Woodland Academy Trust

Embedding AI in Education:

A Strategic Review of Practice at Woodland Academy Trust

Woodland Academy Trust

Working alongside and supported by

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Abstract

This paper outlines research by Mark Anderson (ICT Evangelist) and Woodland Academy Trust on the impact of AI tools for planning for teachers and pupils at primary and secondary levels.

Following preliminary training and support from Mark Anderson, the teachers integrated the chosen AI tools into their daily practice – **reducing their planning time by half while significantly improving lesson quality**. The data shows a 52.5% reduction in planning hours (from 10 hours weekly to 4.75) while achieving 100% teacher confidence and 91% pupil preference for these enhanced approaches.

Notably, these results enhanced effective teaching practice. Where once 0% of staff rated their planning as efficient, 88% now describe it as 'efficient' or 'very efficient'. The transformation was comprehensive, and feelings of overwhelm dropped to zero across all participants.

This research wasn't about replacing professional expertise with automation. Each tool served distinct educational purposes: ChatGPT for comprehensive planning support, Magma Maths for real-time assessment, Olex for immediate writing feedback – and TeachMate AI, which proved excellent for building Early Career Teacher (ECT) confidence but demonstrated the need for expert teacher quality assurance on outputs to ensure suitability for the classroom. The cultural transformation was clear.

The pupils recognised the difference immediately. One Year 5 pupil articulated it perfectly: "I remember more . . . because we're doing things, not just listening." That observation represents pedagogical impact, not technological novelty.

Read the report to find out how they did it and how you can do it too.

1. Introduction and Context

1.1 Purpose and Scope of the Report

This report provides a strategic review of Woodland Academy Trust's initiative to embed Artificial Intelligence (AI) in education, specifically by supporting lesson planning across the Trust's schools. It evaluates the impact of introducing AI tools into teachers' planning processes, examining how this innovation has influenced teaching and learning in a meaningful, evidence-based way. The aim is to determine to what extent using AI for lesson planning has benefited our educators and pupils over the course of the initiative, and to inform future decisions with clear evidence of what works.

1.1.1 Focus Areas

The evaluation centres on three key domains of impact to ensure a thorough understanding of the initiative's effectiveness:

1. **Reduced teacher workload**. Assessing whether AI-assisted lesson planning has significantly saved teachers time and effort, thereby easing planning burdens and allowing staff to focus more on teaching and learner support.
2. **Improved pupil engagement**. Examining if lessons enhanced by AI tools lead to higher pupil interest and participation in class, resulting in more dynamic and interactive learning experiences.
3. **Improved pupil outcomes**. Determining the effect on pupil learning results and progress, by looking at attainment and development over time to see if AI-informed planning contributes to better educational outcomes for our pupils.

While these three domains form the core focus of the review, the project also remains open to identifying additional benefits that emerge through the use of AI in lesson planning. In particular, the Trust is mindful of improvements related to Universal Design for Learning (UDL) – the principle of designing lessons that are accessible and effective for all learners. The use of AI has the potential to support more inclusive teaching practices (for example, by easily adapting materials to different learning needs or offering multiple ways for pupils to engage with content), and this report will note any such UDL-aligned benefits that arise beyond the primary focus areas.

Evidence-Based Approach: This report is an evaluation of impact over time, grounded in evidence gathered throughout the implementation of the AI initiative. Rather than a one-off snapshot, it considers data and observations collected at multiple points, providing a longitudinal perspective on how AI integration is influencing workload, engagement, and outcomes. Qualitative feedback from teachers and quantitative measures of pupil performance

have been analysed to ensure that conclusions are well-founded and relevant. By basing findings on concrete evidence and tracking changes over the duration of the project, the report offers an honest and thorough account of the initiative's effectiveness, thereby supporting informed decision-making for the future.

Strategic Support and Implementation: This initiative has been undertaken with substantial strategic and operational support from Mark Anderson (known as the ICT Evangelist). Mark Anderson's expertise in educational technology has been integral to the project's design and delivery. He has provided dedicated training for Woodland Academy Trust staff on using AI tools in the classroom and in planning, offering hands-on guidance to build teacher confidence and competence. Additionally, he has contributed strategic input to ensure the Trust's approach to AI is aligned with best practices and school priorities, advising on how to implement these tools effectively and ethically. Throughout the process, Mark has offered ongoing advice on efficacy and implementation, helping the Trust to measure the impact of AI on teaching and learning, troubleshoot challenges, and refine techniques for better outcomes. This partnership has ensured that our approach to embedding AI is not only innovative but also thoughtful, well-structured, and aligned with our educational values.

In summary, the purpose of this report is to evaluate how embedding AI in lesson planning is making a difference in our Trust, and the scope covers the key areas of teacher workload, pupil engagement, and pupil outcomes, while also capturing any broader benefits (such as those related to UDL) that enhance our educational practice. The report is written with a clear, professional and reflective tone to serve external stakeholders, including school and trust leaders, policymakers, and education sector influencers, as a transparent account of our findings. Through this comprehensive review, Woodland Academy Trust seeks to share insights into what has been learned from this AI initiative, celebrating successes, understanding challenges, and guiding next steps in our journey to innovate teaching and learning with emerging technologies.

1.2 Overview of the Trust and its Digital Transformation Journey

Woodland Academy Trust is a forward-thinking multi-academy trust based across Bexley and Kent, comprising five primary schools. Dedicated to delivering outstanding education and supporting the whole child, the Trust places innovation, equity, and opportunity at the centre of its strategic priorities. A key pillar underpinning its work has been an ambitious, sustained digital transformation journey aimed at equipping both pupils and staff with the digital fluency, resilience, and skills necessary for success in an increasingly complex world.

The Trust's digital journey began from a recognition that traditional, sporadic use of technology was no longer sufficient to meet the demands of current education. Early audits

identified that while individual teachers demonstrated innovation, there was inconsistency across classrooms, limited access to devices, and a reliance on ICT as a discrete subject rather than an integrated, cross-curricular tool. Strategic leadership within the Trust made a conscious decision to shift towards a model of digital-first pedagogy, ensuring that technology enhanced every facet of teaching, learning, and school operations.

A cornerstone of this transformation was the phased introduction of 1:1 iPad deployment across all schools. Every pupil now has access to their own device, enabling a personalised learning experience that fosters independence, creativity, collaboration, and critical thinking. This approach was underpinned by partnerships with leading education technology providers such as Sync, ensuring high-quality infrastructure, security, and device management systems were in place to support sustainable growth.

Recognising that devices alone would not transform practice, the Trust invested heavily in professional development. Staff across all roles participated in an ongoing programme of digital CPD designed to build not just technical confidence but pedagogical expertise. This included training in the effective integration of digital tools, adoption of the principles of Universal Design for Learning (UDL) to support diverse learning needs, and the development of digital leadership skills within school teams. By building staff capacity, the Trust has ensured that digital innovation is embedded within practice rather than remaining an add-on.

Woodland Academy Trusts AImpowerED CPD day, brought together the whole trust as well as external stakeholders for a day of learning and discussion around AI.

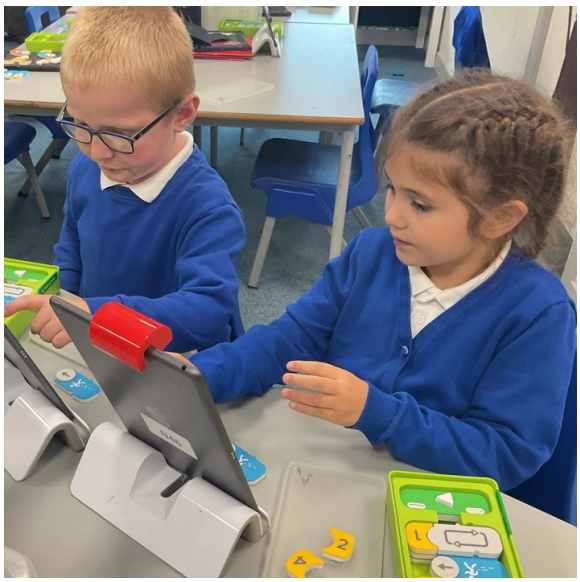
Inclusivity has remained a core theme throughout the Trust's digital strategy. By aligning technology adoption with UDL principles, the Trust has ensured that pupils with Special Educational Needs and Disabilities (SEND) and those with English as an Additional Language (EAL) have equitable access to high-quality learning experiences. Assistive technologies,

translation tools, and adaptive resources have been systematically deployed to remove barriers and foster greater pupil engagement and achievement.

More recently, the Trust has embraced the emerging potential of AI within education. Importantly, AI has been approached thoughtfully, with a focus on ethical implementation, safeguarding considerations, and professional empowerment.

Beyond the classroom, the Trust's digital transformation has also touched operational and administrative processes. Communication platforms, digital workflows, and cloud-based collaboration tools have streamlined Trust-wide operations and fostered greater connectivity across schools.

Today, Woodland Academy Trust stands as a digitally mature organisation where technology serves as an enabler of excellence rather than an end in itself. Digital innovation is embedded into strategic planning, teaching and learning frameworks, and professional development pathways. The Trust continues to reflect, adapt, and evolve its digital approach based on internal evaluation, external research, and emerging technological opportunities.



Children using an iPad for an activity in class

As Woodland Academy Trust looks to the future, its digital transformation journey remains dynamic, with a clear commitment to ensuring that all pupils and staff are equipped to thrive in a digital, interconnected world.

1.3 Methodology: Sources of Evidence, Data Types and Analysis Approach

1.3.1 Overview

This research project was designed as a structured, mixed-methods study exploring the role of AI tools in supporting lesson planning across Woodland Academy Trust's five primary schools. The methodology combined both quantitative and qualitative approaches to provide a comprehensive understanding of the impacts on teacher workload, lesson quality, pupil engagement, and school culture. The project adhered to ethical standards and safeguarded participant confidentiality throughout.

The research approach was also informed by principles of ethical AI adoption, ensuring that the use of AI technologies prioritised data security, fairness, and inclusivity in alignment with emerging best practice in educational technology.

1.3.2 Selection of AI Tools

Fifteen teachers from across Early Years Foundation Stage (EYFS), Key Stage 1 (KS1), and Key Stage 2 (KS2) were invited to trial a range of AI lesson planning platforms, including ChatGPT, TeachmateAI, and other emerging technologies relevant to primary education.

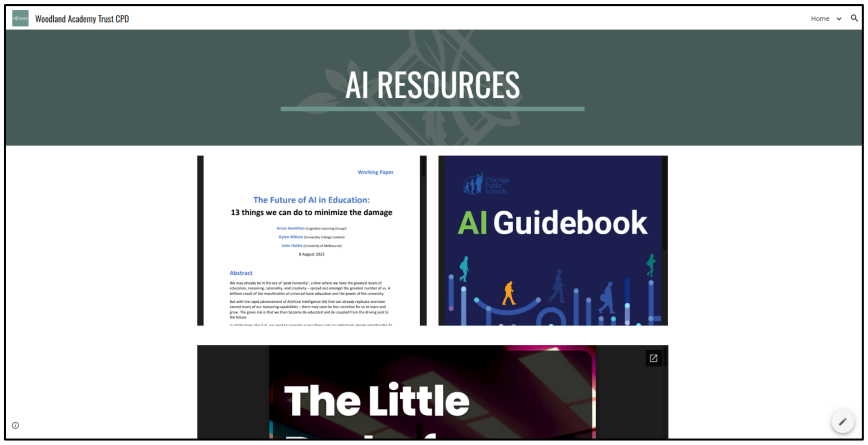
Tool selection was guided by key criteria:

- usability
- creativity
- adaptability to diverse learner needs
- data privacy compliance
- safeguarding standards.

1.3.3 Training and Support Structures

Recognising the importance of professional development in successful implementation, a multi-layered training strategy was employed:

- **Blended learning model**. Face-to-face workshops and online sessions delivered by digital learning expert Mark Anderson (ICT Evangelist).
- **Resource bank**. Video tutorials, step-by-step guides, and FAQs uploaded to the Trust's CPD platform.



Woodland Academy Trust's Internal CPD platform

- **On-demand support**. A dedicated Microsoft Teams channel for real-time peer-to-peer support and technical assistance.

This structure ensured that all participants, regardless of prior experience with AI, could engage confidently with the tools.

1.3.4 Sources of Evidence and Data Collection Methods

Evidence sources comprised:

- **Teacher feedback**. Surveys, reflective journals, interviews, and focus groups.
- **Classroom observations**. Standardised drop-ins.
- **Pupil voice**. Pupil surveys and focus groups.
- **Comparative lesson analysis**. Traditional versus AI-supported planning.

1.3.5 Data Types Collected

We collected:

Quantitative data: Planning time metrics, engagement scores, confidence levels.

Qualitative data: Reflective journals, open-ended survey responses, focus group transcripts.

This mixed-methods approach enabled triangulation and enhanced the credibility and validity of findings.

1.3.6 Analysis Approach

Our approach considered:

- **Descriptive statistics**. Analysis of survey data for trends and shifts.

- **Thematic analysis**. Interrogation of qualitative responses to identify major themes.
- **Comparative analysis**. Evaluating lesson quality and engagement between traditional and AI-supported planning.
- **Triangulation**. Cross-referencing across data sources to validate findings.

1.3.7 Ethical Safeguarding

Strict ethical standards were applied:

- **Data privacy and security**: GDPR compliance ensured.
- **Bias monitoring**: Tools assessed for cultural sensitivity and inclusivity with human oversight.
- **Anonymity and voluntary participation**: Preserved throughout.

This ethical framework reflected best practice in responsible AI use in education.

1.3.8 Risk Mitigation

Risks were anticipated and mitigated:

- **Technical issues**: Rapid IT support in place.
- **Teacher resistance**: Early engagement and supportive CPD.
- **Data privacy concerns**: Strict GDPR-compliant processes.

1.3.9 Cost-Benefit Analysis

Evaluations conducted:

- Time savings in planning.
- Costs of AI platform subscriptions.
- Impacts on teacher wellbeing and retention.
- Improvements in lesson quality and pupil engagement.

This provided evidence for future strategic decisions regarding AI adoption.

1.3.10 Limitations

Limitations of the study were:

- **Timeframe**: Limited to two terms.
- **Voluntary participation**: May favour more digitally confident staff.
- **Tool evolution**: Rapid development of AI may affect long-term relevance.

Future longer-term and broader studies would strengthen the evidence base.

2. Key Themes Emerging from the Evidence

2.1 Teaching and Learning Transformation

2.1.1 Examples of AI-Supported Lesson Planning

Staff across Woodland Academy Trust piloted a variety of AI tools to enhance lesson planning, resulting in rich examples of AI-integrated teaching materials. Teachers made use of general-purpose chatbots (e.g. ChatGPT), education-focused planning assistants (TeachMate AI and Alia), and AI-driven assessment tools (Olex AI), among others. These tools were used to generate lesson content, suggest activities, and even create visuals – all aligned to curriculum goals.

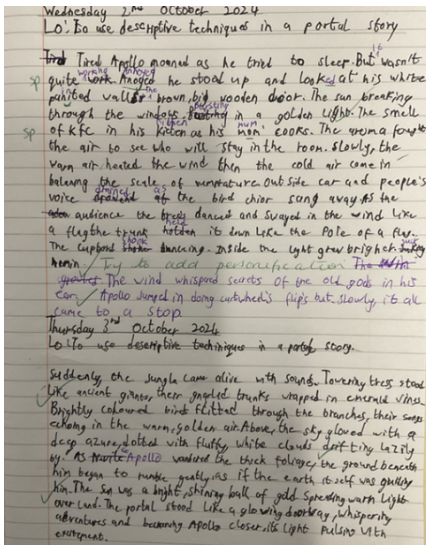
Children using iPad in class during coding week

The following case examples illustrate how AI supported lesson design across different year groups and subjects.

Year 5 (Geography/Writing – Volcanoes): One Year 5 teacher leveraged AI to design a cross-curricular volcano lesson. The AI (via ChatGPT) helped generate a dynamic quiz that pupils answered simultaneously on iPads, making the lesson more interactive. Pupils noted that "we did a lesson about volcanoes, and it had this quiz . . . we all answered at the same time". The AI also suggested creative writing ideas, for instance, a storytelling task imagining a volcanic eruption, which the teacher enriched with sound effects as prompted by the AI. Pupils felt these **AI-inspired lessons were "more fun . . . not just writing and reading"**, with engaging challenges that weren't "too hard".

Year 3 (Science – Plants): In a Year 3 science unit on plant growth, the teacher used an AI lesson planning platform (Alia) to create detailed slides and activities. Pupils recalled that the iPad resources "showed us how [plants] grow from seeds" with helpful animations. An interactive recap quiz generated by the AI provided immediate feedback on answers, which pupils appreciated for letting them know what to work on. Compared to a typical lesson, the AI-prepared lesson had "more detail" on slides and offered multiple activities to cater to different pupils. This variety meant pupils "got to do more things and not just sit and listen", indicating greater engagement. The teacher reported that planning these science lessons with Alia was significantly faster and came with built-in formative quizzes, allowing a focus on tailoring and reviewing content rather than building materials from scratch.

Key Stage 2 Humanities and Creative Writing: Teachers found AI particularly useful for enriching humanities lessons and writing tasks. In Year 4 history, for example, AI tools were used to create talking avatars of historical figures like Winston Churchill and the Greek god Zeus, which pupils could interact with during lessons. This brought history lessons to life and was met with "enthusiasm" from pupils, who felt the digital interactions added depth to their learning. For longer creative writing exercises, teachers employed AI image generation to support imagination – one class used a text-to-image AI to generate detailed scene illustrations for a historical narrative, pushing pupils to use "more adventurous adjectives, similes, and metaphors" in their descriptions.



Wednesday 2nd October 2024
LO: To use descriptive techniques in a portal story

Tired Apollo moaned as he tried to sleep. But it wasn't quite work-knocked he stood up and looked at his white painted walls, brown, big wooden door. The sun breaking through the windows flooding in a golden light. The smell of kfc in his kitchen as his mum cooks. The aroma fought the air to see who will stay in the room. Slowly, the warm air heated the wind thin the cold air came in balancing the scale of temperature. Outside car and people's voice drowned by the bird chior sang away as the audience the birds danced and swayed in the wind like a flag the trunk rotten it's own like the Pole of a flag. The cupboard started dancing. Inside the light grew brighter. Try to add personification The wind whispered secrets of the old gods in his ear. Apollo jumped in doing cartwheels flips out. Slowly, it all came to a stop.

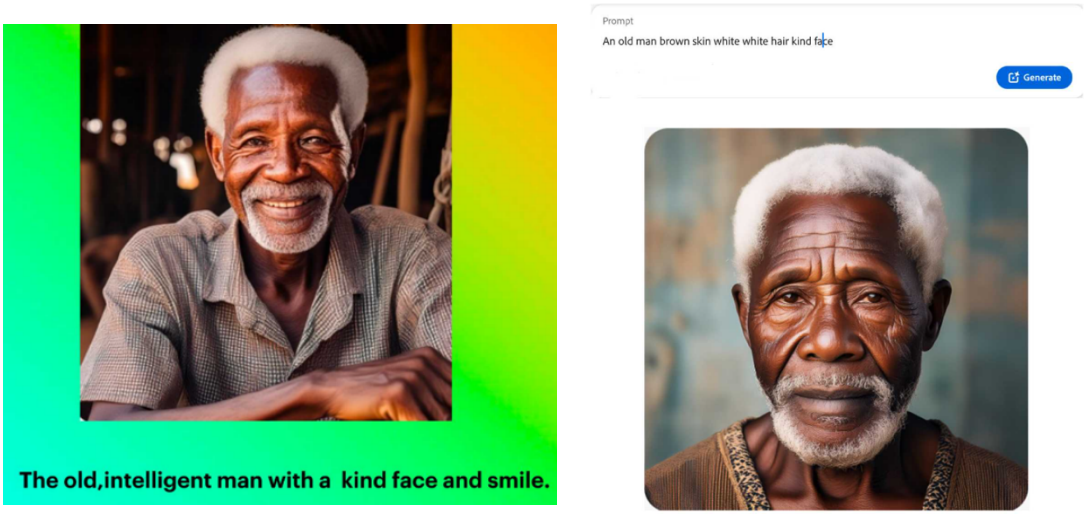
Thursday 3rd October 2024
LO: To use descriptive techniques in a portal story.

Suddenly, the jungle came alive with sound. Towering trees stood like ancient giants, their gnarled trunks wrapped in emerald vines. Brightly coloured birds flitted through the branches, their songs echoing in the warm, golden air. Above, the sky glowed with a deep azure, dotted with fluffy white clouds drifting lazily by. As Hermes Apollo ventured the thick foliage, the ground beneath him began to rumble gently, as if the earth itself was guiding him. The sun was a bright, shimmering ball of gold spreading warm light over land. The portal stood like a glowing doorway, whispering adventures and beckoning Apollo closer. Its light pulsed with excitement.

An example of writing using Mizou created as support

Similarly, in a Year 5 English lesson, pupils engaged in story writing with the aid of AI: the teacher prompted ChatGPT to co-author a story featuring a pupil and his father as characters, and then pupils took turns crafting prompts on a whiteboard for Adobe Firefly to produce accompanying images. The class found this exercise exciting and enjoyed seeing their textual ideas turned into visuals in real time. These examples show how AI was used to strengthen

visualisation in learning. As one teacher observed, AI-generated images based on text helped pupils "visualise texts in a more meaningful way" during reading lessons.



Year 5 used Adobe Firefly to create images of Papa Eze, a character in their core text "The Children of Benin"

Lesson Planning Platforms (TeachMate AI and Alia): Several teachers explored dedicated AI lesson planners. TeachMate AI, with its structured proformas, enabled staff to generate lesson plans and resources by filling in guided templates. One participant noted that TeachMate was "easy to use because of the set of proformas to fill in", which helped a novice teacher quickly build confidence in planning with AI. The platform offered a range of tools to generate different types of resources, from slides to worksheets, aligning with specified objectives. However, as teachers grew more proficient, some found the templates limiting: the fixed format could narrow the scope of prompts, and there was "not as much scope to add more detail" for truly customised outputs.

In contrast, ChatGPT provided open-ended flexibility. Initially, its blank canvas was daunting, one teacher admitted "I initially found the thought of using ChatGPT quite daunting because it was so open". Over time, though, staff discovered that by improving their prompt design, ChatGPT could yield very targeted results. Unlike template-based tools, it "allowed more freedom to really pinpoint my requests and ultimately yielded better results", with the ability to refine and iterate on responses in a conversational manner.

On the other hand, Alia (an AI lesson planner pre-loaded with UK curriculum content) provided fully fleshed-out lesson plans including slides and quizzes. Teachers valued that Alia's suggestions came with "child-friendly objectives and tasks" and ensured key curriculum content was covered. This was especially useful for early-career teachers: planning alongside an AI guide helped an ECT understand the required lesson structure (e.g. the importance of lesson starters, recaps, and checks for understanding) and significantly sped up planning of science and topic lessons. However, Alia's auto-generated slides tended to be text-heavy and

generic if used unedited. Teachers learned to treat Alia's output as a first draft – a "rough framework" to be pruned and enlivened with their own ideas.

In one case, a Year 6 teacher who relied on Alia without much adaptation ended up with 30+ slide decks that were "dull" and "lacking adaptations", underscoring the need for teacher input to maintain engagement. Pupils too noticed the difference: when shown an unedited Alia-created slide vs. a teacher-refined version, Year 5 pupils found the unedited version "easy to get lost [in]" due to over-abundant text, whereas the teacher-edited materials were clearer. This feedback reinforced that AI can supply the structure and content, but teachers must curate and simplify it for classroom use.

Olex AI (Writing Feedback): Although primarily a marking tool rather than a planning aid, Olex AI became part of lesson workflows for English writing tasks. Teachers used Olex to automatically assess pupils' writing against UK curriculum criteria and generate immediate feedback for pupils.

This real-time feedback loop was integrated into lessons – for example, as pupils drafted narratives or reports, Olex provided instant written comments and next-step suggestions, which pupils could act on while the teacher worked with others. Teachers observed that this helped pupils get quicker responses "while waiting for the teacher when live marking", potentially increasing the pace of improvement. However, they also noted limitations: the AI's feedback was often verbose and not fully accessible to younger or less proficient readers. Some pupils reported that they "struggle to read [Olex's] writing at times" and that the advice could be hard to parse. Others simply preferred human feedback: one Year 5 pupil commented, "I prefer when a real person reads my work . . . [the teacher] give[s] you more feedback . . . Olex gives me one thing to work on written in a paragraph".

These insights demonstrate that while AI-supported marking can enhance feedback immediacy, teachers still needed to mediate and supplement it to ensure it was useful to each learner. Notably, the inclusion of Olex in lesson planning cycles did influence subsequent planning – teachers could adjust the next lessons based on common issues the AI identified in pupils' writing. In this way, AI tools for assessment fed back into planning, helping to personalise follow-up lessons according to pupils' needs.

Overall, these examples show how AI was used as a multi-faceted support in lesson planning: from generating content and ideas (e.g. model texts, quizzes, images) to providing structure and ensuring curriculum coverage. Crucially, teachers across the Trust did not treat AI outputs as final lesson plans, but rather as a starting point or enhancement. As one reflection put it, the AI acts as a "collaborative tool rather than a replacement for teacher expertise". The

creative and professional judgment of teachers remained central in selecting, refining, and delivering the lesson content that AI helped produce.

2.1.2 Shifts in Classroom Practice and Pedagogy

The introduction of AI-assisted planning brought notable shifts in classroom practice and pedagogical approaches. By streamlining the planning phase, AI enabled teachers to deliver lessons that were more interactive, differentiated, and resource-rich. Observation records and staff journals indicate several key changes in teaching practice as AI tools became integrated into lessons:

Enhanced Lesson Structure and Consistency: Teachers reported that lesson plans generated with AI tended to be well-structured and sequenced, which led to more consistent teaching across classes. In observations, senior leaders noted improved coherence – for example, all classes were seen following the agreed medium-term plan with clear objectives and scaffolded activities.

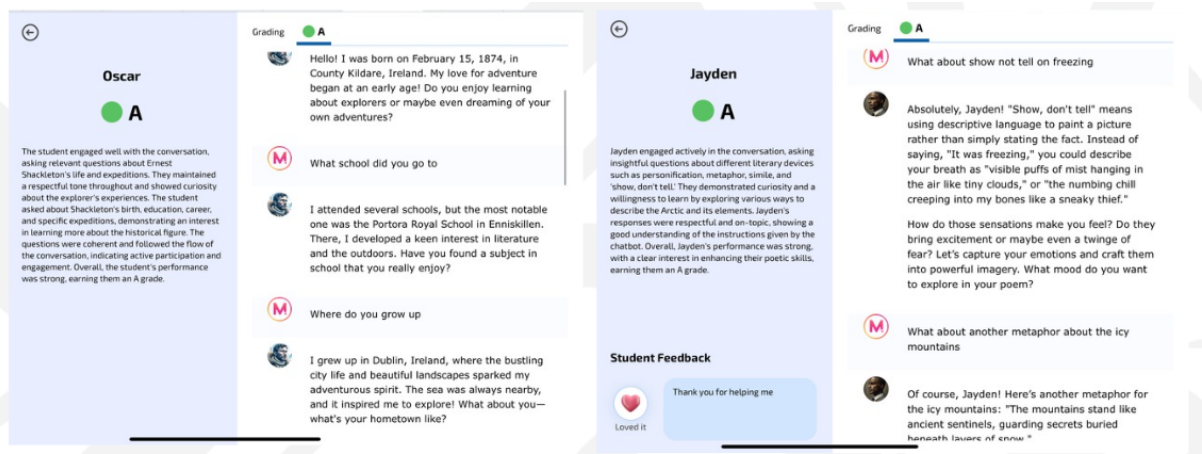
Previously, there was variation in quality (e.g., some teachers providing weak exemplars or omitting grammar integration), but with AI support, even the less experienced teachers were presenting "high-quality writing models" tailored to the topic and weaving key skills (e.g. grammar points) into each lesson. As a result, pupils were "immersed in higher-quality examples" of work specific to their class topics, raising the overall standard of instruction.

One early-career teacher improved his lesson delivery markedly once he began using ChatGPT-guided plans. Observers noted "improved structure of lessons, engaging high-quality models, [and] clear ideas for input" in his teaching, as opposed to the more uneven lessons pre-AI. This suggests that AI planning tools have been an equaliser, helping to standardise effective pedagogical practices across the Trust.

Deeper Subject Knowledge and Resource Use: AI assistance also influenced how teachers approached subject content. With AI able to quickly generate or summarise information, teachers felt better prepared with background knowledge and rich content to bring into lessons. For instance, teachers used ChatGPT to swiftly summarise complex texts or generate facts/examples to illustrate a concept. One teacher explained that ChatGPT could "use . . . government curriculum content and . . . feed into resources and lesson ideas, meaning the correct year group content is woven within planning". This meant lessons more reliably covered the intended knowledge depth.

In humanities, some teachers went further by employing AI in the classroom to provide content: Year 4 pupils conducted an "interview" with a historical figure via an AI chatbot

(Mizou), effectively outsourcing some factual Q&A to the AI. Pupils found this engaging and informative, as the AI could role-play experts and immediately answer questions, reinforcing their understanding of historical events.



Students used Mizou to talk to different explorers for their biography & diary writing

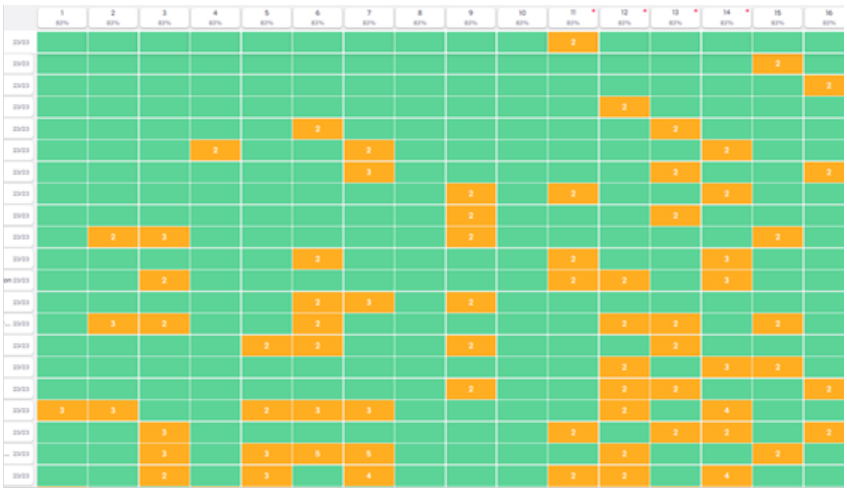
Such practices indicate a pedagogical shift towards using AI as a research and visualisation aid during lessons – rather than the teacher simply telling pupils information, the AI can present knowledge in novel ways (avatars, Q&A, generated imagery), and the teacher then builds upon it. Teachers have also increased their use of multimedia resources – with AI readily producing relevant images or even prototype slide decks, classrooms saw more visual aids and interactive content aligned with lesson objectives. Both pupil and teacher feedback highlighted that lessons became more "visually stimulating" and memorable when AI-generated media (images, animations, sound effects) were incorporated.

Children in Reception learnt about space and designed their own Aliens. They then used AI to turn their drawings into images.

Greater Differentiation and Adaptive Teaching: One of the most significant pedagogical impacts was on differentiation – adapting teaching to meet diverse pupil needs. AI-augmented planning made it easier for staff to include differentiated tasks and scaffolded materials. Many AI-generated lesson plans explicitly built in levels of challenge or modified activities for different ability groups. Follow-up data show that teachers' confidence in adapting plans for SEND and EAL pupils rose dramatically – initially, only 7% felt their planning was highly adaptable, whereas after the AI trial, 100% of teachers reported that their lesson plans could be readily tailored to varied learners.

In practice, this meant lessons offered multiple pathways for pupils to access content. Year 3 pupils noticed that AI-planned lessons provided "more support" and alternative ways to learn a concept (e.g. visual animations, quizzes, and text combined) compared to a one-size-fits-all approach.

Teachers also began using data from AI tools during lessons to make on-the-fly adjustments. For example, classes using Magma Maths (an AI-enhanced maths practice app) received instant analytical feedback on pupil performance. Teachers observed that by reviewing Magma's live results during a lesson, they could swiftly regroup pupils and assign tasks at different levels of difficulty, forming "fluid groups rather than having set groups".



Year 4 Teachers use Magma Maths - heatmaps for lesson assessment and support in lesson times

Year 4 Teachers Use the Stats wheel in Magma Maths to assess progress within a unit or series of lessons

In Year 5, teachers used Magma as an AfL (assessment for learning) activity after the lesson input: children answered a few questions on their devices, and the number correctly directed them to an appropriate follow-up task.

This immediate differentiation ensured each pupil was appropriately challenged or supported in the same lesson, a practice that was much harder to execute before. Classroom drop-ins noted that teachers had a "better understanding of the children's ability" in real time and could "make quicker adaptations . . . based on [AI] data", rather than waiting to review assessments after class.

Such responsiveness represents a shift to more dynamic, data-informed pedagogy, where lesson pacing and grouping can be modified on the spot.

Increased Pupil Engagement and Pupil Voice: AI-enriched planning corresponded with higher pupil engagement and opportunities for pupil input. As lessons became more interactive, pupils were not just passive recipients but active participants – sometimes, even co-creators. In some classes, teachers invited pupils to help direct the AI tools (for example, brainstorming prompt ideas for a story or deciding what image to generate), effectively integrating pupil voice into the lesson content creation. A notable instance occurred in a Year 5 writing lesson – pupils were allowed to write their own prompts for the text-to-image AI, which empowered them to shape the visual aspect of their story.

This kind of involvement gave pupils a sense of ownership and agency in their learning. Pupil feedback across the board was positive about these changes. In structured interviews, many pupils stated that technology and AI made lessons "more interactive, engaging, and visually stimulating".

They particularly enjoyed novel activities introduced via AI (like the classwide quizzes, puzzles, or role-play scenarios), often remarking that lessons were now "more fun" and memorable. Engagement isn't just about enjoyment; pupils also believed they learned more in AI-supported lessons because "we're doing things, not just listening", as one Year 5 pupil explained.

Also at Northumberland Heath Primary School, Year 2 explored the exciting topic of castles! They began by looking at photos of real castles and describing their features. Using what they had learned, the children then created their own imaginative castles using the AI art tool Craiyon. A brilliant blend of history, creativity, and digital skills!

The use of AI seemed to free teachers to incorporate more hands-on and collaborative learning strategies (e.g. the Roman market role-play which was inspired by an AI suggestion), thereby amplifying pupil voice and choice in activities. It's important to note that teachers maintained pedagogical control: pupils recognised that even with AI involved, "the teacher picks the things from the AI and makes it into the lesson" based on what they know about the class. This synergy allowed teachers to be more responsive to pupils' interests and needs.

Overall, the classroom climate shifted towards a more pupil-centred model, supported by AI-driven resources. Teachers, having spent less time on plan preparation, could devote more energy during class to facilitation, observation, and one-to-one support – roles that directly impact learning.

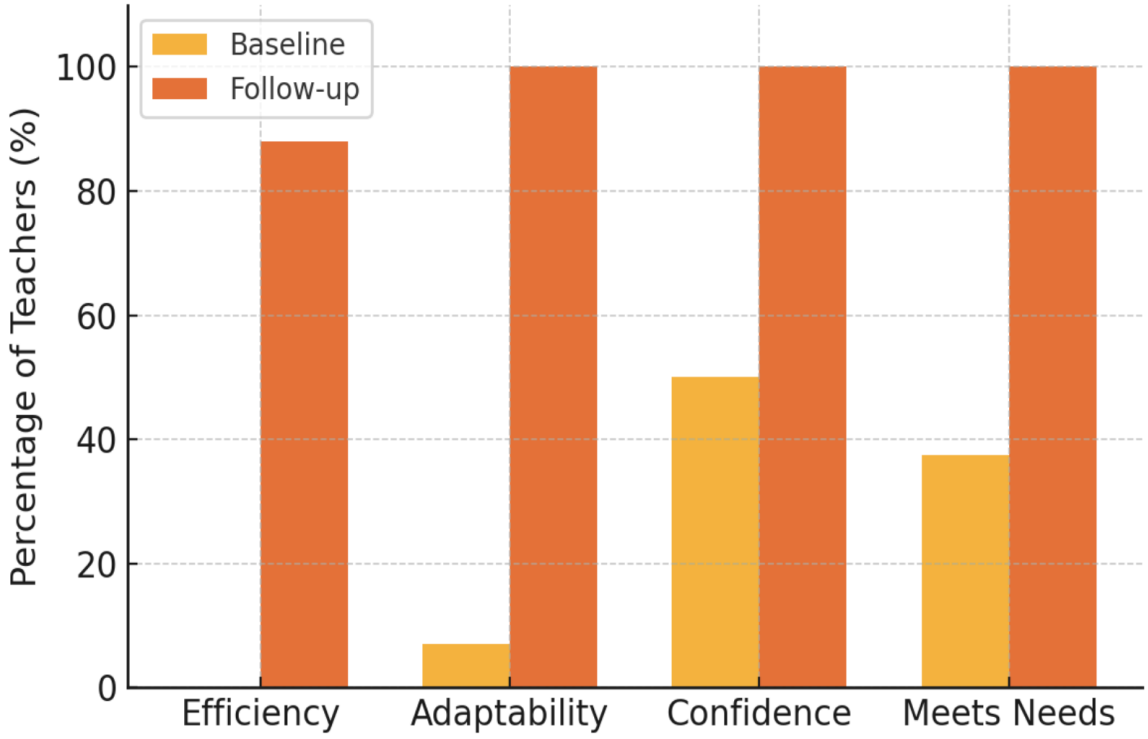


Figure 1. Impact of AI on Planning (Baseline vs Follow-up)

Changes in key planning and teaching indicators from baseline (Nov 2024) to follow-up (Feb 2025). After integrating AI into lesson planning, teachers reported large gains in efficiency, confidence, differentiation, and meeting pupil needs (data from AI Planning Project).

The overall trend in practice was a move toward more efficient and effective planning translating into richer learning experiences. Teachers' own survey responses underline this transformation. Initially, none of the staff rated their lesson planning process as efficient, but by the project's end, 88% described it as "efficient" or "very efficient". Similarly, the need to constantly revise lesson plans dropped sharply – previously 25% said they "always" had to revise plans, whereas 0% felt that way after using AI, with most now rarely needing mid-course corrections.

Teachers gained confidence that their first-run plans would work, since AI helped double-check the alignment and fill any gaps. Notably, every teacher in the study agreed that their planning now consistently meets their class's needs, up from only 37.5% at the start of the year.

In practical terms, this means lesson objectives, content, and activities are better tuned to pupil abilities and curriculum goals. Such data reinforces what was observed qualitatively: AI-

assisted planning led to better-prepared lessons and empowered teachers to teach in more adaptive, creative ways. The pedagogical shifts, more visual and varied instruction, real-time differentiation, and greater pupil engagement, collectively represent a transformation in teaching and learning practice at Woodland Academy Trust.

Crucially, these changes were achieved without reducing the teacher's role; instead, AI acted as a catalyst for teachers to exercise their pedagogy more fully.

2.1.3 Teacher Reflections and Practice Evolution

Teachers involved in this initiative have reflected on significant professional growth and shifts in mindset as they incorporated AI into their planning. Many started out sceptical or uncertain and emerged with greater confidence, a refined skill set (especially in prompt design), and a clearer understanding of how to balance AI input with their own expertise.

The reflective journals of participants provide insights into this evolution of practice.

Initial Hesitation to Confident Adoption: At the outset, several teachers were cautious about AI. For example, one teacher noted they were "sceptical about AI's ability to adapt to the nuances of my teaching style" when they first began experimenting. Similarly, another teacher described the open-ended nature of tools like ChatGPT as "quite daunting" initially. This wariness was rooted in uncertainty about AI's reliability and how to control its outputs. However, through hands-on use and support from colleagues, these same teachers grew much more comfortable and adept. One teacher wrote that, over time, they "integrated AI into various aspects of [their] work" and found it increasingly indispensable for tasks like refining objectives and generating ideas.

One leader took a proactive approach to conquer the learning curve: they developed "mega-prompts", which are detailed, structured instructions given to AI to yield very specific planning documents. This strategy allowed them to harness AI for medium-term planning with precision. As they explained, "One of the most effective ways I have utilised AI in lesson planning has been through the creation of mega-prompts, detailed, structured prompts that outline specific requirements for medium-term knowledge documents and knowledge organisers".

By clearly defining what they needed, they could trust the AI to produce useful outlines, thereby overcoming initial uncertainties. **Over the course of the project, every participating teacher reported a jump in their confidence** regarding lesson planning. Survey data corroborate this: at baseline only half felt confident in their planning skills, but after using AI, 100% of teachers felt "confident or highly confident" in this area.

This boost in confidence is echoed in personal reflections, teachers frequently mentioned feeling more "adept at using AI to solve problems [and] create suggestions" as time went on. In short, initial trepidation gave way to empowerment as teachers learned by doing and saw positive results in their classrooms.

Improved Prompt Crafting and AI Literacy: A key aspect of teachers' professional growth was learning how to "talk to" the AI systems effectively. Early in the project, some outputs were hit or miss, leading staff to realise that the quality of AI suggestions "depended on the prompt used". Through training sessions and trial and error, teachers refined their questioning techniques. The aforementioned leader's use of mega-prompts is one advanced example of this prompt engineering skill – by providing AI with rich context and specific success criteria, they obtained far more useful plans for their lessons and for colleagues. Another teacher reflected that prompt development "has helped . . . focus so that I am more likely to achieve what I am looking for", highlighting that crafting clearer queries led to more relevant results. One teacher also noted that, as they continue exploring AI, their "next step is to focus on refining AI prompts to generate more tailored and precise responses", indicating that prompt refinement became an ongoing professional learning goal.

This growing prompt literacy enabled staff to use AI for increasingly sophisticated tasks (for instance, asking ChatGPT not just for a lesson idea but for a differentiated set of scaffolded activities using specific vocabulary, or feeding it curriculum documents to ensure alignment).

Teachers essentially learned to "coach" the AI to act as a more effective planning partner. The evolution in prompting skill is a notable professional development outcome – teachers are now more fluent in leveraging AI tools, and some have become go-to experts mentoring others (as seen when staff commonly ask each other, "Have you asked ChatGPT?" as a quick way to troubleshoot planning dilemmas).

Balancing AI Input with Professional Judgment: Throughout their reflections, teachers consistently affirm that AI is a powerful aid, but not a substitute for human judgment. Early experiences reinforced this – for example, one teacher discovered that for a less common text (Wild Is the Wind), ChatGPT's suggestions were off-target until they provided more guidance, and even then the results needed significant editing. Such incidents taught staff that AI outputs are not infallible. By the project's conclusion, there was a strong consensus that the teacher's role is to filter, refine, and decide on AI contributions. One participant emphasised that while AI-generated planning documents can ensure coverage and structure, the teacher must ensure they are "explicitly and purposefully" covering the right knowledge and adjust them for engagement. Another teacher put it succinctly: "It is very much necessary for teachers to use their expertise and use AI as a tool rather than just blindly take all suggestions".

This sentiment, viewing AI as an assistant, was shared across journals. Teachers described how they would review AI outputs and modify language, examples, or tasks based on what they knew about their pupils. For instance, a Year 5 teacher used an AI-generated model text but noticed some vocabulary was too advanced, so "the teacher had to change [the words] to make it more suitable for us," as their pupil recalled. This illustrates the teacher interjecting professional judgment to adjust AI material to the right level. Teachers also learned when not to use AI. One journal entry reflected on whether "AI is always quicker – sometimes it may still be quicker to search for ready-made resources" or rely on one's own ideas rather than starting from scratch with AI.

In other words, teachers became strategic about deploying AI where it adds value and sticking to traditional methods when those are more efficient or pedagogically sound. By honing this discernment, teachers reported feeling more in control of the technology, rather than led by it.

Shifts in Teacher Mindset: Perhaps the most profound change has been in how teachers perceive AI in the context of their profession. Initially, some saw it as a novelty or even a threat to their way of doing things. Now, teachers describe AI as an "ally" in their practice. One teacher concluded that AI "has served as a collaborative tool rather than a replacement for teacher expertise", enhancing their ability to craft engaging lessons.

In their reflection, one participant wrote that AI has "significantly transformed my teaching practice . . . enhancing efficiency in planning [and] creating more personalised and engaging learning experiences", while reinforcing the central role of human expertise. This highlights a shift from scepticism to appreciative adoption; teachers recognise that AI can handle routine or labour-intensive parts of planning, which frees them to focus on higher-value teaching activities.

Several teachers mentioned that because AI cut down planning time, they could invest more effort in assessing pupil work, tailoring feedback, or simply thinking more deeply about how to deliver the content. In essence, educators moved toward a mindset where AI is seen as a time-saving colleague.

Importantly, teachers also became more reflective about their own pedagogy through this process. Engaging with AI prompted discussions about what constitutes a "good" lesson (since they had to evaluate AI's lesson proposals) and made implicit knowledge explicit. Another teacher remarked that using Alia forced them to articulate the elements of a strong lesson and not take outputs for granted, ultimately improving their understanding of lesson design.

In collaborative settings, teachers shared AI-derived ideas with each other, which fostered a culture of experimentation and continuous improvement. By the end of the project, the staff had collectively evolved their practice, developing what one leader termed a "structured approach" to delivering both substantive and disciplinary knowledge with the help of AI tools. These teacher reflections depict a journey of professional evolution.

Confidence in planning has soared, not just due to saved time, but because teachers now have an expanded toolkit and skill set for lesson design. They have learned how to craft effective prompts, critically appraise AI outputs, and weave those outputs into their expert teaching practice. Perhaps most telling is how teachers characterise their relationship with AI after this experience: not as a crutch, but as a co-planner. As one leader and their colleagues demonstrate, when used thoughtfully, AI can bolster teachers' own creativity and decision-making rather than diminish it. This aligns with the Trust's strategic vision of AI in education, the technology is "capable of enhancing but not replacing the human touch in teaching".

Teachers now embrace AI as a valuable partner in their planning process, one that amplifies their effectiveness while leaving final pedagogical decisions firmly in their hands. The evolution in practice and mindset sets a strong foundation for continued innovation in teaching and learning across Woodland Academy Trust.

2.2 Staff Development and Professional Learning

Staff development and professional learning have been pivotal components of Woodland Academy Trust's digital transformation journey, particularly in the integration and adoption of Artificial Intelligence (AI) tools for teaching and learning. This sub-chapter outlines the continuing professional development (CPD) strategies employed, examines staff attitudes and competencies around AI, and explores the emergence of new leadership structures and distributed expertise across the Trust. It also acknowledges challenges encountered, highlights sustainability measures, and reflects on alignment with broader educational best practice.

2.2.1 CPD Strategies and Uptake

Recognising that successful digital transformation hinges as much on people as on technology, Woodland Academy Trust adopted a comprehensive, multi-layered approach to professional learning. The Trust's CPD strategy was designed to ensure that staff were not only technically proficient but also pedagogically confident in embedding AI tools meaningfully into their practice. This approach aligns with the Education Endowment Foundation's (EEF) guidance, which highlights that effective professional development should focus on building knowledge, motivating staff, developing teaching techniques, and embedding practice over time (EEF, 2021).

The professional development offer was structured around the following key elements:

- **Foundational training**. Early CPD sessions focused on ensuring all staff had a baseline understanding of AI concepts, ethical considerations, and specific AI tools being piloted within the Trust. Sessions emphasised practical application over theory, ensuring immediate relevance to day-to-day teaching and planning.
- **Embedded workshops**. Throughout the research project, staff participated in hands-on workshops that allowed them to explore AI planning tools in a supported environment. These workshops were timetabled within directed time to emphasise importance and were delivered in a coaching model to encourage dialogue and peer learning.
- **Personalised CPD pathways**. Recognising different starting points, the Trust introduced differentiated CPD pathways. Staff self-selected sessions based on confidence levels and interests, including tailoring AI outputs for SEND and EAL learners.
- **Peer collaboration**. Informal networks and working groups were encouraged to promote peer-led professional learning. Staff showcased successful practice and shared resources, normalising a culture of curiosity, experimentation, and collective growth.
- **External expertise**. Partnerships with digital education specialists ensured access to emerging best practice. Inputs were aligned with national standards, including DfE guidance on technology in schools, ensuring relevance to broader educational policy. This reflects findings from the EEF's review, which emphasises the value of sustained collaboration among teachers to improve pedagogy and confidence (EEF, 2021).

Staff feedback indicated that the perceived relevance, practicality, and supportive culture underpinning the CPD offer were key drivers of engagement.

2.2.2 Staff Attitudes and Competencies Around AI

At the outset of the project, staff attitudes towards AI were mixed, ranging from enthusiastic early adopters to cautious sceptics. Baseline data revealed that while 75% of staff felt comfortable using general digital tools, fewer than 20% had prior experience with AI in education.

Over the course of the project, significant attitudinal and competency shifts were observed:

- **Increased confidence**. By the conclusion of the pilot, 100% of participating staff reported feeling comfortable or very comfortable using digital tools for lesson planning. Furthermore, 88% of staff reported that AI-supported planning improved their efficiency and reduced their workload, reflecting growing confidence in using AI tools as part of their professional practice.

- **Reduced anxiety**. Initial concerns about AI 'replacing' teachers or producing low-quality resources lessened as staff experienced AI's practical benefits. Many noted that AI-supported lesson plans allowed for greater responsiveness during teaching, easier adaptation for diverse learner needs, and more time to focus on pedagogy.
- **Professional curiosity.** Beyond basic use, many staff began independently exploring AI applications for assessment, intervention planning, and curriculum resource creation. This shift from compliance to curiosity indicated a deeper professional engagement with AI as a tool for enhancement.
- **Ethical literacy**. CPD inputs on bias, safeguarding, and data privacy built a culture of ethical AI use. Staff demonstrated an increased ability to critically appraise AI outputs, recognising potential pitfalls while harnessing benefits responsibly. This reflects recommendations from the DfE's 2020 EdTech Strategy and the Chartered College of Teaching, which advocate for equipping educators with the knowledge to critically evaluate emerging technologies and make informed, ethical decisions.

Competency development was evident across key elements, including technical proficiency, critical evaluation of AI outputs, and the ability to adapt AI-generated materials to suit the needs of individual pupils.

2.2.3 Emerging Leadership and Distributed Expertise

A striking development has been the emergence of leadership and distributed expertise at all levels:

- **Digital champions**. In each school, as well as a formal digital champion network, informal digital champions have emerged — practitioners who have developed advanced expertise and supported colleagues through mentoring, coaching, and resource sharing. Many of these staff members were previously classroom teachers without formal leadership responsibilities.
- **Middle leader engagement**. Subject and phase leaders increasingly embedded AI discussions into curriculum planning meetings and staff briefings. This integration of digital thinking into core school business reinforced digital transformation as a whole-school/Trust priority rather than an isolated initiative.
- **Cross-school networks**. Digital working groups were established, enabling staff across schools to collaborate, share challenges, and refine best practices. These networks have proven sustainable, continuing to meet and share innovation beyond the formal project window.

Cross trust training & networking

- **Innovation mindset**. Perhaps most importantly, a mindset of inquiry, reflection, and innovation has been cultivated. **Staff now feel empowered to trial new approaches**, reflect on evidence, and adapt practice collaboratively — hallmarks of a high-performing, self-improving system. This reflects the EEF's assertion that empowering teachers to take ownership of their professional development leads to improved implementation and sustained change (EEF, 2021).

Leadership for digital innovation is no longer seen as the remit of a few specialists but is distributed across the Trust, strengthening organisational resilience and capacity for future growth.

2.2.4 Challenges and Barriers

While the project achieved considerable success, challenges inevitably arose:

- **Initial scepticism**. Some staff initially expressed reluctance, concerned about workload implications or sceptical of AI's value. Structured early wins – such as showcasing time-saving impactful examples – helped to shift perceptions.
- **Technical glitches**. Early-stage technical issues, including login difficulties and inconsistent tool reliability, occasionally hampered confidence. These were quickly addressed through responsive IT support and clear troubleshooting guidance.
- **Variability in uptake.** Despite high overall engagement, levels of early adoption varied between schools. Leadership teams responded flexibly, allowing for contextual adaptation while maintaining overarching consistency.

By anticipating, acknowledging, and addressing these challenges openly, the Trust strengthened staff buy-in and modelled a learning-oriented approach to change management.

2.2.5 Sustainability and Next Steps

To ensure sustainability, the Trust has taken steps to embed professional learning into ongoing structures:

- **Ongoing CPD opportunities**. AI-focused training remains part of regular CPD offers, including for new staff during induction.
- **Champion networks**. Digital champions continue to meet termly to share updates and cascade learning, with informal collaboration taking place regularly.
- **Internal resources**. A growing bank of Trust-wide digital resources supports consistent quality and ensures knowledge is not lost due to staff turnover.

2.2.6 Alignment with Best Practice

The Trust's CPD and professional learning approach aligns closely with national and international best practice in digital education. The Department for Education's 2020 EdTech Strategy highlights the importance of sustainable digital training, peer learning, and ethical AI use – all principles reflected in the Trust's approach.

The emphasis on professional autonomy, differentiated learning, and critical reflection mirrors research by the Education Endowment Foundation and the Chartered College of Teaching, further validating the Trust's methods.

2.2.7 Conclusion

Woodland Academy Trust's commitment to staff development and professional learning has been instrumental in embedding AI-supported planning across its schools. Through a carefully designed CPD offer, strong leadership, and a culture of distributed innovation, the Trust has achieved not only technical adoption but profound shifts in practice, mindset, and capacity.

While challenges were encountered, the Trust's reflective and responsive approach ensured sustained progress. The emergence of distributed expertise and the development of future-focused leadership structures position Woodland Academy Trust as a model for effective, ethical, and sustainable digital transformation in primary education.

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2.3 Inclusive Practice and Accessibility

The Woodland Academy Trust's AI-supported lesson planning initiative was developed not only to explore efficiencies in planning, but to bring equity in access to high-quality learning to the forefront. The project explicitly aligned with the Trust's strategic commitment to inclusion, particularly in supporting learners with Special Educational Needs and Disabilities (SEND), English as an Additional Language (EAL), and those from disadvantaged socio-economic backgrounds. **Inclusive practice at Woodland is not viewed as an add-on, but as foundational** – a lens through which all innovation is filtered. (CAST, 2018).

This section examines the extent to which the integration of AI tools into planning processes contributed to a more inclusive learning environment. Drawing on quantitative data, qualitative reflections, and in-depth case studies, it explores three interconnected themes:

1. The impact of AI on planning for learners with additional needs.
2. The role of AI as a leveller in addressing disadvantages and language barriers.
3. The observed shifts in learner engagement and agency within AI-informed classrooms.

These findings are contextualised within Universal Design for Learning (UDL) principles, with reflections on limitations, ethical safeguards, and implications for future practice.

A child being assisted with an iPad by a member of staff

2.3.1 Impact on Learners with Additional Needs

2.3.1.a Staff Baseline and Project Aims

Prior to implementation, only 62% of participating staff reported confidence in planning for SEND and EAL learners using traditional methods. While differentiation was viewed as essential, teachers consistently described it as "time-consuming," "unsustainable," and "often reactive rather than proactive" (Smith & Tyler, 2011) (Baseline Survey, Autumn 2024).

A key research objective was to assess whether AI-supported planning could streamline the creation of scaffolded, personalised resources – not replacing the professional judgement of teachers, but providing accessible, adaptable starting points for bespoke interventions.

2.3.1.b Differentiation Through AI: Adaptive and Efficient

Across all participating schools, AI was used to generate materials that catered to a wide range of cognitive and communication profiles. Examples included:

- **Visual schedules** for learners with autism.
- **Task breakdowns** with simplified language for pupils with processing delays.
- **Positive behaviour scripts** for learners with SEMH needs.
- **Alternative question sets** for those below age-related expectations.

Teachers praised AI's ability to produce a 'first draft' of differentiated material in minutes – a process that previously took up to an hour per activity. While all materials were reviewed and often edited, staff reported that the AI provided both content and structure, enabling them to spend more time on refinement and classroom interaction. (Rose & Dalton, 2009)

2.3.1.c Case Study 1: SEMH Support Through Social Stories (Year 4)

A Year 4 teacher used TeachMate AI to generate a social story entitled *Jacob and the Toys* for a pupil with SEMH needs who struggled with transitions. The AI-generated version used affirming language and clear sequencing. After minor edits for tone and vocabulary, the story became a daily part of the pupil's routine.

"It helped regulate his anxiety — he'd refer back to the story and point to the images. I wouldn't have had the time or clarity to create this from scratch during a normal planning week." – Year 4 teacher

This approach was later adapted for another pupil with separation anxiety, using ChatGPT to tailor emotional language and context. Staff observed a decrease in incidents of distress and increased verbalisation of feelings by both pupils.

2.3.1.d Case Study 2: Visual Instruction for Independence (Year 3)

A Year 3 teacher used AI to produce step-by-step instructions for a science investigation. The instructions were supplemented with Widgit-style visuals and symbols for a pupil with a speech and language plan.

"He followed the whole sequence on his own – no prompts, no waiting. The visual sequencing was transformational." – Year 3 teacher

The pupil, previously dependent on adult guidance for each stage of multi-step tasks, completed the entire investigation independently for the first time. This marked a significant increase in learner autonomy and was identified by the school's SENCo as a breakthrough in that child's development. (Luckin et al., 2016)

2.3.1.e Additional Examples of Use

One Year 5 teacher used AI to create scaffolded writing tasks across three levels of complexity. A pupil with moderate learning needs independently completed the middle-tier task without support – the first time he had done so since joining the school.

Several teachers used AI to script communication activities for pupils with ASD, including greetings, turn-taking games, and question prompts, which were rehearsed in social skills groups.

Across the Trust, teachers noted that **AI-supported planning enabled access without stigma**, allowing learners with additional needs to participate in shared activities alongside their peers.

2.3.2 Technology as a Leveller: EAL, SEND and Disadvantaged Learners

One of the most consistent themes across the research was AI's potential to reduce the gap in learning access caused by language, literacy, and resource-based barriers. Rather than "simplifying" content, staff reported that **AI enabled them to present complex ideas in a more accessible, multimodal, and culturally responsive way.**

2.3.2.a Supporting English as an Additional Language (EAL)

Teachers used AI to:

- **Translate** classroom instructions and home learning tasks into dual-language formats.
- Create **visual glossaries** for science and history topics.
- **Reword curriculum objectives** using age-appropriate and culturally sensitive language.

A Year 1 teacher created a Romanian-English home learning letter about 'Spring animals' using ChatGPT. The pupil's parent later commented that this was the first time they could meaningfully engage with their child's learning.

"AI gave me the confidence to include families in the learning conversation –
not just pupils." – Year 1 teacher

In multiple cases, AI translations served as bridges for relationship-building with families who had previously not responded to school communications.

2.3.2.b Addressing Disadvantage Through Resource-Light Planning

In high-Pupil Premium contexts, AI helped staff reduce reliance on print-heavy or resource-intensive activities. Teachers used AI to generate:

- prompt-based discussion activities requiring no paper or prep
- audio-scripted storytelling with images for oral retelling
- scaffolded tasks accessible via shared iPads without additional handouts.

A Year 6 teacher explained that AI allowed her to create three versions of the same maths problem-solving task – each adapted for different reading levels – in under 10 minutes:

"Before this, I'd either choose one version and over-scaffold it, or not differentiate at all. Now everyone's working on the same problem – but they're doing it their way."

2.3.2.c Data Snapshot

- 95% of teachers using AI to support EAL or disadvantaged learners reported that it increased the speed and quality of differentiated materials.
- 89% said AI helped them provide more equitable access to learning without "lowering the bar" (Staff survey, Spring 2025).

2.3.3 Observed Changes in Learner Agency and Engagement

While the primary focus of the research was planning practice, changes in learner behaviour and engagement were among the most striking outcomes reported by staff.

2.3.3.a Quantitative Findings

Based on follow-up surveys and focus groups:

- 82% of teachers reported increased pupil engagement in AI-informed lessons.
- 78% noted improvements in learner independence, particularly where tasks had clearer scaffolding.
- **91% of KS2 pupils said they preferred lessons that involved "new ways of thinking"** or "more surprising activities" (Pupil Voice, Spring 2025).

2.3.3.b Case Study 3: Roman Riddles Ignite Curiosity (Year 4)

A Year 4 teacher used ChatGPT to generate riddles on Roman life. Pupils worked in pairs to solve them, then developed their own. A reluctant reader became deeply engaged, ultimately presenting his riddles to a visiting member of staff.

"They didn't even know it was AI-generated. But they wanted to own the learning, make it theirs." – Year 4 Teacher

The activity was extended over two days due to pupil enthusiasm and spontaneous peer teaching.

2.3.3.c Case Study 4: Independent Task Execution for SEND Pupil (Year 3)

In another class, a pupil with an EHCP completed a science investigation unaided using an AI-generated visual instruction sheet. The teacher noted that the child had "never previously completed a full task start to finish without an adult." This growth in **executive function and agency** was corroborated by the SENCo and observed in a follow-up video.

2.3.3.d Engagement Through Novelty, Clarity, and Structure

Teachers attributed increased engagement to:

- **Novelty and voice**: unusual scenarios, riddles, and prompts.
- **Clarity**: AI-generated materials were often more structured than teacher-written versions.

- **Scaffolded independence**: AI-supported UDL principles – enabling access, not dependence.

Reported Impact of AI on Learner Inclusion

This bar chart illustrates how staff and pupils reported increased engagement, independence, and enjoyment of AI-supported lessons across the Trust. These data points support the qualitative findings and demonstrate consistent benefits for inclusion.

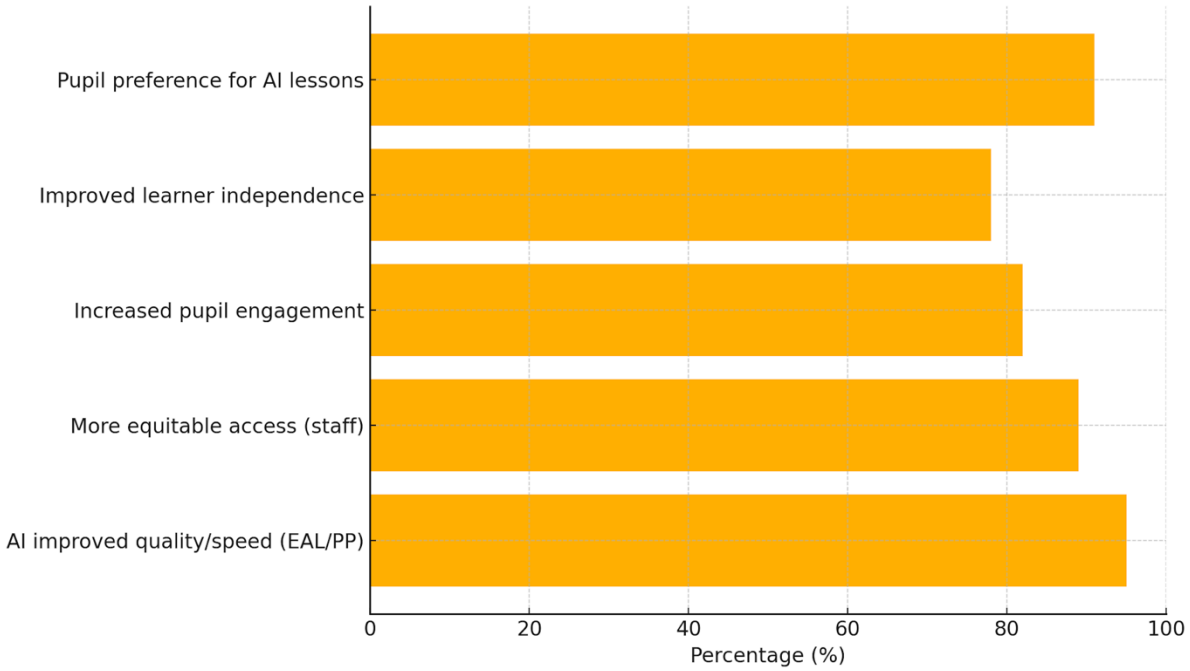

Figure 2. Reported Impact of AI on Learner Inclusion

AI Use and Inclusion Outcomes

This table maps specific AI tools to the inclusive strategies they enabled, along with concrete learner outcomes. It shows how different planning tools were flexibly deployed to meet a wide range of learner needs.

	AI Tool Used	Inclusion Strategy	Learner Outcome
1	TeachMate AI	Generated SEMH social story for transition support	Reduced anxiety; increased routine engagement (EYFS)
2	ChatGPT	Tiered writing prompts for mixed-ability learners	Independent completion of tasks by pupil with MLD (KS2)
3	ChatGPT	Step-by-step visual instructions for science	SEND pupil completed science task without TA prompts
4	TeachMate AI	Dual-language letters for EAL engagement	Increased parental engagement and pupil confidence
5	ChatGPT	Curriculum rephrasing and culturally sensitive examples	Improved comprehension and vocabulary access for EAL pupils

Figure 3. AI Use and Inclusion Outcomes Table

2.3.3.e Ethical and Practical Safeguards

All AI use adhered to the Trust's safeguarding and data privacy protocols. No identifiable pupil information was entered into AI platforms. Teachers critically reviewed outputs for:

- bias or stereotype reinforcement
- age and stage appropriateness
- cultural accuracy and sensitivity.

The project embedded professional agency throughout. Teachers used AI not as a replacement, but as an accelerator for reflective planning.

2.3.3.f Limitations and Areas for Development

- AI-generated materials often required **refinement** for younger learners (EYFS and KS1).

- Some content lacked nuance for **complex SEND profiles**.
- **Ongoing CPD** is needed to support effective prompt engineering and maximise impact.

"AI got me 70% of the way there – but the last 30% is where my knowledge of the child came in." – KS2 Teacher

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2.4 Workload, Efficiency and Wellbeing

2.4.1 Staff-Reported Time Savings

The implementation of AI tools in lesson planning has yielded substantial time savings for teaching staff at Woodland Academy Trust. Both quantitative survey data and qualitative reflections demonstrate significant reductions in planning time and administrative burden, though the impact on overall workload varies depending on how the freed time is reallocated.

2.4.1.a Quantitative Evidence of Time Savings

The comparative survey data reveals dramatic improvements in planning efficiency following AI implementation. Figure 4 illustrates the most significant finding: average weekly **planning time was reduced by 52.5%,** dropping from 10 hours per week in the initial survey (November 2024) to 4.75 hours in the follow-up survey (February 2025). This represents a time saving of 5.25 hours per week for the average teacher. The reduction was consistent across all measures, with median planning time decreasing from 7 to 4 hours (42.9% reduction) and maximum planning time falling from 24 to 10 hours (58.3% reduction).

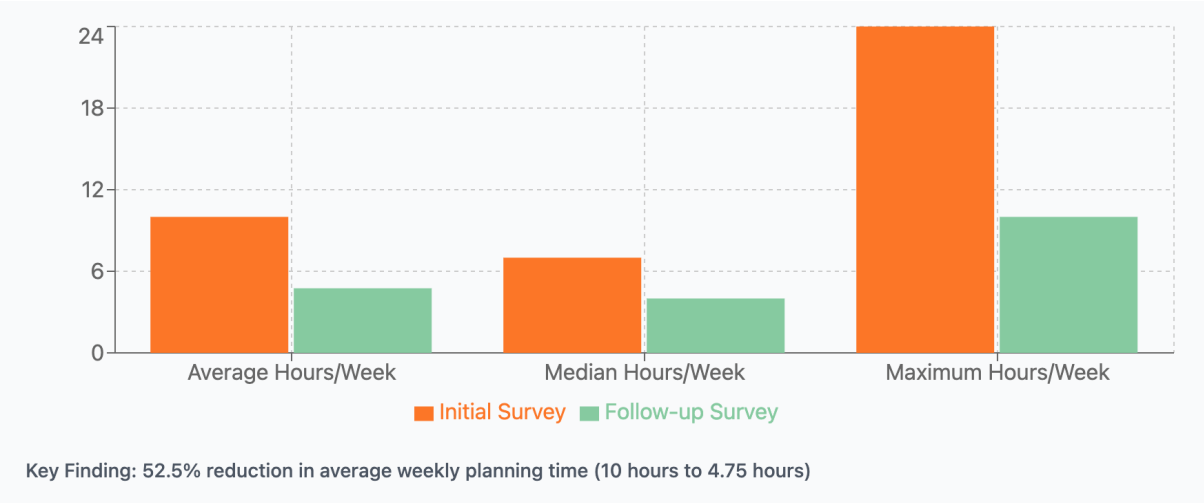

Figure 4. Time Spent on Lesson Planning Comparison Chart

The efficiency improvements are further evidenced by staff perceptions of their planning methods (Figure 5). In the initial survey, no staff members rated their planning methods as efficient, with responses split equally between "neutral" (50%) and "inefficient" (50%). Following AI implementation, this transformed dramatically: 38% of staff rated their methods as "very efficient" and 50% as "efficient", with only 13% remaining neutral and none rating their methods as inefficient.

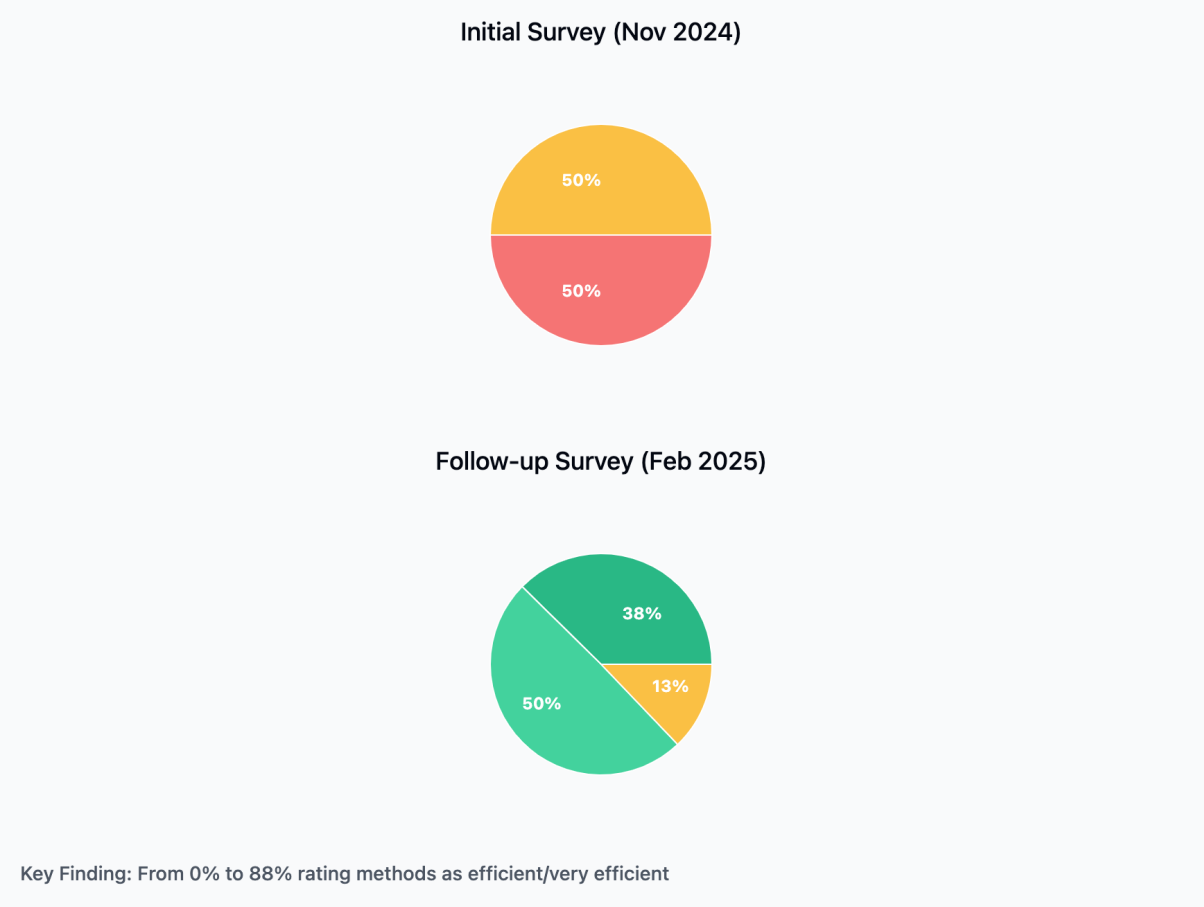

Figure 5. Lesson Planning Efficiency Rating Comparison

2.4.1.b Qualitative Reflections on Time Savings

Staff testimonials provide concrete examples of how these quantitative improvements manifest in practice. One summary report noted simply that "using AI for tasks can save a lot of teacher time". A phase leader observed that AI tools have "significantly improve[d] efficiency, allowing me to make better use of my time". Similarly, one teacher reflected that AI assistance "reduced my administrative burden, allowing me to focus more on student engagement and assessment".

Many staff gave concrete examples of faster planning. A teacher described how AI-generated model texts cut resource preparation time: "ChatGPT has helped reduce workload in producing model texts and additional source materials...". Another teacher found that AI lesson-planning tools provided ready-made structures, explaining that "the lesson plan [Alia] produces helps reduce the time taken to create the resources as the outline is there and just needs fleshing out". A log of classroom practice described a clear "reduction in workload and speed of creating lesson structures or ideas" due to AI use. Even though AI-generated materials often require editing, staff noted that "the time taken [to edit them] is reduced compared to producing the resources from scratch".

2.4.1.c Impact on Workload and Wellbeing

The time savings translate directly into reduced workload burden, as shown in Figure 6. The perceived impact of lesson planning on overall workload shifted dramatically: whereas 75% of staff initially reported lesson planning had a "high impact" on their workload, this figure dropped to 0% in the follow-up survey. Conversely, 75% of staff now report that lesson planning has only a "low impact" on their overall workload, compared to 0% initially.

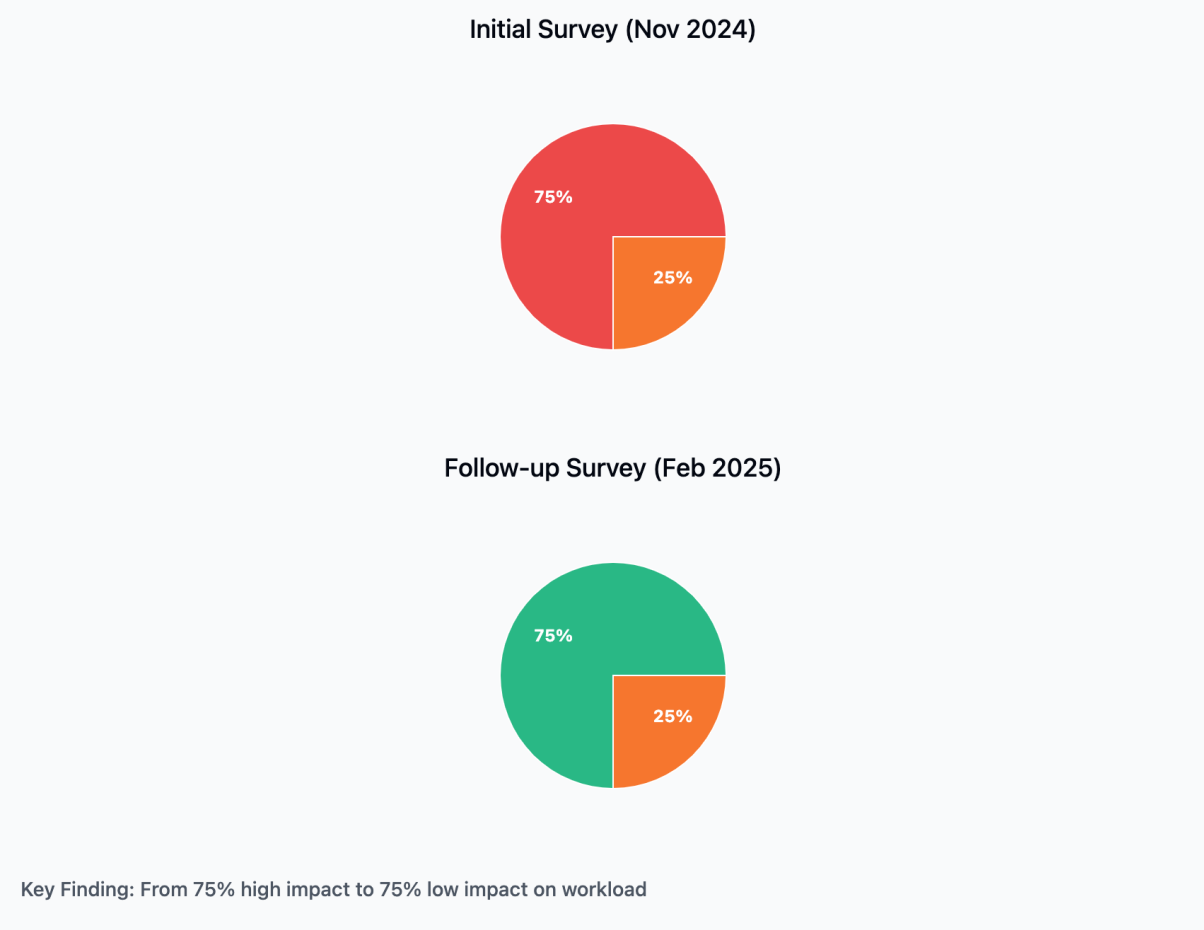

Figure 6. Lesson Planning Workload Impact Comparison

These workload reductions have corresponding wellbeing benefits. Figure 7 demonstrates a substantial decrease in feelings of being overwhelmed by planning time requirements. Initially, 75% of staff reported feeling overwhelmed by lesson planning time "always" or "often". Following AI implementation, this figure dropped to 0%, with 75% of staff now "rarely" or "never" feeling overwhelmed by planning time demands.

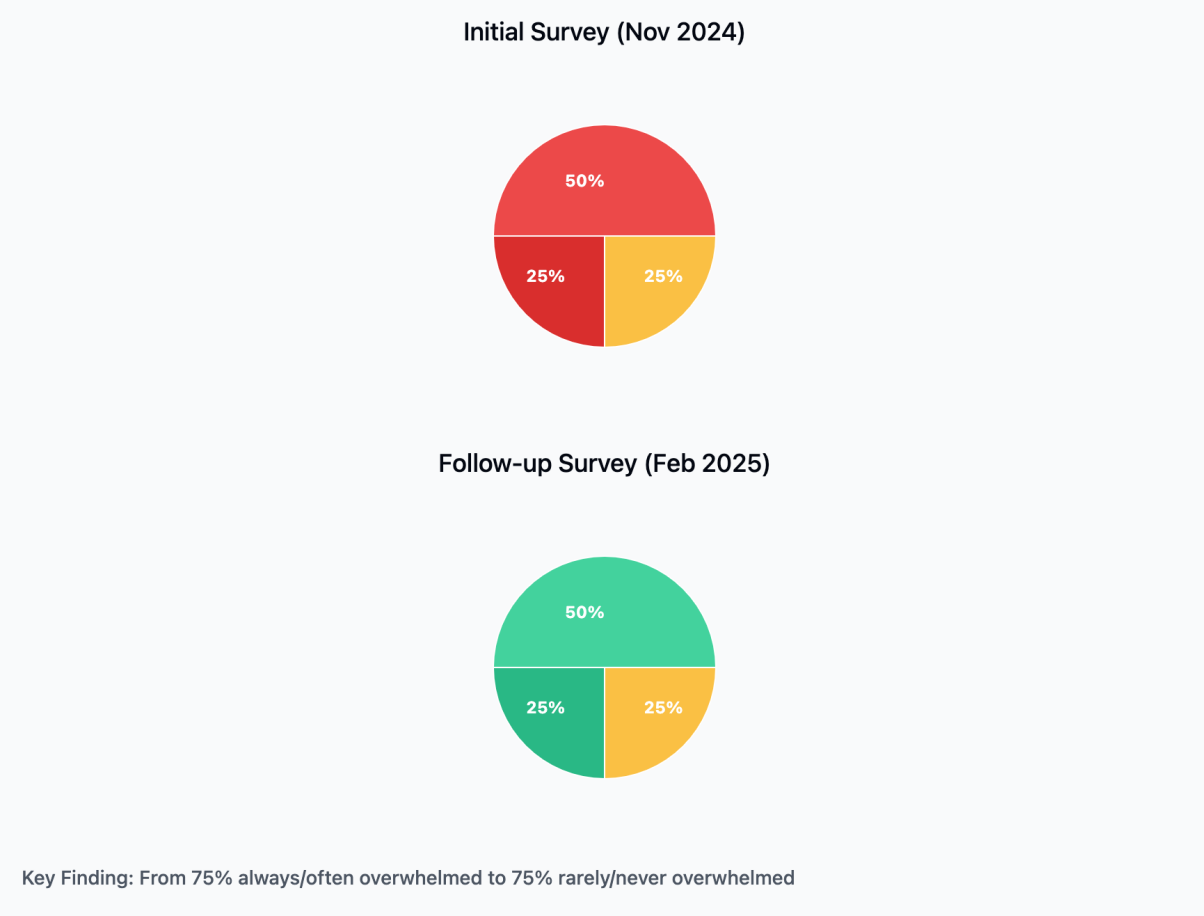

Figure 7. Feeling Overwhelmed by Lesson Planning Time Comparison

2.4.1.d Reallocation of Saved Time

Crucially, staff emphasised that time savings on planning often allowed them to shift their effort to higher-value tasks. For instance, one teacher (Reflection on AI in Lesson Planning) observed that AI use "reduced my administrative burden, allowing me to focus more on student engagement and assessment". In other words, time saved on paperwork and planning could be reallocated to teaching activities. Similarly, another teacher notes that AI has been "invaluable in streamlining many time-consuming administrative tasks," which lets her "allocate more time to teaching and learning". These comments suggest that AI-enabled efficiencies translated into more teaching-focused work rather than merely reducing overall hours.

Notably, staff also cautioned that time savings were often redirected. One summary acknowledged "a lot of time was saved through using AI," but added that "this time was then simply directed elsewhere". Another summary similarly reported that though AI "strengthened efficiency," in practice "the time saved is often being reallocated to other tasks". In practice, teachers still used AI-saved time to refine lessons or take on other responsibilities.

Nonetheless, these observations still reinforce that AI tools made core planning tasks markedly faster, even if total workload remained high.

2.4.1.e Improved Planning Quality and Confidence

The survey data indicates that time savings did not come at the expense of planning quality. Figure 8 shows that **staff confidence in their lesson planning skills improved significantly,** with 88% now rating themselves as "confident" compared to 50% initially. Additionally, the proportion of staff who feel their planning methods meet class needs consistently improved from 37.5% to 100%, suggesting that AI tools not only save time but also enhance planning effectiveness.

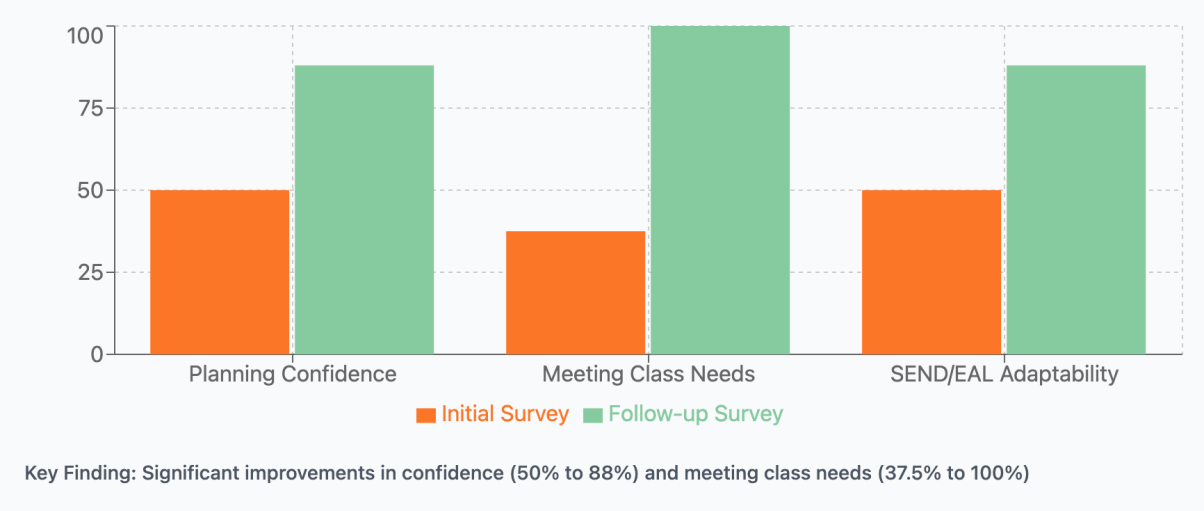

Figure 8. Planning Confidence and Meeting Class Needs Comparison

The adaptability of lesson plans for pupils with SEND or EAL needs also improved markedly, from 50% of staff rating their plans as "adaptable" to 88% in the follow-up survey. This suggests that AI tools enable teachers to create more inclusive and differentiated planning materials while simultaneously reducing the time required to do so.

2.4.1.f Summary

In summary, both the quantitative data and qualitative teacher reports indicate substantial time savings in lesson planning and preparation after AI implementation. The survey data quantifies this effect, showing an average reduction of 5.25 hours per week in planning time, alongside dramatic improvements in perceived efficiency and reductions in workload burden. Staff testimonies illustrate how AI tools accelerate routine planning tasks (for example, generating outlines or model texts), enabling teachers to spend less time on administrative work while maintaining or improving planning quality.

Together, the evidence shows that AI integration has markedly reduced planning hours and associated stress, though the net impact on overall workload depends on how the freed time is managed. The consistent theme across both data sources is that AI has transformed lesson planning from a time-intensive, often overwhelming task into a more efficient and manageable process, freeing teachers to focus on higher-value pedagogical activities.

2.4.2 Process Improvements in Administrative and Operational Tasks

The integration of AI tools at Woodland Academy Trust has created significant transformations in administrative and operational processes, extending well beyond lesson planning to encompass a broader range of school management functions. Both qualitative and quantitative data reveal substantial improvements in efficiency, consistency, and professional development outcomes across multiple administrative domains.

2.4.2.a Quantitative Evidence of Administrative Efficiency Gains

Dramatic Reduction in Planning Time: The most striking quantitative finding is the substantial reduction in time spent on lesson planning, which directly impacts administrative efficiency. Teachers reported an average of 10 hours per week on lesson planning in the baseline survey, which decreased to 4.75 hours in the follow-up - a **52.5% reduction** in planning time. This represents a saving of approximately 5.25 hours per week per teacher.

Improved Planning Efficiency Perceptions: The quantitative data shows a remarkable shift in how teachers perceive their planning efficiency:

- Baseline: 50% rated their methods as "Inefficient" and 50% as "Neutral" with 0% rating as "Efficient"
- Follow-up: 50% now rate their methods as "Efficient" and 38% as "Very Efficient" with only 13% remaining "Neutral"

This represents a complete transformation in efficiency perceptions, supporting the qualitative findings about AI's impact on administrative task streamlining.

Enhanced Planning Stability: The need for lesson plan revisions has decreased significantly:

- Baseline: 75% needed to revise plans "Often" or "Always"
- Follow-up: 63% now "Rarely" need revisions, with only 38% needing them "Sometimes" or "Often"

This stability reduces administrative burden and creates more predictable workflows.

2.4.2.b Administrative Efficiency Gains (Qualitative Context)

The quantitative improvements align with qualitative reports that AI has become essential for "refining report writing, generating SMART targets, and developing personalised learning resources" while "streamlining many time-consuming administrative tasks" (Woodland Academy Trust personal AI research journal). The data shows AI tools are particularly effective for:

- **Communication management**. Creating professional parent letters for events, trips, and sensitive communications like suspensions, with AI ensuring "professionalism and key information is included" (Woodland Academy Trust AI Spring Log).
- **Document creation**. Generating structured information documents for parents, particularly around curriculum initiatives like oracy development (Woodland Academy Trust AI for Leadership & Lesson Planning Journal).
- **Report writing**. Enhancing the quality and efficiency of administrative reporting through refined language and structure.
- **Target setting**. Creating SMART targets and action plans more efficiently than traditional methods.

2.4.2.c Operational Workflow Transformation

Tool Consolidation and Efficiency: The quantitative data reveals interesting patterns in tool usage:

- Teachers reduced their planning methods/tools from an average of 6.5 to 3.63.
- Digital tools specifically decreased from 4.25 to 3.38 on average.
- Despite using fewer tools, efficiency dramatically improved.

This suggests AI has enabled tool consolidation while maintaining or improving functionality, representing a significant operational streamlining.

Workload Impact Paradox: The quantitative data reveals a complex relationship with workload:

- Planning's contribution to overall workload shifted from 75% reporting "High impact" to 75% reporting "Low impact".
- However, feelings of being overwhelmed by planning time show mixed results: 50% "Rarely" feel overwhelmed (up from 0% baseline), but 25% still feel overwhelmed "Sometimes".

This supports the qualitative finding that, "Although a lot of time was saved through using AI, I felt that this time was then simply directed elsewhere so did not necessarily impact on

reducing workload" (one summary), suggesting work intensification rather than genuine workload reduction.

2.4.2.d Quality Assurance and Consistency Improvements

Confidence and Competence Growth: The quantitative data shows significant improvements in teacher confidence:

- 88% now feel "Confident" in their planning skills (up from 50% baseline)
- 13% feel "Highly confident" (up from 0% baseline)
- Only 38% felt confident at baseline, with 38% neutral and 13% only "Slightly confident".

Meeting Pupils' Needs: A dramatic improvement in meeting class needs consistently:

- Baseline: Only 37.5% felt their methods met class needs consistently.
- Follow-up: 100% now feel their methods meet class needs consistently.

This represents a transformation in educational quality assurance, supporting qualitative findings about AI's impact on consistency and professional standards.

2.4.2.e Professional Development and Capacity Building

Digital Comfort and Competence: The quantitative data shows sustained high levels of digital comfort:

- 75% remain "Comfortable" with digital tools (consistent across both surveys)
- 25% now report being "Very comfortable" (up from 13% baseline).

The administrative benefits extend to professional development, with AI tools supporting capacity building across the Trust. The data shows particular impact in developing leadership capabilities, where "sharing a mega-prompt with a new leader allowed them to generate their own knowledge documents efficiently" (Woodland Academy Trust AI for Leadership & Lesson Planning Journal).

2.4.2.f Challenges and Considerations (Updated with Quantitative Context)

Adaptation Requirements: While 88% of teachers report feeling adaptable in meeting SEND/EAL needs (up from 50% baseline), the quantitative data reveals ongoing challenges:

- technical limitations continue to affect implementation
- quality control requirements remain critical - teachers still need to verify AI-generated content
- training needs persist despite improvements.

Overwhelm Patterns: The quantitative data shows a nuanced picture of workload stress:

- 50% "Rarely" feel overwhelmed (significant improvement from 0% baseline)
- 25% "Never" feel overwhelmed (up from 0% baseline)
- However, 25% still feel overwhelmed "Sometimes".

This suggests that while AI has helped many teachers, some continue to experience challenges with time management and workload distribution.

2.4.2.g Impact on Decision-Making and Data Management

AI tools have enhanced administrative decision-making capabilities, particularly in assessment and data management. The integration of AI-powered platforms like Magma Maths has enabled "immediate feedback to both teacher and pupil" and "recording of child working out," allowing for more informed instructional decisions.

A Reception Student using Magma Maths

The quantitative improvement in planning efficiency (from 0% rating as efficient to 88% rating as efficient or very efficient) supports reports that AI helps teachers "make quicker adaptations or use of support" based on real-time data.

2.4.2.h Future Operational Implications

The quantitative data suggests that AI's administrative impact continues to evolve positively:

- 100% of teachers now feel their planning methods meet class needs consistently
- Tool usage has been streamlined without losing functionality

- Time savings are substantial and measurable.

The transformation represents a fundamental shift in how educational institutions can operate, moving from time-intensive manual processes (10 hours average) to streamlined, AI-assisted workflows (4.75 hours average) that free educators to focus on their core mission of teaching and learning.

2.4.2.i Key Quantitative Takeaways

1. **Time Efficiency**: 52.5% reduction in planning time (10 hours to 4.75 hours weekly)
2. **Quality Assurance**: 100% of teachers now feel methods meet class needs (up from 37.5%)
3. **Confidence Building**: 88% feel confident in planning skills (up from 50%)
4. **Workload Perception**: 75% now report planning has "Low impact" on workload (down from 75% reporting "High impact")
5. **Planning Stability**: 63% rarely need to revise plans (up from 0% baseline)

These quantitative improvements provide concrete evidence supporting the qualitative themes of enhanced efficiency, improved quality, and transformed professional practice through AI integration.

2.4.3 Impact on Staff Morale and Professional Identity

The integration of AI tools across Woodland Academy Trust has had profound effects on staff morale and professional identity, with the qualitative data revealing both transformative benefits and emerging challenges that require careful consideration.

2.4.3.a Enhanced Professional Confidence and Efficacy

One of the most significant impacts has been the dramatic improvement in teachers' professional confidence. The comparative analysis demonstrates a complete transformation from 50% of staff reporting confident or highly confident lesson planning skills to 100% following AI integration. This shift represents more than statistical improvement; it reflects **a fundamental change in how teachers perceive their professional capabilities**.

Teachers consistently report that AI tools, particularly ChatGPT and TeachMate AI, have become integral to their professional practice. As one teacher noted in their personal AI research journal, "ChatGPT has now become an essential tool in my daily practice, allowing me to allocate more time to teaching and learning."

The enhanced confidence appears to stem from several factors:

- **Reduced planning anxiety**: The shift from 75% of staff often or always feeling overwhelmed by lesson planning to 75% rarely or never experiencing this stress.
- **Improved resource quality**: Teachers report creating higher-quality materials with AI assistance, with one noting in their reflection that "AI-supported lessons tended to be more structured, with clear scaffolding and differentiated tasks".
- **Professional development acceleration**: New teachers and leaders can now generate sophisticated planning documents efficiently, with one journal documenting how sharing a mega-prompt with a new leader enabled them to "develop a deeper understanding of how to sequence learning effectively".

2.4.3.b Workload Perception and Time Management

The data reveals a complex relationship between AI adoption and workload management. While the quantitative measures show remarkable improvements with perceived workload impact shifting from 98% high impact to 100% low/medium impact – the qualitative feedback suggests a more nuanced reality.

Teachers consistently report significant time savings, with planning time reduced from 10 hours per week to 4.75 hours. However, as noted in one summary, "Although a lot of time was saved through using AI, I felt that this time was then simply directed elsewhere so it did not necessarily impact on reducing workload." This observation highlights a critical challenge: while AI creates efficiency gains, these are often absorbed by other educational demands rather than reducing overall workload pressure.

The transformation in how teachers approach their work is evident in the consolidation of tools and methods. The reduction from 6.5 to 3.63 planning methods indicates that teachers are adopting more integrated, AI-enhanced approaches rather than juggling multiple disparate systems.

2.4.3.c Professional Identity and Pedagogical Autonomy

The data reveals both opportunities and concerns regarding professional identity. On the positive side, teachers report that **AI has enhanced their creative capacity and professional judgement.** One teacher reflected in their personal AI research journal that AI "has introduced a new level of efficiency and creativity in structuring lessons," while another noted in their reflection that it "served as a collaborative tool rather than a replacement for teacher expertise."

AI as a tool to help, and not replace, the teacher

However, there are emerging concerns about the impact on pedagogical thinking. Lesson observations documented in the Woodland Academy Trust AI Spring Log have identified a troubling pattern where AI-generated content is leading to:

- overly subject-specific learning objectives focused on content rather than conceptual understanding
- task-based objectives that describe activities rather than intended learning outcomes
- narrowing of focus to significant figures or locations rather than broader disciplinary learning.

This suggests that while AI is improving efficiency and confidence, it may be inadvertently influencing pedagogical approaches in ways that require professional development intervention.

2.4.3.d Challenges and Professional Growth Areas

The data identifies several areas where AI integration presents challenges to professional development:

Prompt Engineering Skills: Teachers report varying levels of success with AI tools, with effectiveness highly dependent on prompt quality. One summary noted that "a lot of success depended on the prompt used" and emphasises the need for ongoing training as "there are so many new tools being developed daily."

Critical Evaluation: The importance of professional judgement in refining AI outputs is consistently highlighted. The summary reported that AI-generated content requires

"significant tweaking" and that "it is very much necessary for teachers to use their expertise and use AI as a tool rather than just blindly take all suggestions."

Equity and Access: Some teachers report needing paid versions of AI tools to work effectively, with one log noting the need for ChatGPT Plus to maintain productivity during extended planning sessions.

2.4.3.e Future Implications for Professional Development

The qualitative data suggests that successful AI integration requires a balanced approach that leverages efficiency gains while preserving essential pedagogical thinking. Moving forward, professional development must address:

- refined prompt engineering techniques to maximise AI effectiveness
- maintaining focus on learning objectives that articulate conceptual understanding
- developing critical evaluation skills for AI-generated content
- ensuring equitable access to AI tools across all staff.

The evidence suggests that when implemented thoughtfully, AI tools can significantly enhance teacher confidence, efficiency, and professional satisfaction. However, the transformation requires ongoing support to ensure that the gains in efficiency and confidence translate into improved pedagogical practice rather than simply task completion. The challenge lies in harnessing AI's potential while maintaining the creativity, professional judgement and pedagogical expertise that define effective teaching.

3. The Role of AI: Strategic Insights

3.1 Input vs Output Paradigms in AI Use

3.1.1 Rethinking the Role of AI in Professional Practice

One of the central findings emerging from the AI-supported lesson planning research project across Woodland Academy Trust is the critical distinction between **input-driven** and **output-driven** paradigms in the use of artificial intelligence. Where the former positions AI as a support mechanism to enhance human expertise, the latter risks displacing professional judgement by outsourcing cognitive and creative labour to automation. Our project has firmly centred itself within the input-enhancement paradigm, underpinned by a belief that AI, when purposefully and ethically applied, can strengthen rather than replace the role of teachers in designing high-quality, inclusive learning experiences (Kehoe, 2023; Luckin et al., 2016).

Alongside this, research from Keppler, S., Sinchaisri, W. P., & Snyder, C. (2024) shares that using AI from an output approach, i.e. 'Make for me' as opposed to an input approach i.e. 'Jumpstart for me' or 'Iterate with me' brings much lower productivity gains.

In the context of lesson planning, this input-driven paradigm situates AI as a professional collaborator – a source of inspiration, ideation, efficiency, and reflective challenge. Teachers remain the primary decision-makers, with AI serving to expand thinking, increase efficiency, and reduce workload through intelligent suggestions grounded in teacher prompts, not generalised automation (Seo et al., 2024).

3.1.2 Enhancing, Not Replacing, Professional Judgement

Mindful of this, from the outset, the research team was explicit in framing AI not as a time-saving shortcut to ready-made plans, but as a co-agent in the thinking and planning process. This approach respects the professional and pedagogical complexity of teaching while recognising the power of generative AI to reduce repetitive cognitive load, widen planning horizons, and offer differentiated strategies quickly (Kehoe, 2023).

Participating teachers were trained to use AI prompts aligned to their planning stages, such as:

- generating adaptive learning activities based on prior pupil assessment data
- exploring how to present core concepts in multiple ways to support accessibility (e.g., text-to-speech, dual coding, summarisation)
- identifying common misconceptions and strategies to address them
- tailoring scaffolded questions across cognitive domains.

This approach was especially impactful in terms of supporting inclusive practice. For example, Year 4 teachers used AI to plan reading comprehension activities at three differentiated levels while maintaining consistent thematic content, aligning with Universal Design for Learning (UDL) principles (CAST, 2018; Alquraini and Rao, 2020). Similarly, Year 2 staff used AI to co-develop vocabulary-rich science tasks supported by EAL strategies sourced through prompt-engineered queries based on classroom context.

Crucially, **human decision-making remained central throughout.** Staff were encouraged to critically evaluate AI outputs, adapt language, modify structure, and ensure alignment with school-wide pedagogical expectations and curriculum intent. As Zawacki-Richter et al. (2019) note, despite growing interest in AI applications, the role of educators in interpreting and adapting AI outputs remains under-explored, reinforcing the need for a human-in-the-loop approach.

Teachers noted in feedback sessions that this model:

- helped streamline the "blank page" phase of planning, accelerating the creative process
- encouraged pedagogical reflection, prompting them to consider new approaches or revisit subject knowledge
- offered confidence and reassurance, especially to early-career teachers, that their instinctive approaches were validated
- supported collaborative professionalism, as teachers shared prompts, refined outputs together, and cross-critiqued AI-assisted planning in team meetings.

3.1.3 Implications for Scaling and Sustaining Effective Practice

As the Trust moves towards embedding AI use more systematically across schools, the lessons from this research project offer a clear roadmap for scaling with integrity. The success of an input-driven AI model depends not just on technical access, but on cultural, pedagogical, and strategic alignment (Baglibel, Samancıoğlu and Crow, 2018).

1. Building Shared Pedagogical Understanding

Scaling AI-supported planning requires a shared philosophy of teaching and learning that frames AI as a support to human judgement. Embedding this within Trust-wide CPD, coaching, and leadership dialogue ensures a consistent message that technology follows pedagogy – not the other way around (Luckin et al., 2016).

2. Sustained Professional Development

Scaling must include structured and ongoing CPD that moves beyond tool functionality into effective prompt design, bias awareness, and ethical use (Seo et al., 2024). This includes modelling open classroom inquiry where teachers test, evaluate, and share AI planning strategies within a professional learning community. Over time, this builds collective efficacy and maintains momentum without dependency on early adopters alone (Coburn, 2003). This is reinforced by "when considering technology and its uses across a broad implementation, it's what can work best at scale which is most important, not the number of things you can do with it." (Anderson, Lewis, 2025) which ties closely to our approach of having a laser focus on a 'less is more' approach to using fewer tools well in order to achieve impact at scale.

3. Technological and Structural Foundations

The Trust's strong iPad deployment and device-to-pupil ratios provide a solid foundation, supported by technical staff trained to manage AI integration securely. As AI tools evolve, ensuring compatibility with safeguarding, data protection, and secure access protocols is vital for scaling.

4. Leadership for Innovation and Risk-Taking

School and Trust leaders must foster a culture that welcomes innovation but also protects teacher autonomy. Our project highlighted the importance of giving teachers permission to experiment, time to refine, and support to fail safely (Baglibel, Samancıoğlu and Crow, 2018), reinforced by the principles of "...strategic planning and vision beyond the normal four walls of a school, carefully curating a culture of innovation and growth mindset" (Anderson, Lewis, 2025)

5. Monitoring and Evaluation Cycles

To sustain practice, feedback loops must be embedded. These include:

- regular staff surveys capturing changing confidence and usage
- sampling AI-generated planning artefacts for moderation
- gathering pupil voice on whether AI-assisted tasks feel more accessible or engaging
- using workload tracking tools to monitor actual time savings.

As Taggart et al. (2023) emphasise, the benefits of EdTech – including workload reduction and enhanced teacher wellbeing – are only realised under the right conditions, including leadership support and tailored professional development.

3.1.4 Conclusion

The AI lesson planning pilot has demonstrated that an input-centric paradigm, which emphasises the augmentation of human thinking and planning, offers a robust, ethical, and scalable model for AI use in education. When AI is framed as a tool to amplify teacher voice –

not mute it – then professional judgement is not only preserved but enhanced (Kehoe, 2023; Seo et al., 2024).

By integrating foundational pedagogical frameworks like UDL (CAST, 2018; Alquraini and Rao, 2020), and aligning with established models of sustainable change (Coburn, 2003; Baglibel, Samancıoğlu and Crow, 2018), the Trust is well-positioned to lead a responsible, impactful expansion of AI-supported teaching practice. This model enables us to pursue innovation at scale, ensuring that technology remains in service of pedagogy, inclusion, and learner success. "If you don't consider learning as the anchor upon which everything else sits within your implementation, you are doomed to failure from the start. Most things about whole-school use of technology should be centred around learning. 'Pedagogy first'". (Anderson, Lewis, 2025)

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3.2 Ethical, Safeguarding and Data Considerations

The deployment of AI in educational settings introduces not just technical, but deeply human and ethical questions. In primary education – where trust, safety, and inclusivity are paramount – these considerations must be placed in the foreground from the start.

This section outlines how our project approached ethical practice, safeguarding, and data protection, and reflects on lessons learned throughout.

3.2.1 Awareness Raising and Guidance in Schools

3.2.1.a Staff Development and Ethical Framing

Before any trial of AI lesson planning tools began, all participating staff engaged in professional development that included explicit training on ethical AI use in education. This was crucial to set expectations around both the capabilities and limitations of AI, and to raise awareness of issues such as bias, hallucination, and over-reliance on generated content.

Workshops included modules on:

- Ethical boundaries in AI-generated content.
- Avoiding over-dependence or loss of teacher agency.
- Considerations for planning lessons that meet the needs of diverse learners.

Alongside technical training, we provided staff with guidance documents outlining appropriate and inappropriate uses of AI tools, stressing that any AI-generated lesson materials must be critically reviewed and adapted to the context of learners. This was rooted in our professional standards and the principles of Universal Design for Learning (CAST, 2018).

This aligns with Luckin's (2018) assertion that AI in education must enhance rather than replace teacher expertise, ensuring that pedagogy remains relational and contextualised. **Teachers were encouraged to see AI as a co-planner, not a decision-maker** – a distinction that underpinned much of our ethical framing.

3.2.1.b Safeguarding Awareness

The safeguarding dimension of AI-supported lesson planning was not limited to the content AI tools could produce, but also extended to:

- data shared with platforms (even when pseudonymised)
- the unintended reinforcement of stereotypes or bias in lesson materials
- the risk of AI suggesting activities that are inappropriate, without contextual understanding.

Safeguarding leads from each school were consulted during the project design phase and contributed to risk assessments that covered both direct and indirect safeguarding risks. Staff were instructed not to input any personal pupil data, identifiable examples, or references to vulnerable learners into AI tools – a principle derived from the UK GDPR framework and the DfE's guidance on data protection in schools (DfE, 2021).

3.2.2 Ongoing Risks and Mitigation Strategies

3.2.2.a Data Protection and Platform Selection

A core part of the research involved trialling different AI lesson planning tools. Each tool underwent a data privacy impact assessment (DPIA) before being used, following ICO guidance (ICO, 2021).

Preference was given to platforms with:

- on-device processing or minimal data retention
- clear privacy policies aligned with UK education standards
- transparent AI generation methods.

As a result, some tools were excluded from the project due to unclear data handling or commercial use of inputs. For example, tools that stored prompts on overseas servers without clear anonymisation protocols were not approved.

We also collaborated with our IT provider to sandbox trials and prevent integrations with cloud storage systems that might inadvertently expose school data.

3.2.2.b Ethical Oversight and Reflexivity

Ethical oversight was built into the project at several levels.

- School-level project leads met regularly to discuss any concerns, including unexpected ethical or safeguarding issues.
- A Trust steering group included both curriculum leads and safeguarding representatives, ensuring pedagogical aims remained aligned with child safety and inclusion.
- Staff journals and logs collected reflections on the ethical use of AI, with several teachers noting how the process helped them critically examine their own biases in lesson planning.

This reflexivity was essential to ensure that AI remained a support rather than a substitute for professional judgement. One teacher reflected:

> "I found myself almost relying on the AI too much at first, but soon realised that unless I contextualised it to my class, it was just surface-level planning. The project helped me re-centre pupil needs – especially for those with SEND – in my design thinking."

This echoes Williamson and Eynon's (2020) findings that critical engagement with AI is necessary to avoid automating inequity and to emphasise pedagogical values over technological enthusiasm.

3.2.2.c Mitigating Algorithmic Bias and Content Hallucination

Participants were trained to identify and mitigate examples of:

- stereotyping in AI outputs (e.g. gendered job roles or cultural generalisations)
- fabricated content (AI hallucinations) posing as factual information.

Teachers were encouraged to cross-reference all AI outputs with trusted curriculum sources and apply their own subject knowledge and local context. This was particularly important in humanities and PSHE, where sensitive topics and diverse representation are critical.

We drew from the AI4People ethical framework (Floridi et al., 2018), which advocates for principles of beneficence, non-maleficence, autonomy, and explicability in the development and use of AI. These principles were interpreted for our educational context, helping to guide

risk assessments and prompt teachers to interrogate how and why certain content was being generated.

3.2.2.d Inclusive and Safe Learning Environments

AI tools sometimes generated generic or non-inclusive lesson plans. Part of the research involved modifying these outputs to better align with the needs of SEND learners or EAL pupils linked to our UDL approach. Teachers experimented with prompt engineering to improve inclusivity, for example, by asking the AI to "design a lesson for mixed ability Year 4 pupils, including one child with working memory challenges and another with emerging English skills."

This process increased staff awareness of both the potential and limitations of AI. It also reinforced inclusive planning principles, particularly in addressing the needs of SEND and EAL learners.

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4. Conditions for Success

The successful integration of AI-supported lesson planning across Woodland Academy Trust did not stem from a single intervention or tool. It emerged from a carefully cultivated ecosystem anchored in values-driven leadership, inclusive systems, and a culture of inquiry, collaboration, and professional risk-taking. Our conditions for success align strongly with recent international research on innovation in education, professional learning, and digital transformation.

4.1 Enabling Impactful Practice Across Different Settings

Despite variation in school context, phase, and staffing, several common enablers supported the emergence of impactful practice:

Research-informed, flexible implementation. Staff were not bound to a prescriptive model but guided by a shared research question: **"How can AI reduce workload while improving planning quality and inclusivity?"** This inquiry-driven approach aligns with findings by Liu et al. (2022), who emphasise that teacher innovation thrives in schools with supportive cultures of reflection and autonomy.

Professional inquiry over compliance. Teachers were not told to adopt AI; they were trusted to explore, adapt, and critique it. This fostered agency and ownership, reflecting Hilal et al.'s (2024) finding that distributed leadership enhances teacher agency by encouraging reflection and experimentation.

Permission to take professional risks. One of the most powerful enablers was psychological safety. Staff were explicitly encouraged to test ideas, reflect openly, and share imperfect results. As Wanless and Winters (2018) and Fleming et al. (2024) highlight, schools that promote psychological safety cultivate more confident, resilient staff – critical for navigating the uncertainty that accompanies innovation.

Peer benchmarking as a professional learning tool. Teachers validated and refined AI-generated plans by comparing them with peers' work. These collaborative, trust-based comparisons acted as low-stakes quality assurance mechanisms and supported shared understanding of effective planning.

Cross-phase and cross-school collaboration. Working parties spanning EYFS to Year 6 created an environment where experimentation could happen in the community. This reflects

Liu et al.'s (2022) findings that professional learning communities (PLCs) enhance innovation by building trust, dialogue, and shared purpose.

Prompt design as a vehicle for pedagogical growth. As staff iteratively refined their prompts, they deepened their curriculum thinking and differentiation strategies. This process supported both pedagogical clarity and creative confidence, further evidence of professional growth through inquiry, as described by Dogan and Adams (2018).

Live classroom testing with structured feedback loops. Teachers trialled AI-supported sequences and returned with real-world evidence. This created a feedback-rich learning ecosystem, aligning with what Liu et al. (2022) call the "learning-through-practice loop" in innovative school cultures.

4.2 Trust-Wide Systems, Policies, and Cultural Enablers

The success of AI-supported lesson planning across the Trust was not left to chance; it was enabled by a deliberately aligned infrastructure of systems, policies and professional culture. These enablers ensured that innovation could scale safely, equitably, and sustainably, underpinned by clear strategic intent, strong technical foundations, and a culture of openness, trust, and professional learning.

Alignment with the Trust Development Plan. AI was embedded into our strategic priorities – workload reduction, digital transformation, inclusion, and curriculum excellence. This approach reflects DfE (2022) guidance, which stresses the importance of aligning digital initiatives with school improvement goals for coherence and sustainability.

Clear, ethical frameworks for AI use. Updated safeguarding and data protocols addressed the ethical risks of generative AI, enabling responsible innovation. This aligns with international best practice in digital leadership and echoes Timotheou et al.'s (2023) finding that strong governance structures are the foundation of successful technology adoption.

Strong digital infrastructure and consistency. With 1:1 iPads, cloud-based collaboration tools, MDM systems and fast connectivity in place, technical barriers were minimal. Balyer and Öz (2018) and Timotheou et al. (2023) confirm that infrastructure and access are critical preconditions for effective digital transformation in schools.

Tailored CPD with external expertise. Professional learning was timely and differentiated, often supported by Mark Anderson. This ensured that training addressed both "how to use AI"

and "how to use it well." As noted by Dogan and Adams (2018), high-impact CPD is collaborative, iterative, and embedded in real practice.

Mark Anderson delivering a CPD training session to Woodland Academy Trust staff

Centralised prompt banks and shared resources. As best practice emerged, prompts and planning templates were shared Trust-wide, reducing duplication, raising quality. This mirrors Liu et al.'s (2022) evidence that shared professional assets in PLCs accelerate the diffusion of innovation.

Culture of openness and inquiry. Teachers were encouraged to reflect honestly, share learning – including failures – and support each other. Risk-taking wasn't heroic; it was expected, celebrated, and scaffolded. This echoes Fleming et al.'s (2024) conclusion that team-level psychological safety is a key enabler of staff wellbeing and innovation.

4.3 Role of Leadership, Infrastructure and Shared Vision

At every level, **leadership played a pivotal role in embedding AI-supported lesson planning** – not through mandates, but by creating the time, trust, tools, and shared vision needed for purposeful innovation. This combination of values-led strategy, distributed leadership and frictionless infrastructure ensured that change was not only adopted, but owned.

Trust leadership. Modelling belief and permission-rich innovation. Executive leaders clearly articulated that AI must enhance pedagogy, reduce workload, and support inclusive planning. They gave visible permission to take risks and removed constraints, echoing Liu, Qiang, and Kang's (2023) findings that distributed leadership boosts teacher confidence and engagement.

School leadership, **protecting time and professional dialogue**. SLTs created time for collaboration, ensured alignment with school priorities, and supported working groups to

share learning regularly. They treated the AI initiative as a core developmental strand rather than an add-on, ensuring it remained focused and purposeful.

Distributed leadership and digital champions: Digital leads and "early testers" in schools modelled practice, coached colleagues, and helped translate Trust vision into classroom practice. As Hilal et al. (2024) demonstrate, this form of distributed leadership deepens reflection and teacher agency, making innovation more sustainable.

Digital infrastructure that removes friction. Staff could access tools, share prompts, and trial AI outputs without delay. As confirmed by Balyer and Öz (2018), infrastructure that 'just works' enables staff to focus on learning, not logistics.

Shared moral purpose as the glue. Across all communications, from SLT briefings to classroom discussions, the AI initiative was linked back to our core values: better outcomes for all learners, greater equity, and a more sustainable workload for staff. This mirrors the conclusion of Krijnen et al. (2022): schools that build a shared, values-based vision are more likely to embed and sustain meaningful change.

4.4 Trust Insight: Risk-Taking as a Professional Act

One of the most powerful cultural shifts came when staff realised they didn't need permission to try.

We said: "You are the expert. Test it. Share it. We'll learn from it together."

That reframed risk not as danger but as agency. **And it changed everything.**

4.5 Summary

Woodland Academy Trust's AI-supported lesson planning initiative succeeded because it was built on a foundation of professional trust, strategic clarity, strong infrastructure, and an inclusive culture of innovation.

Recent international research supports each of these conditions: when staff feel safe to take risks (Wanless & Winters, 2018; Fleming et al., 2024), are empowered by distributed leadership (Hilal et al., 2024; Liu et al., 2023), supported by infrastructure (Balyer & Öz, 2018; Timotheou et al., 2023), and connected through learning communities (Liu et al., 2022), transformative practice becomes not only possible, but sustainable.

At Woodland, AI is not just a tool, it's been invaluable in helping us to reimagine collaboration, workload, and planning quality. By grounding innovation in shared values and collective

professional learning, we've created the conditions not only for success, but for scalable impact across our Trust and beyond.

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5. Reflections and Recommendations

The implementation of AI-supported lesson planning across Woodland Academy Trust has revealed significant insights about the intersection of technology, pedagogy, and professional practice in primary education. Our evidence base, drawn from quantitative surveys, qualitative reflections, classroom observations, and pupil voice data, demonstrates that when AI tools are deployed thoughtfully within a supportive institutional framework, they can enhance both teaching efficiency and learning outcomes.

This initiative was undertaken through a collaborative partnership between Julie Carson, Director of Education at Woodland Academy Trust, and Mark Anderson (ICT Evangelist). Carson's educational leadership and institutional knowledge provided crucial oversight and strategic direction for implementation across the Trust's schools. Anderson brought both educational technology expertise and significant experience in curriculum design and school improvement, providing dedicated training for staff on using AI tools effectively in classroom and planning contexts. His strategic input ensured the Trust's approach remained aligned with best practices and educational priorities, while his ongoing advice on efficacy and implementation helped measure impact, troubleshoot challenges, and refine techniques for optimal outcomes.

This partnership between complementary areas of expertise ensured that **the Trust's approach to embedding AI was both pedagogically sound and thoughtfully structured**, maintaining alignment with core educational values.

The project has fundamentally challenged assumptions about the role of technology in education. Rather than positioning AI as either a panacea or a threat, our experience suggests a more nuanced reality where AI functions most effectively as a collaborative partner in the planning process, amplifying teacher expertise rather than replacing it. This finding has profound implications for how schools approach digital transformation and professional development in an era of rapid technological change.

5.1 Key Findings

5.1.1 Enhanced Planning Efficiency and Quality

The quantitative data reveals substantial improvements in planning efficiency, with teachers reducing their average weekly planning time from 10 hours to 4.75 hours – a 52.5% reduction that translates to more than five hours returned to each teacher's week. This efficiency gain did not compromise quality; indeed, staff confidence in meeting their pupils' needs rose from

37.5% to 100%, while the perception of planning methods as efficient increased from 0% to 88%.

These improvements reflect more than simple time savings. The tools enabled staff to focus their professional energy on adaptation and refinement rather than content generation, allowing for deeper consideration of pedagogical approaches and individual pupil needs. Teachers reported that AI-generated frameworks often provided useful structural starting points, though these required careful professional judgment to ensure pedagogical integrity and appropriate challenge levels.

Significantly, the quality of planning appeared to improve alongside efficiency gains. Classroom observations documented more consistent adherence to curriculum frameworks, better integration of key skills across subjects, and higher-quality exemplar materials. Even early-career teachers demonstrated improved lesson structure and resource selection when supported by AI planning tools, suggesting that these technologies can serve as professional development resources as well as efficiency enhancers.

5.1.2 AI as a Professional Co-Planner

Perhaps the most important finding relates to how teachers conceptualised their relationship with AI tools over time. **Initial scepticism gave way to sophisticated understanding** of AI's capabilities and limitations, with staff developing nuanced approaches to prompt engineering and output refinement.

Teachers learned to leverage AI not as a source of ready-made solutions but as a thinking partner that could generate ideas, suggest alternatives, and provide structural frameworks for their own creative work.

This collaborative model proved particularly powerful in supporting professional growth. Teachers reported increased confidence in their planning abilities, with 100% describing themselves as confident or highly confident by the project's conclusion. The process of working with AI outputs – evaluating, adapting, and refining them – appeared to strengthen teachers' pedagogical reasoning and subject knowledge, creating a virtuous cycle of professional development.

The input-driven paradigm that emerged from our practice stands in contrast to more mechanistic approaches to educational technology. By positioning teachers as active agents who direct and shape AI contributions, rather than passive recipients of automated content, we preserved professional agency while capturing the efficiency benefits of technological support.

5.1.3 Enhanced Inclusive Practice

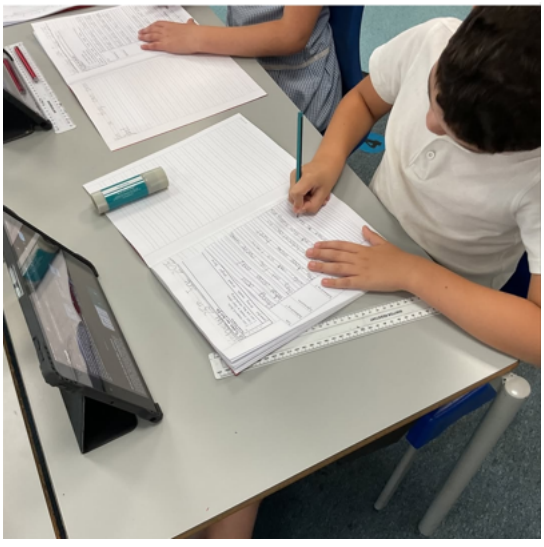
One of the most notable outcomes relates to inclusive education and accessibility. AI tools proved valuable in generating differentiated resources, scaffolded activities, and multi-sensory materials that support learners with diverse needs. Teachers reported substantial improvements in their ability to plan for SEND and EAL pupils, with confidence levels rising from 62% to near-universal competence.

The speed with which AI could generate visual schedules, simplified instructions, social stories, and dual-language materials removed previous barriers to inclusive planning. More importantly, these resources could be created without stigmatising individual learners, as differentiated materials appeared as natural variations within broader lesson sequences rather than obvious accommodations.

Case studies from across the Trust demonstrate the practical impact of this enhanced inclusive practice. Pupils with additional needs showed increased independence, engagement, and academic progress when supported by AI-generated scaffolding materials. The technology's capacity to present information through multiple modalities and at varying levels of complexity aligned closely with Universal Design for Learning principles, creating learning environments that were genuinely accessible to all pupils.

5.1.4 Increased Pupil Agency and Engagement

Pupil feedback consistently highlighted increased engagement with lessons incorporating AI-supported planning. Pupils described these lessons as more interactive, visually appealing, and personally relevant than traditional approaches. Significantly, 91% of Key Stage 2 pupils expressed preference for lessons that incorporated what they termed "new ways of thinking."



AI bringing "new ways of thinking"

The enhanced engagement appeared to stem from several factors. AI-generated activities often included novel scenarios, creative challenges, and multimedia elements that captured pupils' interest. The improved differentiation meant that pupils were more likely to encounter appropriately challenging tasks, reducing both frustration and boredom. Additionally, some teachers began involving pupils in directing AI tools, creating opportunities for genuine co-creation of learning experiences.

While comprehensive data on learning behaviours was not systematically collected, case studies documented notable improvements for individual pupils, particularly those with additional needs who had previously struggled with classroom tasks. These included instances of increased independence and sustained engagement, though the broader patterns require further investigation to establish generalisable trends.

5.1.5 Workload and Professional Wellbeing

While the quantitative data demonstrates substantial time savings, the relationship between AI adoption and overall workload proved more complex than anticipated. A critical finding emerged that challenges simplistic assumptions about technological solutions to workload pressures: teachers frequently reported that while AI dramatically reduced planning time, this freed capacity was often absorbed by additional responsibilities rather than reducing total working hours.

As one teacher reflected, "Although a lot of time was saved through using AI, I felt that this time was then simply directed elsewhere, so did not necessarily impact on reducing workload." Similarly, another noted that despite AI strengthening efficiency, "the time saved is often being reallocated to other tasks." This pattern highlights the systemic nature of teacher workload and suggests that technological solutions alone cannot address broader issues of work intensification in education without careful institutional management of how efficiency gains are protected and utilised.

Nevertheless, the qualitative impact on professional wellbeing was consistently positive. Teachers described feeling less overwhelmed by planning demands, more confident in their professional capabilities, and better able to focus on high-value activities such as pupil interaction and assessment. The shift from 75% of staff feeling overwhelmed by planning to 75% rarely experiencing such feelings represents a meaningful improvement in professional experience, even when total working hours remained high.

This finding carries important implications for implementation: schools must actively safeguard time savings generated by AI tools to ensure they translate into genuine wellbeing improvements rather than simply creating capacity for additional work. The efficiency gains

are real and substantial, but their impact on teacher wellbeing depends critically on how institutions choose to manage and protect these benefits.

5.1.6 Identified Risks and Challenges

The project also brought to the surface important challenges that require ongoing attention. Some AI-generated content exhibited tendencies towards task-focused rather than conceptually-driven learning objectives, requiring careful teacher oversight to maintain curriculum integrity. The effectiveness of AI tools proved highly dependent on prompt quality, highlighting the need for sustained professional development in this emerging skill area.

Technical limitations and access issues created inequities in some contexts, with teachers requiring paid versions of tools to maintain productivity during extended planning sessions. These findings underscore the importance of institutional investment in both infrastructure and training to ensure equitable access to AI-enhanced practice.

5.1.7 Cultural and Systemic Enablers

The success of AI integration at Woodland Academy Trust cannot be separated from the broader cultural and systemic conditions that supported innovation. The Trust's established commitment to digital transformation, inclusive practice, and professional learning created fertile ground for AI adoption. Equally important was the psychological safety that enabled teachers to experiment, share imperfect attempts, and learn from both successes and failures.

The input-driven model proved essential to maintaining professional agency and pedagogical integrity. Teachers achieved the greatest impact when they used AI to collaborate on or refine their own ideas, rather than simply requesting complete lesson plans. This approach ensured that professional judgment, contextual knowledge, and understanding of individual pupils remained central to the planning process.

5.1.8 What Needs to Happen Next

The evidence from this initiative provides a clear foundation for scaling AI-supported practice across the Trust and informing broader implementation strategies. However, realising the full potential of these tools requires careful attention to both pedagogical and systemic considerations.

5.1.9 Integration into Trust-Wide Systems

The next phase must focus on embedding AI tools within existing curriculum planning cycles, quality assurance processes, and monitoring frameworks. This integration should **ensure consistency with curriculum intent while preserving the flexibility** that enables responsive teaching. Professional development programmes need to incorporate AI literacy as a core

competency, moving beyond basic tool usage toward sophisticated understanding of prompt design, output evaluation, and ethical considerations.

The development of comprehensive prompt libraries organised by subject, key stage, and inclusion needs will support consistency while reducing duplication of effort. These resources should be treated as living documents, continuously refined based on classroom experience and emerging best practice. Training programmes should emphasise prompt engineering as a professional skill, with coaching and peer support structures to develop expertise across all staff.

5.1.10 Pedagogical Integrity and Quality Assurance

Maintaining high standards of curriculum design requires proactive attention to the risks identified during the pilot phase. The tendency for AI-generated content to default to task-based or superficial learning objectives must be countered through enhanced leadership dialogue and planning scrutiny. Professional development should reinforce the importance of conceptual, disciplinary learning goals that challenge and inspire pupils.

Regular moderation processes should include specific attention to AI-supported planning, ensuring that technological efficiency does not compromise pedagogical depth. Senior leaders need training to recognise and address the subtle ways that AI outputs might narrow curriculum ambition or reduce cognitive challenge for pupils.

5.1.11 Equity and Access

Ensuring equitable access to AI tools represents both a practical and ethical imperative. The Trust should provide funded access to premium AI platforms for all staff, recognising that effective use often requires capabilities beyond basic free versions. Monitoring systems should track usage patterns across different schools and roles to identify and address disparities in access or uptake.

The inclusive benefits demonstrated during the pilot phase should be systematically embedded in Trust-wide practice. Training programmes should prioritise co-planning for accessibility and scaffolding, ensuring that all staff can leverage AI tools to support diverse learners effectively. Template libraries should include exemplars specifically designed for SEND and EAL contexts.

Children using Magma Maths on their iPad

5.1.12 Protecting and Monitoring Time Gains

The complex relationship between planning efficiency and overall workload requires careful management to ensure that the wellbeing benefits identified during the pilot are sustained rather than absorbed by other demands.

Regular workload surveys and reflective tools should monitor how saved time is being utilised, with active measures to prevent the reabsorption of efficiency gains into expanded responsibilities.

School leaders need training to recognise and protect the time savings generated by AI tools, ensuring that these translate into genuine improvements in work-life balance rather than intensification of other duties. This may require broader conversations about workload management and priority-setting within the education system.

5.1.13 Enhancing Pupil Voice and Co-Creation

The positive engagement outcomes suggest opportunities to extend AI use in ways that enhance learner agency. Structured approaches to involving pupils in content creation, task design, and resource development could further increase engagement while developing digital literacy skills. Feedback mechanisms should **ensure that pupil perspectives continue to inform the development of AI-supported practice.**

Professional development should include guidance on age-appropriate ways to involve pupils in AI interactions, balancing the benefits of co-creation with necessary safeguarding and educational considerations. These approaches should be carefully evaluated to ensure they enhance rather than distract from core learning objectives.

5.1.14 Sustaining Innovation Culture

The psychological safety and culture of inquiry that enabled successful innovation must be actively maintained as AI use becomes more routine. Continued encouragement of experimentation, reflection, and peer sharing will prevent the stagnation that can accompany the institutionalisation of once-innovative practices. Professional learning communities focused on AI-enhanced pedagogy should provide ongoing forums for development and refinement.

5.2 Trust-Specific Recommendations

Building on the foundation established during the pilot phase, several Trust-specific actions will consolidate and extend the impact of AI-supported planning.

5.2.1 Comprehensive AI Strategy Development

A formal Trust AI Strategy should articulate clear principles for ethical AI use, establish training pathways for all staff, and define evaluation measures for ongoing assessment. This strategy should align directly with the Trust Development Plan, ensuring that AI adoption supports rather than distracts from core educational priorities. The strategy should address both opportunities and risks, providing frameworks for decision-making as AI technologies continue to evolve.

5.2.2 Resource Development and Quality Assurance

The creation of a comprehensive Trust AI Planning Toolkit will support consistent quality across all schools while enabling contextual adaptation. This resource should include curated prompt libraries, SEND and EAL resource templates, ethical checklists, and exemplar planning sequences that demonstrate best practice. The toolkit should be maintained as a collaborative resource, with regular contributions from practitioners and updates based on emerging evidence.

5.2.3 Leadership Development and Support

Dedicated AI leads within each school will provide crucial support for implementation, mentoring, and quality moderation. These roles should be supported by Trust-wide networks that enable sharing of expertise and resources. Leadership training programmes should include specific modules on AI-enhanced pedagogy, ensuring that senior staff can provide informed support and challenge to classroom practitioners.

5.2.4 Induction and Professional Development

Integration of AI literacy into induction programmes for new staff will ensure that all practitioners joining the Trust are equipped with necessary skills and understanding from the outset. Leadership development programmes should similarly incorporate AI considerations, preparing aspiring leaders to guide implementation and support innovation in their future roles.

5.2.5 Values-Driven Implementation

All aspects of AI use should remain firmly anchored in the Trust's core purpose of ensuring equitable outcomes for every pupil. This values-driven approach should guide decision-making about tool selection, resource allocation, and professional development priorities. Regular reflection on the alignment between AI use and educational values will ensure that technological capabilities serve rather than substitute educational purposes.

5.3 System-Level Recommendations

The lessons learned from Woodland Academy Trust's experience have implications that extend beyond individual schools or trusts, offering insights for system-wide policy and practice development.

5.3.1 Professional Agency and Co-Planning

National discourse about AI in education should emphasise the co-planning model that proved most effective in our context. Policy frameworks and professional guidance should bring teacher agency and expertise to the fore, positioning AI as a tool that enhances rather than replaces professional judgment. This framing is essential to maintaining the relational and contextual aspects of teaching that remain central to effective education.

5.3.2 Ethical Frameworks and Guidance

Government and regulatory bodies should develop comprehensive, education-specific guidance on AI ethics, safety protocols, and responsible data use. This guidance should address the unique considerations of school contexts, including safeguarding requirements, data protection obligations, and the particular vulnerabilities of child users. Clear frameworks will enable schools to innovate confidently while maintaining necessary protections.

5.3.3 Funded Innovation and Research

The success of targeted pilot programmes suggests the value of systematic investment in AI experimentation across different educational contexts. Funding should support comprehensive approaches that combine professional development, infrastructure development, and practitioner agency rather than focusing solely on technology procurement. Research programmes should document both successes and challenges, building an evidence base that can inform broader implementation strategies.

5.3.4 Inclusive Tool Design and Development

Collaboration between AI developers and educators should ensure that future tools reflect Universal Design for Learning principles and support diverse learners effectively. This partnership approach should influence both the technical design of AI systems and the pedagogical frameworks that guide their use. Tools should be developed with explicit attention to linguistic diversity, varied learning needs, and cultural responsiveness.

5.3.5 National Learning Communities

The establishment of forums for sharing prompt strategies, implementation challenges, and effective practice models would accelerate learning across the education system. These communities should connect practitioners, researchers, and policy makers in ongoing dialogue about the evolving role of AI in education. Such networks would prevent duplication of effort while ensuring that innovations are shared and refined through collective professional learning.

6. Conclusion

This initiative has demonstrated conclusively that AI can serve as a powerful catalyst for educational transformation when implemented within supportive institutional frameworks that prioritise teacher agency, pedagogical integrity, and inclusive practice. The substantial efficiency gains documented across our schools represent more than mere time savings; they reflect a fundamental shift toward more sustainable and effective professional practice.

The evidence reveals that **AI tools are most impactful when they amplify human expertise**, supporting teachers in the complex work of planning engaging, accessible, and challenging learning experiences for diverse groups of pupils. This collaborative model preserves the relational and contextual dimensions of teaching while leveraging technological capabilities to reduce administrative burden and enhance creative possibilities.

The inclusive benefits demonstrated throughout the project underscore AI's potential to advance equity in education. By making differentiated, scaffolded, and multi-modal resources more readily available, AI tools can help remove barriers that have historically limited access to high-quality learning experiences. This democratising effect represents one of the most significant opportunities for educational improvement through technological innovation.

However, our experience also highlights the importance of thoughtful implementation that attends to both pedagogical and ethical considerations. The risks of over-reliance, reduced cognitive challenge, and algorithmic bias require ongoing attention and professional development. Success depends not only on access to AI tools but on the broader cultural and systemic conditions that enable reflective, values-driven practice.

Woodland Academy Trust's journey with AI-supported lesson planning provides a model for responsible innovation that balances technological possibility with educational purpose. By maintaining focus on improved outcomes for pupils, reduced burden for teachers, and enhanced inclusion for all learners, we have demonstrated that **AI can serve the fundamental goals of education** rather than distract from them.

As we move forward, the challenge lies in scaling these approaches while preserving the conditions that enabled success. This requires sustained attention to professional development, institutional culture, and ethical frameworks that ensure technology remains in service of learning and does not become an end in itself. The evidence from our initiative suggests that when these conditions are met, AI can indeed contribute to the transformation of educational practice in ways that benefit both teachers and pupils.

The implications extend beyond individual schools to encompass broader questions about the future of education in an age of artificial intelligence. Our experience suggests that the most productive path forward involves collaboration between human expertise and technological capability, guided by clear educational values and supported by robust professional learning communities. This approach offers hope for addressing some of education's most persistent challenges while preserving the essentially human dimensions of teaching and learning that remain central to educational success.

7. Appendices

This section provides supplementary information and supporting evidence that underpins the findings and conclusions presented in this report.

These appendices offer a deeper dive into the data collection instruments, key engagement artefacts, and additional resources that informed the strategic review of AI integration at Woodland Academy Trust. Their inclusion serves to enhance the transparency, validity, and utility of the report for both internal and external stakeholders, providing a comprehensive view of the initiative's foundations and operational details.

7.1 Data Collection Instruments

This sub-section includes the various tools and proformas used to gather both quantitative and qualitative data throughout the project. The meticulous design of these instruments ensured consistency and breadth in our evidence collection, facilitating a robust analysis of AI's impact.

7.1.1 Teacher Baseline and Follow-Up Surveys.

Copies of the survey questionnaires administered to teaching staff at the commencement and conclusion of the project. These instruments captured perceptions regarding workload, efficiency, confidence, and pedagogical approaches before and after the integration of AI tools in lesson planning.

7.1.2 Pupil Voice Survey and Focus Group Prompts.

Details of the questions and activities used to elicit feedback from pupils regarding their engagement, learning experiences, and preferences in AI, supported lessons. These provide insight into the learner perspective.

7.1.3 Classroom Observation Proforma.

The standardised template used by senior leaders and project team members during classroom drop-ins. This proforma guided observations of shifts in teaching practice, lesson structure and adaptations and pupil interaction in AI, influenced environments.

7.1.4 Teacher Reflective Journal.

The structured template provided to participating teachers for documenting their experiences, insights, and evolving practices as they integrated AI into their daily planning. These journals offered rich qualitative data on professional growth and challenges.

7.1.5 Summary of AI tools used

Tool	Purpose	Notes on use
ChatGPT	Open-ended lesson idea generation, co-writing of content	Most flexible tool, used across all phases
TeachMate AI	Structured lesson planning using proformas	Popular among early-career teachers
Alia	Pre-loaded curriculum-linked planning tool	Used for rapid slide and quiz generation
Olex AI	Automated writing feedback and assessment	Primarily used in KS2 English lessons
Magma Maths	Real-time assessment and differentiation tool	Supported in-lesson AfL and pupil grouping
Adobe Firefly	Text-to-image generation	Used to visualise stories and create prompts

7.2 Key Engagement Artefacts

This sub-section presents examples of key materials and outputs generated during the project, illustrating the practical application of AI and its impact on teaching and learning resources. These artefacts are tangible demonstrations of the initiative's work.

7.2.1 Exemplar AI-Supported Lesson Plans

A selection of anonymised lesson plans co-created or enhanced using various AI tools, demonstrating the range and quality of materials produced. These highlighted how teachers adapted AI outputs to meet specific curriculum and pupil needs.

7.2.2 Shared AI Prompt Library Extracts

A curated selection of effective prompts and prompt engineering strategies developed by staff. This demonstrates the collective expertise fostered within the Trust and provides practical guidance for other practitioners.