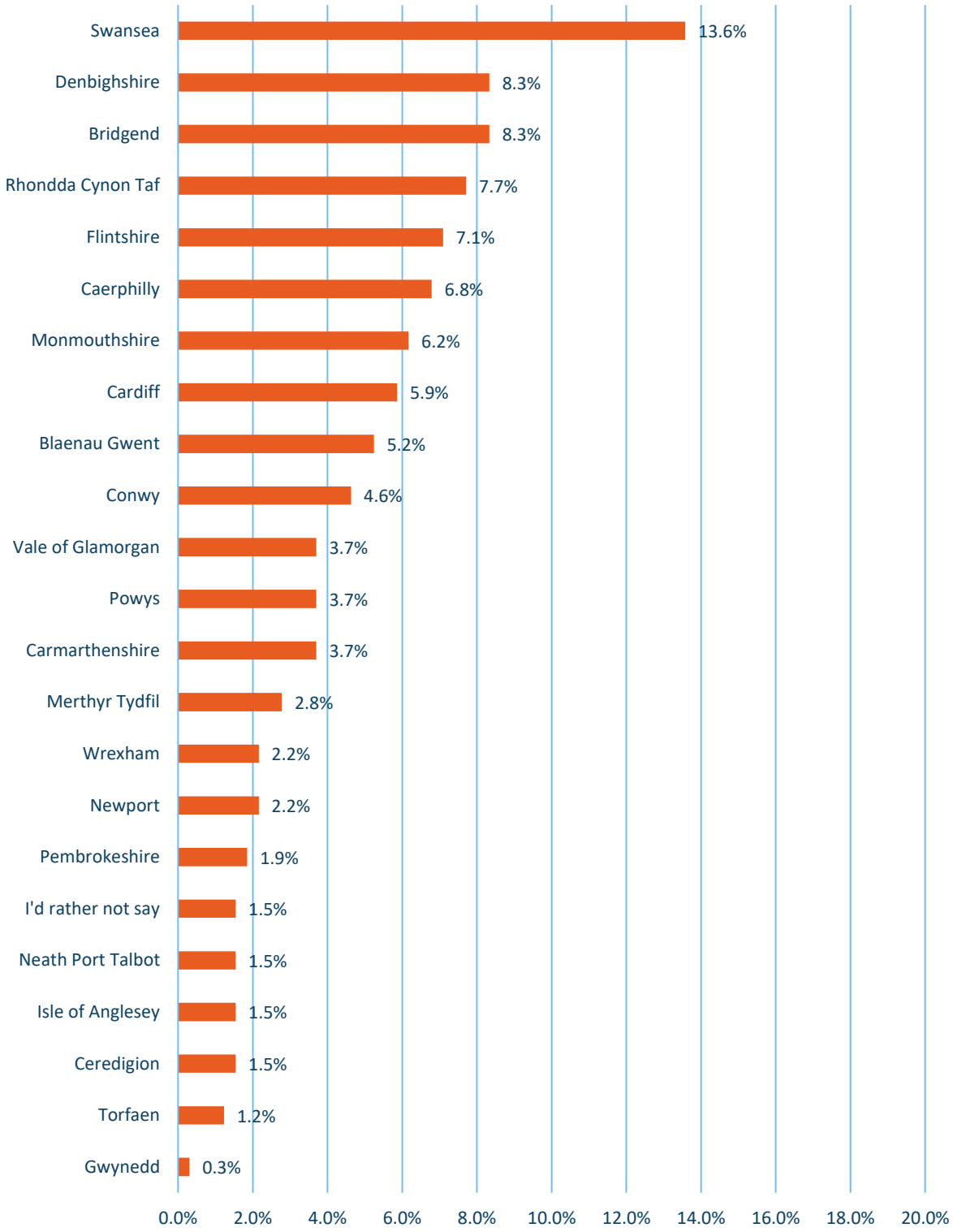
- generally positive about Generative AI
- considered themselves to have a good understanding of it
- mostly interested in it
- mostly not nervous about it

While teachers and leaders that responded to the survey were mostly already using AI and positive about their use, they also acknowledged challenges and mentioned that caution is needed, particularly due to AI's propensity for hallucinating and safety concerns. There was also an acknowledgement of the need for professional learning. However, despite these broad themes, there was variation within and between responses.



[3] Based on 324 responses to "I am a…teacher, school leader, other (please specify)" and "I work in a: (select all that apply)…primary school, secondary school, all age school, maintained special school, pupil referral unit, other (please specify)".

Q4. Which Local Authority do you work for?



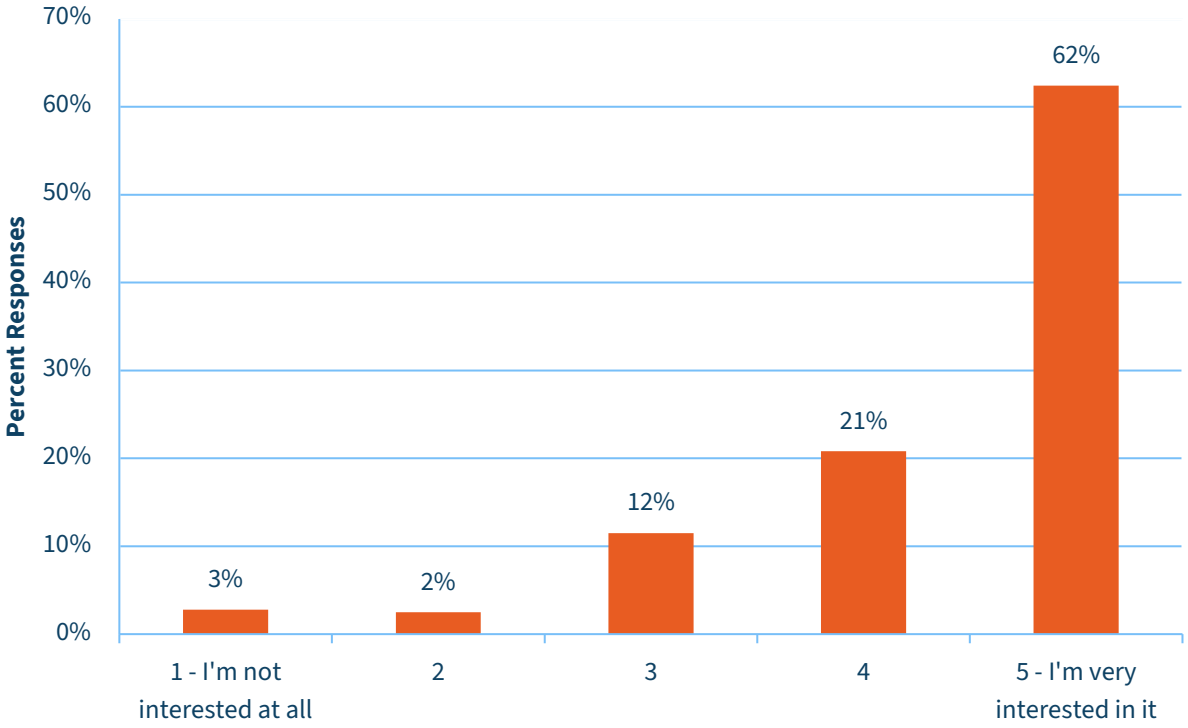
Q4. Have you heard of generative AI (e.g. ChatGPT, Copilot, Gemini? Please explain your answer.

Responses to this question revealed wide-ranging levels of awareness and understanding among those education staff in Wales who responded to this survey. While most respondents had heard of generative AI, their confidence and depth of knowledge varied considerably. A small number of respondents, only eight, reported having heard of GenAI but not understanding it, with explanations referencing limited exposure, such as hearing about it on television or being unfamiliar with its use in school settings. A larger group (94 respondents) reported small extent of understanding. Their explanations ranged from using tools like ChatGPT and TeachmateAI for lesson ideas, to acknowledging limited or cautious engagement, often due to uncertainty or lack of training. Some teachers described initial experimentation, such as using AI to create worksheets or explore how pupils might misuse it in assessments.

More than 200 respondents said they understood GenAI, with over 100 providing detailed insights into their use of AI in practice. Many referenced simple uses like drafting letters, creating resources, or using tools like Copilot, ChatGPT or TeachmateAI regularly. Others described more advanced or integrated applications, such as supporting pupils with ALN, generating differentiated materials, developing curriculum resources, and even co-authoring school policies. Respondents also shared examples of using AI for specific teaching activities such as designing exam-style questions, generating visuals to aid storytelling, or producing planning documentation.

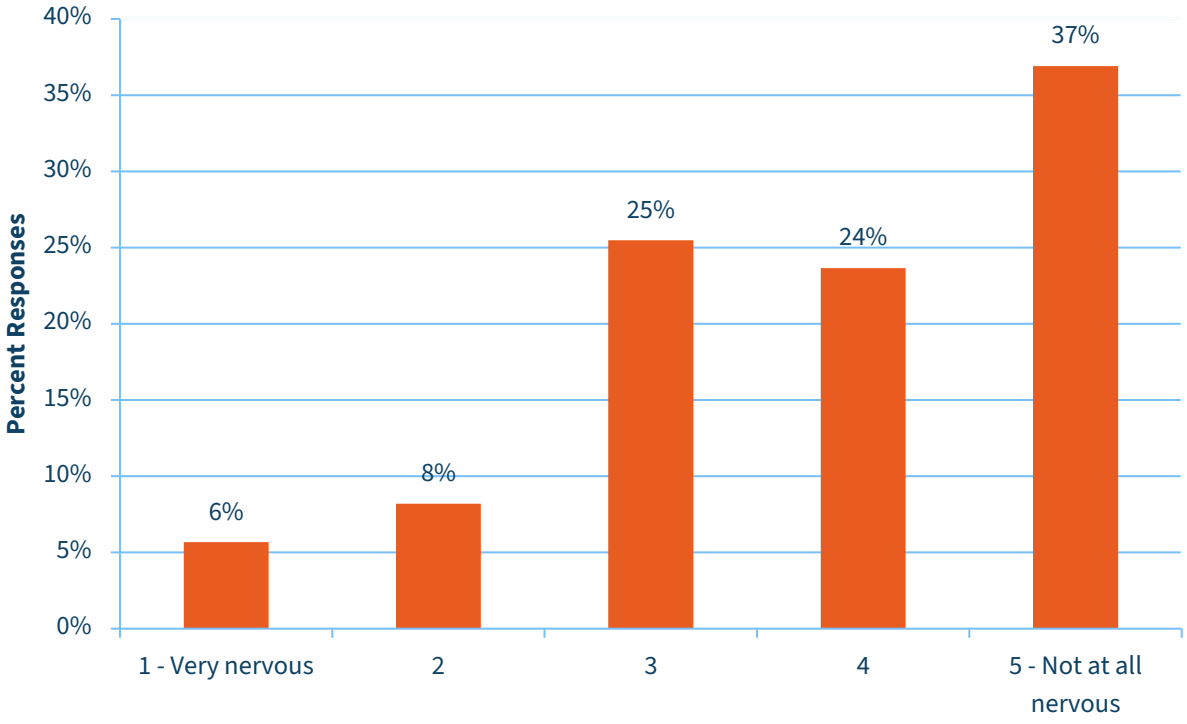
A smaller group discussed broader knowledge of AI, including ethical implications and the need for safe, responsible use. Some cited professional development or collaboration with colleagues as instrumental to their understanding, while others were engaged in school-wide projects or developing AI-focused policies and training. Several mentioned the importance of staying ahead of pupil use and equipping students with the skills to use AI safely and effectively. Overall, the responses highlight an emerging picture of exploration, curiosity, and varied confidence levels, with many respondents recognising both the promise and challenges of integrating AI in education.

Q5. On a scale of 1 – 5, where 1 is not at all interested, and 5 is very interested, to what extent are you interested in using generative AI in your role?



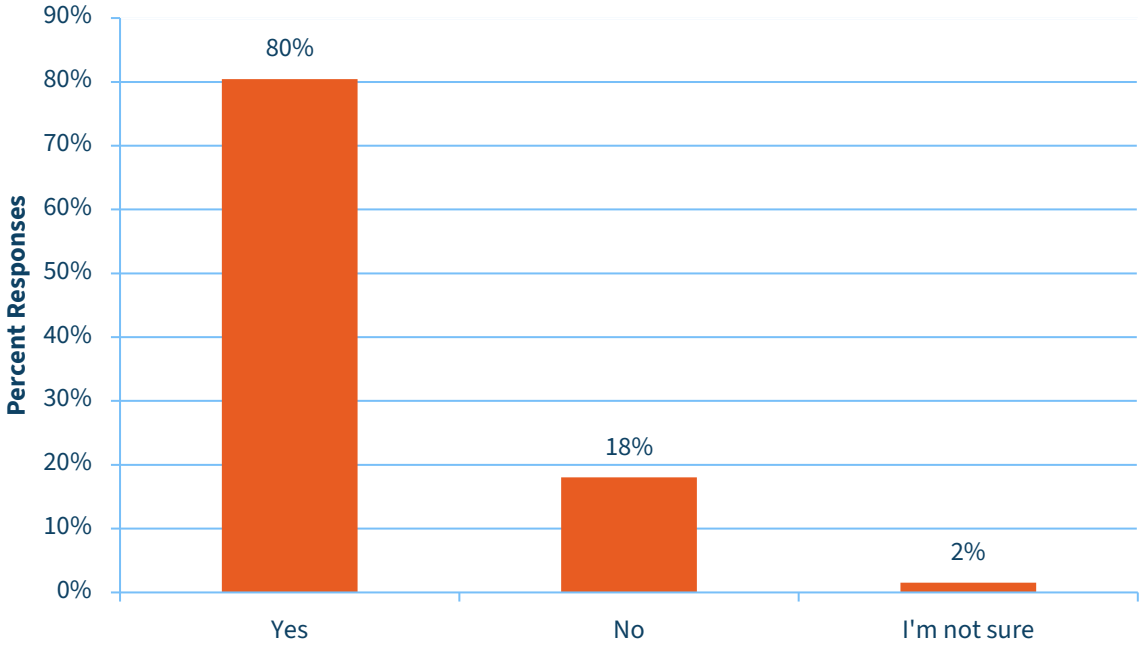
Based on responses from 322 respondents

Q6. On a scale of 1 – 5, where 1 is very nervous, and 5 is not nervous at all, to what extent are you nervous about using generative AI in your role?



Based on responses from 317 respondents

Q7. Have you used generative AI tools as part of your role?



Based on responses from 322 respondents

Q 8. If not, what are the reasons?

Responses to these questions offer a valuable insight into the barriers that prevent some school staff from engaging with AI. Among the 50 responses, a substantial number (around 20) cited a perceived lack of need or opportunity as their main reason for not using AI. These included explanations such as not having had the time, not seeing a specific use for it in their current role, or lacking access to suitable devices or platforms. A few expressed a preference for their own methods or scepticism about the relevance of AI to certain aspects of teaching, particularly where relationships and deep understanding of pupils are paramount. One respondent remarked, “Some elements of teaching can't be completed by AI and there needs to be an understanding of the children to plan for their needs.”

Uncertainty and lack of confidence featured prominently in around 16 responses. These included ethical concerns, worries about data security, and a general lack of understanding of how AI works. For example, one respondent noted, “Do not have a good enough understanding to trust it”, while another raised concerns about copyright and originality in AI-generated content. Others highlighted the technical complexity or limitations they had encountered in earlier attempts to use AI, particularly when trying to apply it in specialist teaching contexts.

A smaller number (around six) indicated they were waiting for further guidance or training before attempting to use AI. These responses suggest a degree of professional caution and a desire to feel confident before using AI with pupils. Several respondents expressed interest in learning more through professional development and mentioned upcoming

training opportunities. Overall, the findings highlight a combination of practical, ethical, and pedagogical concerns, alongside a general appetite for more structured support and clearer guidance to help staff engage confidently and appropriately with AI.

Q9. What tools have you used?

The 257 responses to this question show that a wide range of generative AI tools were being explored by staff who responded to the survey, with a clear preference for a few widely accessible platforms. ChatGPT emerged as by far the most commonly used tool, mentioned in 198 responses. Of these, 65 respondents named ChatGPT as the only tool they used, while the rest mentioned it alongside other platforms.

Microsoft Copilot was the second most frequently cited tool, used by 77 respondents, including seven who used it exclusively and 19 who used it in combination with ChatGPT. Other tools included TeachmateAI (52 mentions), Adobe tools such as Firefly or Adobe Express (48 mentions), Google tools such as Gemini (previously Bard) (29 mentions), Canva (17), and Magic School AI (12). A handful of responses also referred to Diffit, Perplexity AI, and internal school systems such as SLT software, indicating some experimentation with both general-purpose and education-specific tools.

Although the question focused on tools, 79 respondents also gave examples of the tasks they performed with them. These include lesson planning, resource creation, administrative support, writing reports, and generating personalised learning materials. These use cases are summarised in responses to Question 10 and reflect the growing integration of AI tools into professional practice across a range of educational contexts.

Q10. What have you used these tools for?

Respondents described a wide range of practical uses for generative AI tools across teaching, administration, and broader professional tasks. In teaching and learning, staff commonly used AI to support lesson planning, resource creation, such as questions, quizzes, visual prompts, and differentiation, helping to tailor content to suit pupils of varying abilities. Others reported using AI for scaffolding tasks, developing model answers or WAGOLLs, and to support assessment and marking. A few teachers also mentioned using AI directly with pupils in lessons, suggesting emerging instances of pupil engagement with AI tools in classroom contexts.

In terms of idea generation, staff cited examples such as using AI to brainstorm assembly topics, generate planning prompts, and enhance creativity. Administrative uses included drafting letters, newsletters, and emails, proofreading, and taking meeting notes. AI was also used for tasks such as summarising documents, writing CVs, and managing workload, as well as for research, policy writing, and preparing grant applications.

The responses indicate that many teachers are finding innovative and time-saving applications of GenAI in their professional practice, supporting both instructional and operational aspects of their roles.

Unsurprisingly, the main differences between school leaders' and teachers' use of these tools were that school leaders have more strategic uses, such as data collection and analysis or policy creation, while teachers used it more for lesson planning and resource creation.

Q11. What challenges have you encountered in using GenAI?

Survey respondents identified a wide range of challenges when using generative AI, with accuracy and the need to validate outputs cited as the most common concern. Over 70 responses highlighted that AI-generated content often contained inaccuracies, required proofreading, or presented inappropriate tone or complexity, particularly for younger pupils. Several respondents noted the importance of applying professional judgement and subject expertise to verify and adapt AI outputs for educational use.

Another key challenge related to the art of prompting; over 40 respondents mentioned that knowing how to frame effective prompts was a barrier. Respondents described having to spend time refining their questions or commands to get the desired output, which could be off-putting for new users. Linked to this, around 20 people mentioned a lack of training or confidence in using AI, noting the need for professional learning to better understand which tools to use and how to use them effectively in schools.

Additional issues included platform limitations, such as access restrictions, cost, and a lack of content tailored to the Welsh education context. Around 15 respondents commented on the frequent use of Americanised spellings and examples. There were also concerns about misuse by pupils, particularly in relation to plagiarism and over-reliance on AI in assessments. Other challenges included GDPR and copyright compliance, ethical concerns, and AI's limited ability to generate Welsh-medium content.

Q12. What benefits have you experienced in using GenAI?

Survey responses to this question highlighted a broad range of benefits teachers have experienced when using generative AI, with workload reduction and time-saving standing out as the most frequently cited advantages. Many respondents described how AI helps streamline everyday tasks—particularly lesson planning, resource creation, and report writing—allowing them to focus more on pedagogy. One respondent summarised the impact as "the most productive change to education since blended learning", while others referenced improvements in work-life balance and reductions in stress.

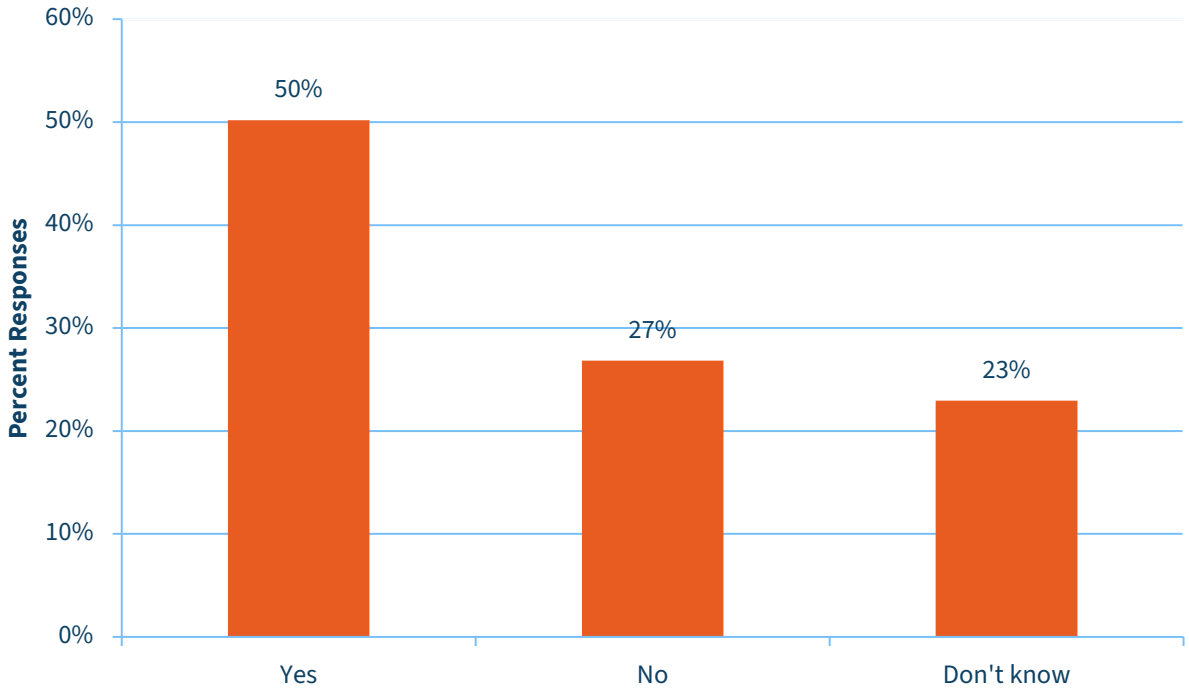
Respondents also described how AI supports content generation, including model answers, differentiated materials, quizzes, and images. They particularly valued its support for writing, such as drafting letters, rewriting for varied reading levels, and enhancing the tone and professionalism of reports. For instance, teachers noted how AI "re-words things in a professional way" and helps with "creating numerous different ways of writing the same information".

Another commonly cited benefit was AI's ability to summarise large volumes of information, making executive summaries and clear reports easier to produce. Educators appreciated how AI could quickly distil key points from long documents or data sheets, aiding both internal planning and external communication.

Idea generation was another theme, with several respondents noting that AI helped them overcome "blank page" moments and contributed novel or creative perspectives they might not have considered independently. Other benefits included information retrieval, curriculum planning, and improvements in the quality of output. A few also commented on pupil engagement, particularly how AI-supported tools could personalise learning, stimulate creativity, and excite pupils through the immediate visualisation of their ideas.

Overall, these responses emphasise the perception among the survey respondents that AI could enhance both teaching effectiveness and operational efficiency when used thoughtfully.

Q13. Outside of school-directed learning activities, are you aware of pupils using generative AI tools?



Based on responses from 257 respondents

Q14. Outside of school-directed learning activities, what positive uses of GenAI by pupils have you encountered?

Based on 115 staff responses to the AI thematic survey question about pupils' use of generative AI, the most common perception was that pupils are increasingly using these tools to support their learning, particularly for research, revision, and writing. Teachers described how pupils use AI to gather information quickly, structure written work, generate revision materials, and receive feedback on drafts. Some reported pupils enhancing their digital skills, such as coding in Python or creating presentations and websites. Others observed its benefits for accessibility, including simplifying complex texts, summarising content, and supporting pupils with additional needs.

Creativity also featured prominently. Pupils were reported to use AI to generate digital art, music, role-play scenarios, and even literature. Some explored AI in their hobbies, such as blogging and content creation, or in social contexts like gaming and social media. Despite these positives, several staff expressed concerns or uncertainty. Some respondents felt AI undermined creative thinking or independence, while others said they had no direct knowledge of pupils using AI positively, especially in younger classes. A few referenced non-educational uses such as meal planning, social media interaction, and job applications. These varied responses suggest a growing, yet uneven, pattern of AI use among pupils, highlighting the need for structured guidance to help them engage critically, ethically, and productively with these tools.

Q15. Outside of school-directed learning activities, have you seen any pupils' use of GenAI that have concerned you?

Based on 115 responses to this question, staff perceptions reflect a mix of uncertainty, emerging risks, and clear areas for concern. Over half of respondents (approximately 57) indicated that they had not personally encountered any safeguarding or ethical issues to date, though several of these acknowledged that this may be due to limited visibility of pupil activity outside the classroom or a lack of awareness. Many predicted that issues were likely to emerge in the near future.

Around a third of respondents raised concerns about academic integrity, including pupils submitting AI-generated work as their own, using AI for homework that was clearly beyond their level, or inflating predicted grades. Several described how students were not aware that using AI-generated work without acknowledgement constituted plagiarism.

Other recurring themes included misinformation and overreliance on AI content without appropriate critical evaluation, and a lack of understanding among pupils about the accuracy, provenance, and privacy risks associated with AI platforms. Several respondents expressed concern about safety and safeguarding risks, citing examples of inappropriate

or disturbing content generated by image or text tools, as well as potential threats such as cyberbullying via AI, deepfakes, and the use of AI to create harmful content. These responses suggest a need for greater education, oversight, and clear guidance to help both pupils and teachers navigate AI use safely and ethically.

Q16. What do you think the opportunities are of GenAI in schools?

Survey responses from 301 people indicate that these staff view GenAI as offering broad and transformative opportunities for schools, particularly in areas of workload reduction, personalised learning, and digital engagement.

A dominant theme was the potential for saving time and easing workload, with many respondents highlighting how GenAI could streamline planning, report writing, resource creation, and administrative tasks and ultimately supporting teacher well-being. Respondents noted that GenAI enables staff to focus more on high-impact teaching and learning activities rather than repetitive tasks.

Another strong area of opportunity identified was content generation, including differentiated resources, model answers, creative prompts, feedback tools, and curriculum design materials. Many believed that AI could enrich the curriculum by introducing more dynamic and responsive materials.

In terms of pupil support, teachers reported a wide range of potential benefits: from tailoring learning experiences to individual needs, particularly for ALN pupils, to enabling creative expression through image and text generation. Several responses also emphasised AI's role in developing pupils' digital literacy and preparing them for a future where AI is integrated into everyday life and employment. Some respondents focused on the potential of GenAI to improve pupil engagement, describing how it could make learning more interactive, imaginative, and responsive to pupils' ideas, such as "interviewing" historical figures or generating artwork from descriptions. Other opportunities cited included enhancing assessment and feedback, supporting research and analysis, and making learning more inclusive and accessible, especially for pupils with ALN.

However, a recurring undercurrent of caution accompanied these positive views. Respondents stressed the need for training and ethical guidance to ensure responsible use of AI. Concerns included safeguarding, overreliance, misinformation, and the environmental impact of AI. A few respondents were sceptical of its overall value, calling for careful implementation aligned with pedagogy, equity, and trust.

Q17. What are your concerns around the use of GenAI in schools?

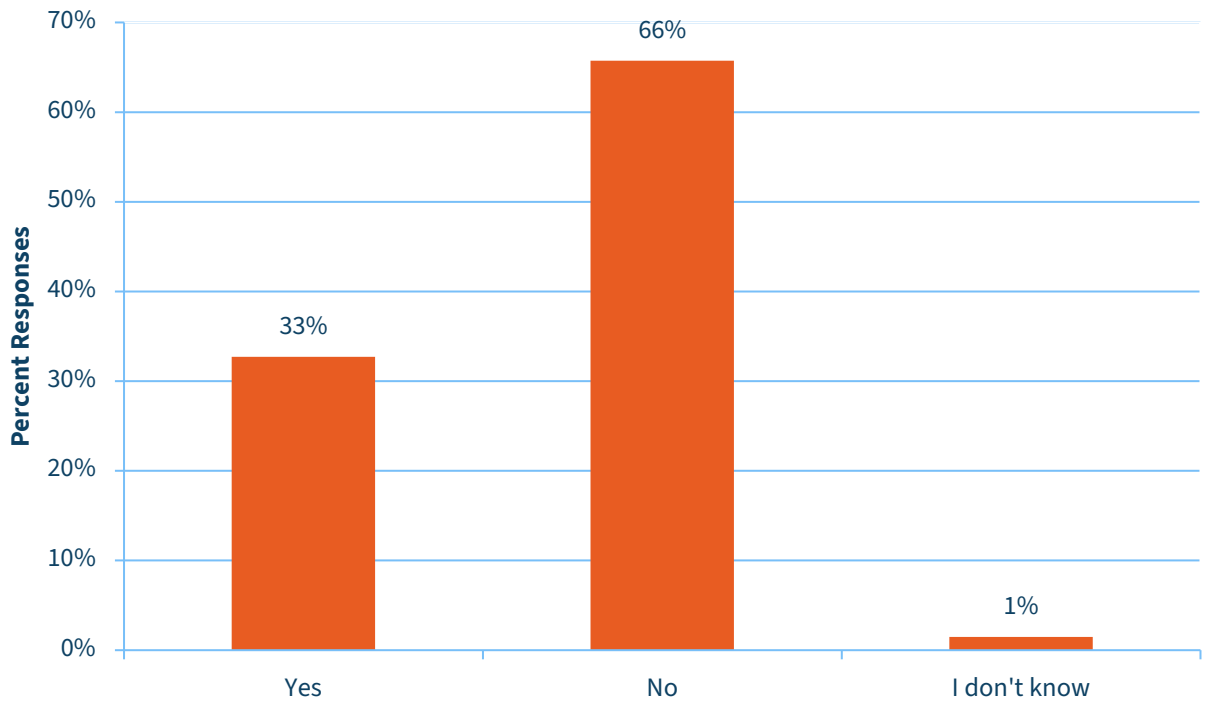
The 302 responses to the question reflect a wide spectrum of issues, including pedagogical, ethical, professional, and technological anxieties.

The most frequent concerns centred on over-reliance on AI (45 responses), particularly among pupils, potentially leading to loss of critical skills, such as the ability to solve problems, reading and mathematical skills, as well as reduced creativity (17) and deskilling of both teachers and pupils (16). Respondents feared that pupils might not engage with learning meaningfully if AI completes tasks for them (22), and that teachers may become dependent on AI for planning or resource creation, bypassing professional judgement and reflection.

Many highlighted academic integrity risks, with 40 citing cheating or plagiarism, and others noting misuse or inappropriate use by pupils (15) and, to a lesser extent, by staff. Some feared that GenAI could be used irresponsibly or to produce inappropriate or harmful content (13), raising safeguarding concerns (22). Others warned of data privacy and GDPR compliance issues (22 and 18 respectively), as well as broader concerns around bias, copyright, and environmental impact of large-scale AI models. Concerns around accuracy of AI outputs were common (35), with 21 respondents stressing the risk that teachers and pupils might fail to validate or critically assess content generated by AI. The potential for misinformation, bias, and unwanted outputs added to a sense of unease.

Finally, there were recurring references to a lack of training, guidance or confidence (approximately 17 responses), and resistance to change, underlining the need for structured professional learning and leadership support to navigate these risks responsibly.

Q18. Have you received any Professional Learning to support your use of generative AI?



Based on responses from 321 respondents

Q19. What PL have you received to support your use of GenAI?

There were 104 responses to this question. The nature and extent of the professional learning described varied considerably, with most respondents reporting informal or self-directed learning rather than structured, strategic training.

Many staff had explored AI tools independently, often prompted by curiosity or the perceived need to stay ahead of developments. Several had taken advantage of in-house INSET or staff-led sessions, with a few schools beginning to embed AI into ongoing professional learning cycles. More formal training opportunities were also noted, including sessions delivered by local authorities, regional consortia, or external providers. Some staff had attended conferences where AI featured as a key theme, while a very few others had accessed resources and guidance produced by Welsh Government and Hwb.

The content of professional learning sessions described by respondents ranged widely. Some focused on raising awareness of what AI is and which tools are available, while others explored specific platforms such as ChatGPT, Copilot, TeachmateAI, Gemini, and Adobe tools. A smaller number of sessions focused on practical classroom applications, prompt engineering, or administrative uses such as drafting documents or summarising notes. A few sessions also covered more specialist themes, including image generation, GDPR compliance, and the ethical implications of AI use in education.

Overall, the responses indicate a growing appetite for professional learning on AI but also reveal a lack of consistency in how this learning is delivered. While pockets of effective practice exist, most professional learning remains ad hoc or self-led, pointing to the need for more coordinated, high-quality provision that supports both confidence and capability across sectors.

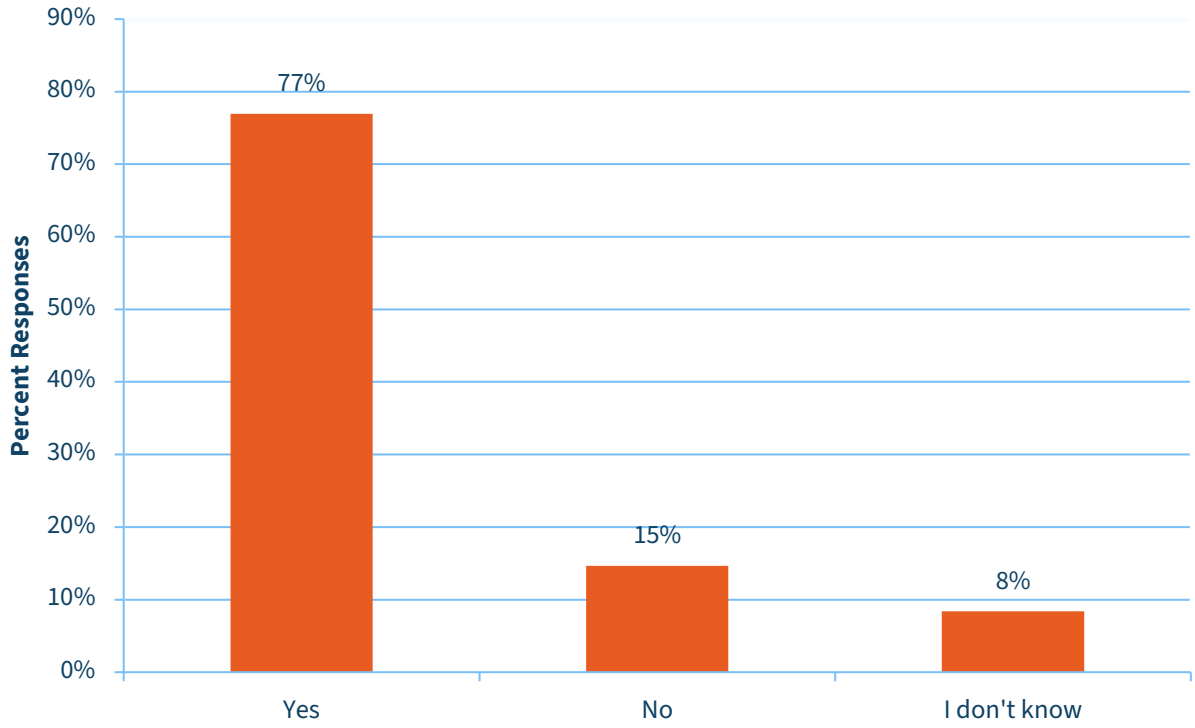
Q20. What impact has it had on your practice?

The responses to this question reflect a wide range of experiences and outcomes. A substantial number of respondents described positive impacts on planning, workload, and teaching quality. Many indicated that the professional learning had given them confidence to begin using AI tools in the classroom, particularly to create differentiated resources, support ALN pupils, generate ideas, and save time on planning, assessment, or administration. Several described the impact as “huge” or “transformational”, with some noting that AI had helped them teach lessons they previously wouldn’t have had time to prepare for.

Time-saving and efficiency were the most frequently cited benefits. Respondents reported that they were now able to spend more time focusing on pedagogy, with AI assisting with repetitive or time-consuming tasks such as report writing, resource creation, and drafting communications. Some said the professional learning had helped them think differently about how to use AI for specific aspects of Curriculum for Wales, and had contributed to improved well-being through reduced workload. Others highlighted how the professional learning had led to increased awareness, upskilling, and enthusiasm. They described feeling more confident using a wider range of AI tools and being better able to support their colleagues and pupils. Some respondents said the sessions inspired them to lead AI training in their own schools or clusters.

However, a smaller number of respondents reported limited or no impact, usually due to the early stage of their engagement, insufficient training, or a lack of confidence. A few noted barriers such as restricted access, lack of login credentials, or school systems not yet being in place to embed the learning. Overall, the responses reflect a strong appetite for further training, with many practitioners already seeing tangible improvements in their practice as a result of AI-related professional learning.

Q21. Do you feel that you need (more) Professional Learning to support your use of generative AI?



Based on responses from 321 respondents

Q22. What, if any, recommendations do you have for the kinds of PL that might be useful for you?

The 236 responses to the question about future professional learning needs around generative AI reflected a strong appetite for further development and a wide range of suggestions on what effective training should include. While responses were varied and often overlapped, three broad themes emerged:

- a desire for more knowledge and guidance on AI use in education.
- preferences for the format and delivery of professional learning.
- calls for support around safe, ethical, and responsible use.

The most prominent theme, identified in over 130 responses, was a clear need for greater knowledge and practical guidance. Teachers wanted support on how to apply AI in teaching and learning across the curriculum, personalise learning, manage workload, and use AI effectively in administration and leadership roles. Respondents showed specific interest in how AI could be used to support ALN pupils. Respondents asked for practical examples, clarity on available tools, and training on specific applications such as resource creation, report writing, prompt engineering, and using AI for strategic planning.

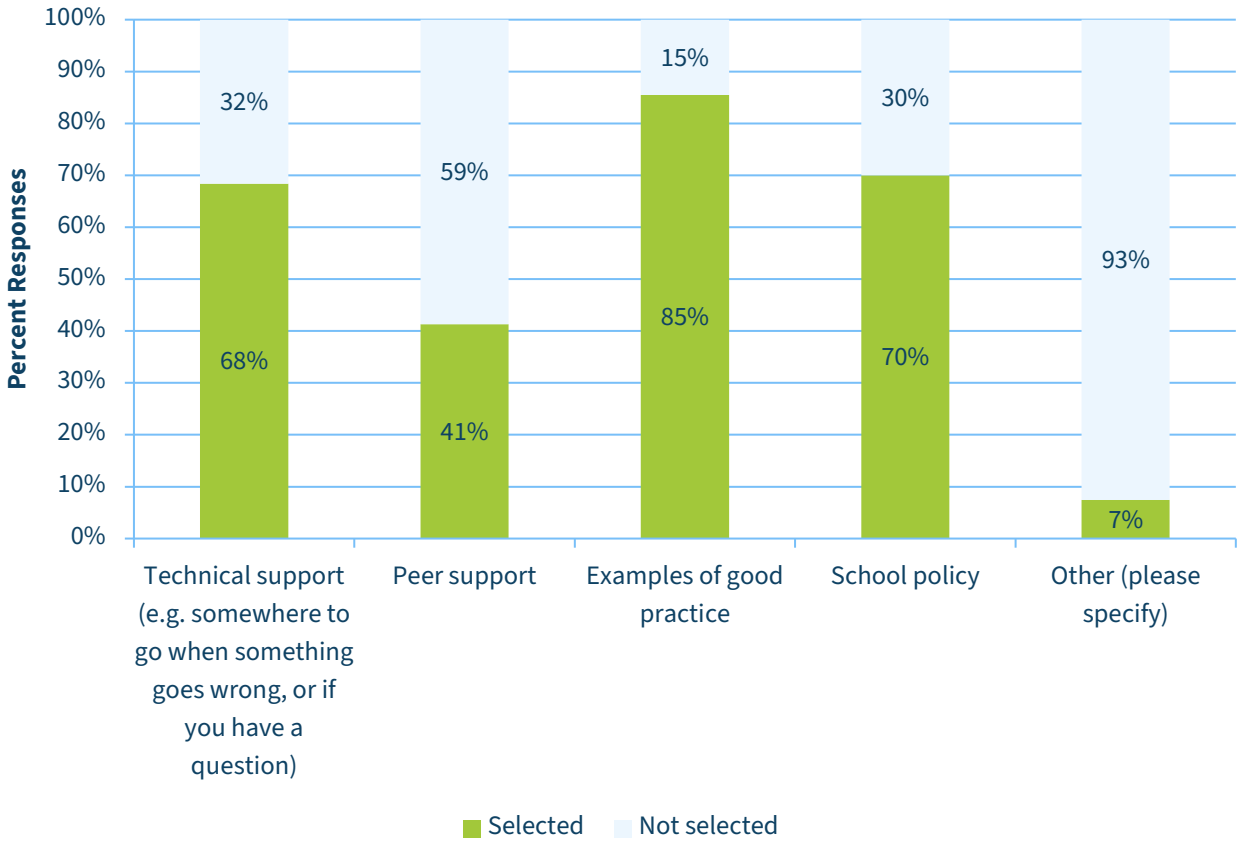
Around 69 responses focused on the preferred format and structure of professional learning. Staff expressed a preference for practical, hands-on workshops, opportunities to share good practice, and subject- or role-specific training. Others wanted structured progression, with suggested pathways from beginner to advanced use. There were also calls for regular, ongoing training to keep up with AI developments.

Just over 50 responses emphasised the importance of training on safe and responsible use of AI. This included safeguarding, data protection, and GDPR compliance, as well as how to educate pupils on ethical use, academic integrity, and recognising potential misuse. Respondents asked for clarity on which tools are safe, when AI should or shouldn't be used, and guidance on creating school policies. A few also called for awareness-raising on copyright and the environmental impact of AI.

Other comments addressed the need for policy development, reducing stigma around AI use, support for parents, and aligning professional learning with broader curriculum and assessment reforms. A small number of responses reflected uncertainty or lack of current engagement but were generally open to future development.

Overall, responses reveal strong interest in practical, ethically grounded, and ongoing professional learning that supports both confidence and competence across all roles in the education sector.

Q23. Beyond PL, what else do you feel you need to use GenAI in your role safely, responsibly, and ethically?



Based on responses from 310 respondents

Of the 310 respondents to the question, 23 selected "Other" and provided additional comments. The majority of these 11 responses focused on the need for clearer guidance and access to learning resources. Respondents asked for practical information about which tools are appropriate or should be avoided, how to handle sensitive data safely, and updates to school GDPR policies. Some requested national guidance or government standards on AI use in schools, while others emphasised the need for time to experiment with tools and access platforms for sharing best practice across Wales.

A few responses highlighted practical applications, suggesting areas where AI could be further embedded, such as stock control, audits, and formal letter writing. Three respondents raised financial considerations, including the need for shared licences on Hwb to reduce costs, additional budget for hardware, and funding for paid AI subscriptions. Other responses included calls for support with planning or simply reiterated the need for "anything" that could help, while three respondents stated that they did not currently need anything further.

Overall, the responses suggest that beyond training, staff are looking for structured guidance, supportive infrastructure, time to trial tools, and equitable access to resources to confidently and ethically use AI in their roles.

Q24. Have you used any policy/guidance to inform your generative AI use? If you have used any policy or guidance, please provide examples.

Of the 55 responses to this question, staff shared a broad range of examples, revealing that while many schools are beginning to consider or develop policies, there is still inconsistency in how guidance is accessed and applied.

A notable number (15 respondents) described being actively involved in the development of school or local authority policies. These included creating new school-level AI policies, conducting risk assessments, consulting with data protection officers, or adapting existing digital safety frameworks. A few respondents indicated that their schools were still in the process of drafting or considering such policies, often using templates or national sources as a starting point.

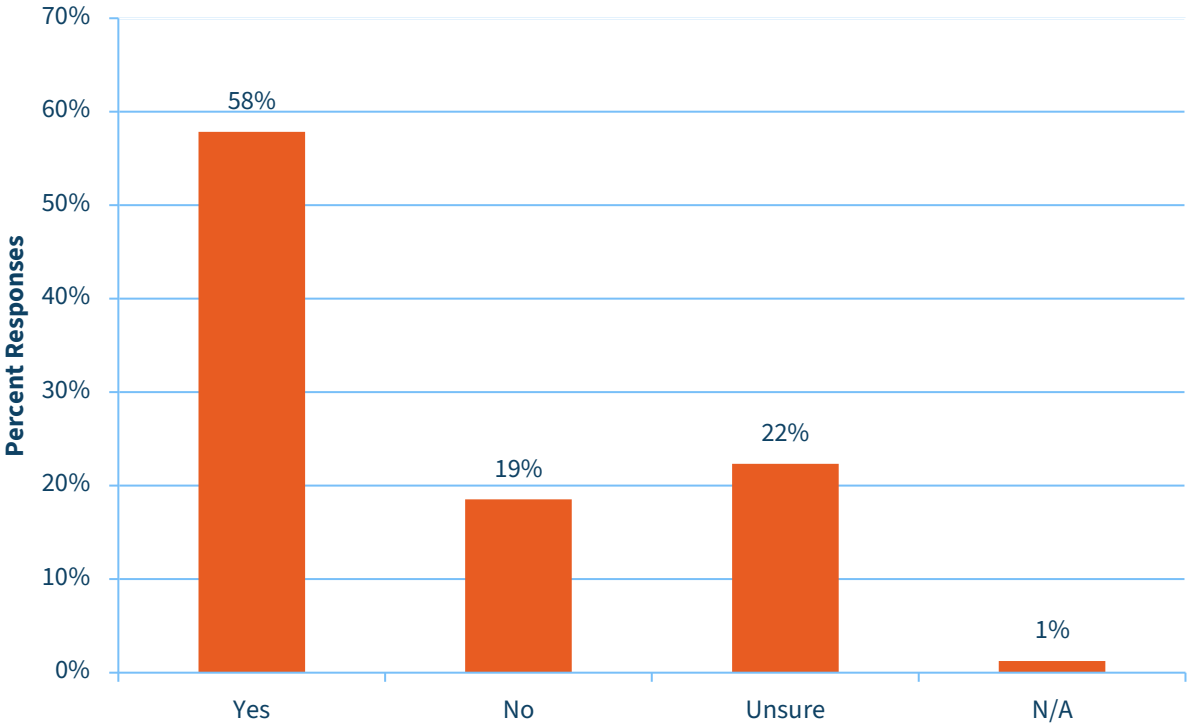
Another 16 respondents referenced using guidance from external authorities, such as Hwb, Welsh Government, local authorities, and digital leads. While some found this guidance helpful, others expressed a desire for more sector-specific and practical support, viewed current documentation was sometimes as too generic.

Seven respondents referred to advice from qualifications bodies like JCQ, WJEC, and AQA, particularly in relation to assessment, NEA submissions, and academic integrity. A further seven noted using guidance from other sources, such as university frameworks, edtech experts, Jisc resources, or experienced colleagues.

Nine responses focused on the content or nature of the guidance used, referencing topics such as ethical use, data protection, GDPR, and links to Curriculum for Wales or safeguarding policies. Some noted that current guidance was overly focused on misuse, which they felt discouraged innovation or positive engagement with AI.

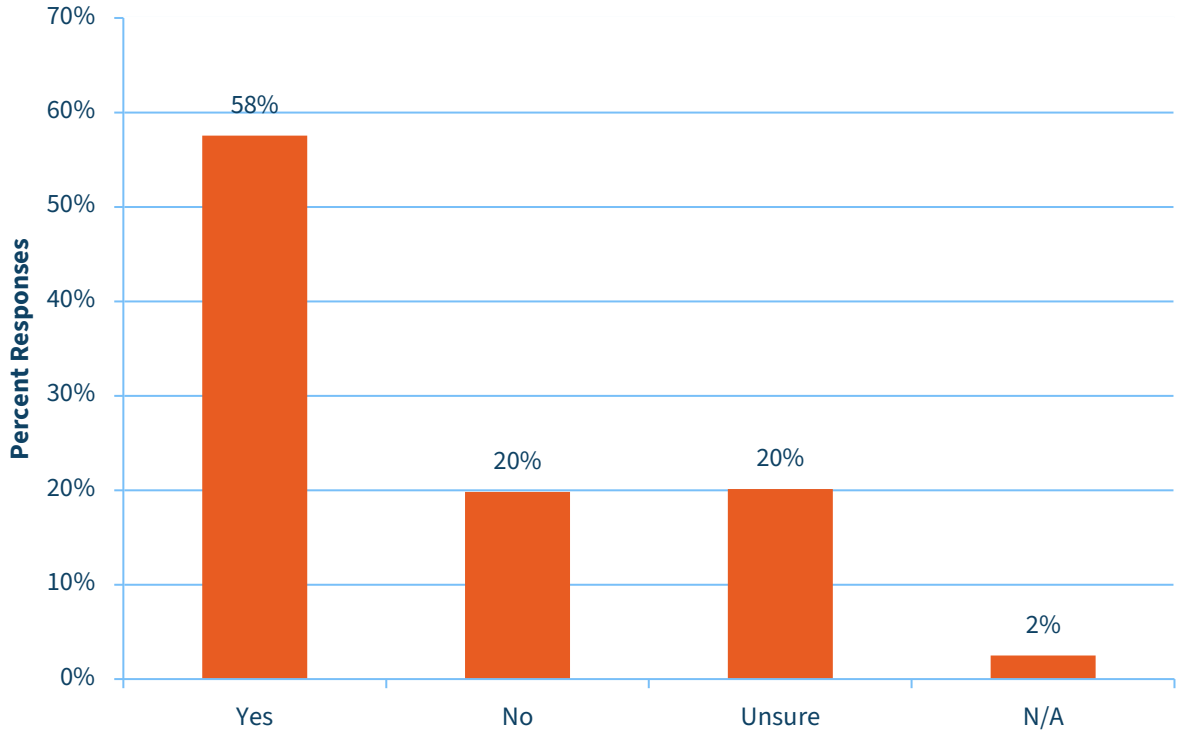
In summary, while examples show that schools are beginning to engage seriously with policy and guidance on AI, practice remains varied. Some schools are proactively developing detailed frameworks, while others await clearer national direction. The responses point to a need for consistent, practical, and context-specific guidance to support safe, ethical, and confident use of AI across the sector.

Q25. Are you confident in your ability to explain what generative AI means to your colleagues?



Based on responses from 318 respondents.

Q26. Are you confident in your ability to explain what generative AI means to your pupils?



Based on responses from 318 respondents.

Methods and evidence base

In January 2025 we issued a survey for completion by staff in schools and PRUs. The survey was open between the beginning of January and the end of March 2025. A total of 324 teachers, support staff, leaders and local authority officers responded to the survey. A copy of the questionnaire we used for this thematic review can be found on the publication page. An indication of the spread of responses in terms of local authority, type of provider and staff role can be found at the start of the Survey Results section. It is important to note that the sample was self-selecting, which means that the responses cannot be deemed representative of teachers and leaders in Wales. However, the exploratory and rapidly developing nature of the use of AI in education provide a useful insight into emerging trends that are likely to be reflected in more schools and PRUs over time.

To further inform the report, during the spring term of 2025, inspectors visited a sample of 21 English and Welsh medium primary, secondary, special and all-age schools across Wales. We selected most of these schools because they had indicated in their survey response that they were engaging positively with AI. We chose a few schools because of other information, for example due to a recent inspection suggesting that staff were undertaking interesting work with AI. During the visits, we spoke with leaders, staff and pupils, looked at examples of pupils' work and documentation, such as policies and teachers' planning. Where possible, we identified examples of effective practice for inclusion in the report. The work of many of these providers is further exemplified in the following video case studies:

Using AI for Differentiation: https://youtu.be/Jv0RmPXOTIQ

Professional Learning and AI: https://youtu.be/MTY_QP-T0Dw

Using AI for Reducing Workload: https://youtu.be/5-IciAj1JhU

How AI is Supporting Teaching and Learning: https://youtu.be/BGCoBZSdHtI

Strategic Approach to AI: https://youtu.be/bIUNkVPkR74

It is important to note that the scope of this research does not include validating provider compliance with legal or regulatory requirements related to AI use, such as data protection, safeguarding, or procurement standards. Responsibility for ensuring compliance with such regulations remains with individual providers.

During the preparation of this thematic report, the author used ChatGPT and Microsoft Copilot (generative AI tools) to support aspects of the writing process. This included

assistance with synthesising information gathered from school visits and the questionnaire, structuring sections of the report, refining language for clarity and accessibility and summarising key messages. At all stages, the author reviewed, edited, and adapted the AI-generated content to ensure accuracy, relevance, and alignment with the report's aims.

All data, findings, and evidence presented in the report are drawn from appropriately cited sources and professional expertise, not generated by AI. Estyn verified the accuracy and authenticity of all references and assumes full responsibility for the final content and conclusions of the report.

Estyn would like to thank the following organisations for their participation in this thematic review:

Organisation	**Sector**
Bedwas High School	Secondary
Townhill Community Primary School	Primary
Barry Island Primary	Primary
Birchgrove Comprehensive	Secondary
Bryn Celyn Primary School	Primary
Caedraw Primary	Primary
Cynffig Comprehensive School	Secondary
Federation of Blenheim Road Community and Coed Eva Primary Schools	Primary
Heronsbridge Special School	Special
Libanus Primary School	Primary
Lliswerry Primary School	Primary
Pantysgallog Primary School	Primary
Pentip Primary School	Primary
Prestatyn High School	Secondary
St Cadoc's Primary School	Primary
Ysgol Cae Top	Primary
Ysgol Cae'r Nant	Primary
Ysgol Cei Newydd	Primary
Ysgol Eirias	Secondary
Ysgol Llanhari	All age
Ysgol y Deri	Primary

Glossary

Additional learning needs (ALN)	A term used in Wales to describe children and young people who require extra help to learn, including those with learning difficulties, disabilities, or social, emotional and mental health needs
Artificial Intelligence (AI)	A machine-based system that processes input to generate predictions, content, or decisions that influence the physical or digital world. In education, AI tools are often used to support teaching, reduce workload, and personalise learning
Assessment for Learning (AfL)	An approach that uses ongoing assessment to support and improve learning and teaching
Curriculum for Wales	The national curriculum in Wales, introduced in 2022, designed to provide a more flexible, integrated and pupil-centred approach to education
Data Protection Impact Assessment (DPIA)	A process required under GDPR to assess and manage risks when using technologies that process personal data
Differentiation	Adapting teaching and resources to suit the different learning needs, styles, or abilities of pupils
Digital Literacy	The skills and understanding needed to use digital tools effectively and safely, including the ability to evaluate information online and interact responsibly in digital environments
English as an Additional Language (EAL)	Refers to pupils whose first language is not English and who are learning it in addition to their home language(s)
Exit Ticket	A brief activity or question given at the end of a lesson to check pupils' understanding of what they have learned
Formative Assessment	Ongoing assessment used during learning to identify pupils' needs, provide feedback and inform teaching, as opposed to end-of-topic tests

Generative Artificial Intelligence (GenAI)	A form of AI that creates content such as text, images, music, or video based on prompts given by the user. Tools like ChatGPT are examples of GenAI
General Data Protection Regulation (GDPR)	A legal framework that governs how personal data is collected, stored, and used in the UK and EU. Schools must follow GDPR when using AI tools that involve personal data
Individual Development Plan (IDP)	A legal document in Wales that sets out the support a child with ALN needs and how it will be delivered
In-Service Education and Training (INSET)	Planned training days for school staff, often used for professional development or curriculum planning
Pedagogy	The method and practice of teaching. It includes how teachers design and deliver lessons to support pupil learning
Peer Support	Support and sharing of knowledge between colleagues, often used to help embed new approaches like AI in practice
Pupil Referral Unit (PRU)	An alternative education setting for pupils who cannot attend a mainstream or special school, often due to behavioural or emotional needs
Profound and Multiple Learning Difficulties (PMLD)	Describes pupils with complex needs including severe learning difficulties, physical disabilities, and/or sensory impairments
Professional Learning (PL)	Ongoing development activities that help teachers improve their knowledge, skills, and professional practice
Prompt Engineering	Crafting specific, clear prompts to get the best responses from generative AI tools
Safeguarding	Protecting children from harm and promoting their welfare, including staying safe when using digital technologies

Self-evaluation	A reflective process where schools or staff assess their own performance to improve practice
Communication Stories	Stories that incorporate visuals to engage pupils, particularly those with PMLD. Resources can also include sensory experiences like touch, smell and sound
Speech-to-Text Software	Technology that converts spoken words into written text, often used to support pupils with difficulties in writing or motor skills
Summative Assessment	Assessment that evaluates what pupils have learned at the end of a unit, topic, or phase of learning
Twilight Training	Professional learning sessions held after the school day, often used to minimise disruption to teaching time
WAGOLL (What A Good One Looks Like)	An example of a high-quality piece of work used by teachers to model expectations to pupils
Welsh Joint Education Committee (WJEC)	An examination board that provides qualifications and assessments in Wales

Numbers – quantities and proportions

nearly all =	with very few exceptions
most =	90% or more
many =	70% or more
a majority =	over 60%
half =	50%
around half =	close to 50%
a minority =	below 40%
few =	below 20%
very few =	less than 10%

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