THE SUTTON TRUST

Artificial advantage?

AI in the classroom and the inequality gap

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Key Findings

- Most teachers are now using AI in schools. 62% of all teachers had used AI tools at least once within the previous month. Only 16% said they never use AI, down from 41% in April 2024.

- Private school teachers are more likely (18% vs 11%) to use AI tools at least once a day. Only 8% of private school teachers do not use AI, compared to 17% in state schools.

- Private school teachers (45%) are more than twice as likely to have had formal AI training than state school (21%) and 32 percentage points (77% vs 45%) more likely to have had informal training.

- More than half of schools do not have anyone with clear responsibility for monitoring how AI is being used in their school – 42% of private schools compared to 57% of state schools.

- Private schools are three times more likely than state schools (27% vs 9%) to have a clear school-wide staff strategy on using AI.

- There are also gaps within the state sector. Teachers in schools with the most affluent intakes were more likely to report having had formal training than the least affluent (26% vs 18%).

- Teachers in schools rated 'Outstanding' are three times more likely to have received formal training and three times more likely to report a school-wide strategy than schools rated 'Requires Improvement/Inadequate'.

- Only two fifths (42%) of teachers said they were either very or fairly confident using AI tools in their role. This rose to 51% in private schools. In state schools, 24% said they were not at all confident.

Recommendations

For government

- **Government should provide additional training and guidance to school leaders on the use of AI**. Many teachers and senior leaders are not confident using AI tools. Existing guidance is limited, relying too heavily on judgement calls by school staff, with the potential for significant variation between settings. That the AI sector is moving apace is a challenge for everyone, but government should work with the education sector drawing on good practice and evidence to provide updated additional guidance and training for teachers and schools.

- **Government should tackle the digital divide for children and young people, to open up access to the benefits of AI.** Many young people from lower socio-economic backgrounds still lack access to digital devices, like laptops for homework. With the growth of AI, the damage of this digital divide is only likely to grow. All students eligible for Pupil Premium should have an entitlement to a device.

- **The evidence base of what works on AI in education should be further developed**. Often, schools are using technology without strong evidence or robust evaluation data on which approaches and tools work. Government should support research to improve the evidence base as new technologies emerge, as well as incentivising technology companies to collaborate with researchers to evaluate the educational and pedagogic impact of their products.

- **Government should monitor the emerging use of AI in schools, with particular attention to inequalities in access and use.** This is a rapidly evolving sector. Schools who do have the capacity and ability to experiment and develop their approaches should be encouraged to do so, but with systems in place to ensure that successful new approaches can be spread to schools across the state sector. Government should regularly survey teachers and school leaders on their use of AI and monitor emerging disparities, and respond quickly before major inequalities become embedded.

- **Government should ensure training on digital literacy is included in initial teacher training programmes** so that new generations of teachers are already equipped to teach in AI-enhanced educational contexts, while also being able to bring the latest AI-enhanced pedagogical methods into schools. They should provide ways for participants to understand the risks and see examples of where AI can support teaching or reductions in workload.

- **Every school should be required to have a member of staff with responsibility for AI,** who should be on the senior leadership team. They should be given the

time, recognition and resources to upskill as necessary, carefully formulate and implement school AI strategies and support staff with appropriate training.

- **The upcoming curriculum review should take account of the impact of AI on teaching and learning.** This should include forward-thinking curricula that will prepare pupils for lives strongly shaped by AI both in and out of work, including benefits and risks of AI. A **national AI strategy for schools** should ensure pupils have equal opportunities in the workplace and beyond.

- **Pilots of AI tools in schools should prioritise the needs of disadvantaged pupils and narrowing gaps.** This could be in the selection of tools or the location of a pilot. This report finds an emerging gap between school types in training and preparedness for AI. Schools with more disadvantaged pupils struggling to work with AI safely and effectively should receive priority support.

For schools and colleges:

- **Schools should designate at least one senior member of staff to have responsibility for the use of AI tools in the school.** AI is complex, and the range of tools available constantly growing. Busy teachers need someone to go to for coordinated, planned guidance and support to ensure they make the most of AI's potential.

- **Informed by evidence and effective pedagogy, schools should reflect on**

how they will monitor the use of and access to AI among students to identify the emergence of any socio-economic gaps. This should include pro-active intervention wherever gaps emerge, for example by using Pupil Premium funding to support students to access proven AI related programmes and initiatives. Financial investment in systems to help with this may be necessary.

- **Additional guidance and training should be provided to staff on which AI tools to use, how and with what limitations.** This training should focus on the benefits that AI can bring but also clearly identify the risks of deploying it in an unregulated fashion. In MATs this guidance may be most effectively produced centrally by specialist staff.

- **Schools should be led by the research evidence when choosing AI-based programmes and interventions for students and staff.** There is a huge number of AI-tools now being advertised to schools but with a growing number of studies being organisations like the Education Endowment Foundation, staff should be led by research evidence and privilege independently evaluated and evidenced products.

- **AI training should be embedded into CPD for all staff**. This should minimally cover the existing Department for Education online training materials and modules, but would ideally include accompanying training focused additionally on the particular needs of a school, its staff and pupils.

Introduction

Artificial Intelligence (AI) has the potential to bring about transformative change in practically every sector and part of the economy, including in the education system. In schools, we are just starting to see its impact. AI is already saving teachers time in tasks like planning and marking, as well as the time of wider school staff on admin tasks. Long term, AI could fundamentally change how education is delivered, allowing content to be tailored to an individual student's needs, on a scale not previously possible. Everyone involved in the sector from government and schools through to technology companies, has a responsibility to take this opportunity to empower schools and learners to avail themselves of exciting new opportunities.

AI also brings considerable challenges to the school system. How will teachers assess students' own abilities when they have used AI to complete their schoolwork? What is the worth of students completing work with AI, with that AI generated work then itself marked by AI used by their teachers? Or, especially in the long term, is that looking at the issue in the wrong way entirely? Will AI bring about such transformative change that it is simply impossible and unnecessary to separate out an individual's own ability from what they can produce using AI? And what would that mean for education? These debates are just getting started, and will continue to develop in the years to come.

This report looks to open another, so far under-explored element of the AI debate. As AI transforms the education sector, what will it do to the existing structural inequalities in the system? How will its impact be felt by different groups of students, and particularly those from lower income homes? Whenever large-scale change happens, it can bring both opportunities and challenges. For those on lower incomes, who are not well served by the status quo, will the upheavals brought by AI in the education system be positive, or could they potentially deepen existing disadvantages?

There are challenges to researching AI in schools, not least because of the very wide range of ways it can be used, from interactive learning tools, to marking, to administrative tools for teachers (and others) or creating classroom content, all of which may have different effects, consequences, risks, benefits etc. This research cannot unpick the detail of that complexity but it will look at how AI is being used in schools today, recognise its diverse uses and implementation and ask whether inequalities in access are already starting to open up. It will look at the barriers teachers face in making the most of the technology, and how that differs in different types of schools, as well as by the level of deprivation of students the school serves. It will also give practical policy recommendations to

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government and schools, on what it can do to ensure all children can benefit from the opportunities AI brings, regardless of their background.

Context

Some key AI terminology:

Artificial Intelligence (AI):

The term AI is a general cover-all term that refers to computer systems that try to simulate human intelligence by 'learning' from huge amounts of data. This can take many forms and be used for many purposes but is often thought of in relation to creating — or generating — content such as text, images or video — or processing information, decision-making or offering advice.

General purpose AI (GPAI):

This refers to AI systems that are designed to conduct a wide range of tasks and functions. These are in contrast to narrow AI systems that are focused on specific tasks or functions. GPAI systems are more flexible and can be used for tasks that they were not specifically designed for. Examples include Google's Gemini, Meta's Llama-4 and OpenAI's GPT-4.

Generative AI:

Generative AI systems are so-called for generating content such as text, images, videos, presentations or other content. Generative AI is one form of GPAI. Generative AI requires very large amounts of training data to 'learn' from — that is to identify the underlying patterns and structures of the data so as to be able to produce new similar content following these patterns. Popular examples include OpenAI's ChatGPT, Microsoft Co-pilot and Dall-E which have user friendly chat-style interfaces.

Narrow AI:

By contrast with GPAI, narrow AI is AI that has been developed for a specific purpose or task. Narrow AI will be focused on doing one particular task very well or efficiently. In education this might be specific software to coach reading or maths.

Large Language Models (LLM)

Large Language Models are a form of generative AI that train themselves on large amounts of text data. By analysing huge language datasets these computer programmes or 'models' are able to read, process and generate text in ways similar to human understanding. LLMs, like ChatGPT, require extensive training on enormous language datasets in order to be able to 'understand' and respond to user-inputted questions and queries.

Recent research

Over the last two to three years awareness and understanding of AI, and particularly generative AI, has surged, including its use in education.[1] A survey for the National Literacy Trust (NLT) in 2024 identified increasing numbers of teachers using AI. Whereas one in three teachers (34%) had heard of generative AI in 2023, this had increased to nearly nine out of ten (88%) in 2024 - and of those, nearly one in two (48%) teachers said they had used the technology (up from one in three (31%) the previous year).[2] Teacher Tapp tracked teachers use of ChatGPT across a three month period in 2023. Between March and May, the proportion of teachers who had not heard of the technology halved (36% to 18%) and use of ChatGPT increased from 15% to 20%.[3] Teacher Tapp have also tracked teachers' increasing use of general AI tools since April 2024, rising from 20% to 54% over that time (Figure 1).

Figure 1: When was the last time you used a general AI tool (such as ChatGPT, Google Gemini, Microsoft Copilot, DALL-E, Midjourney) to help with your school work?
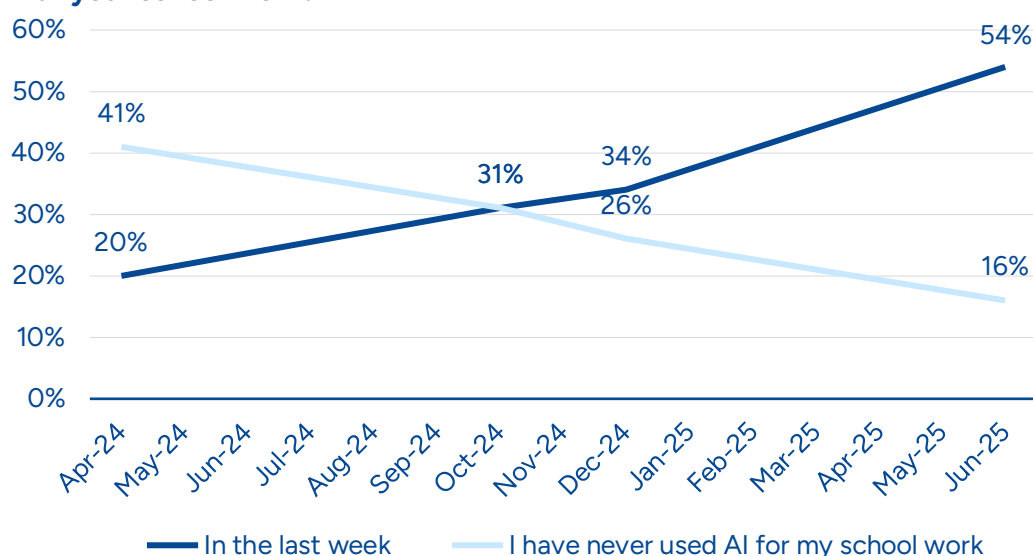
Source: Teacher Tapp.

Another survey of more than 6,500 teachers conducted by educational AI provider Twinkl in January this year found that 60% of teachers are now using AI for work purposes and one in five on a daily basis.[4]

These recent surveys have found that although teachers increasingly welcome AI into their work, they nonetheless have a range of concerns about the use of the technology in educational settings. The NLT survey found a third of teachers concerned about their pupils' use of generative AI - nearly a half (49%) saying they thought it would negatively impact children's writing skills, more than half (57%) concerned it would stop children thinking for themselves and two in five (42%) fearing it would decrease children's engagement with learning. Furthermore, more than three quarters said they needed more training, support and resources to use generative AI tools effectively.[5] This was backed up by the Twinkl survey this year, which found that 76% of teachers had yet to receive any training or substantial guidance from their school. NLT last year found that only one in ten teachers said their school had an AI use policy in place.

Our Teacher Tapp survey builds on the evidence in these previous surveys but delves slightly further into the question of preparedness of schools with questions about confidence, training, school AI strategies and dedicated staff responsible for AI. We also look at this data with a particular focus on disadvantage. There is often discussion about AI digital divides without evidence so this report looks to identify whether and where disadvantage gaps may be emerging.

With the Government enthusiastically pushing for increased use of AI across different sectors,[6] including education, and the Department for Education actively supporting the use of generative, and other AI in schools,[7] the issues of training, support and preparedness are crucial if mistakes of the past in education technology rollouts, for instance leading to the emergence of digital divides, are to be avoided.[8]

Potential benefits and risks of using AI in schools

Personalisation and tutoring

Perhaps one of the strongest potential benefits of using AI in schools is the possibility of personalisation; using adaptive learning technologies with real-time AI analytical tools to tailor educational experiences to particular students.[9] Experts have highlighted that this technology could be particularly helpful for vulnerable groups of pupils, for example those with special educational needs (SEND) and learning disabilities, or students from disadvantaged groups.[10] The

benefit AI could bring is also personalisation at scale – that is the ability to personalise resources and teaching for multiple pupils at once.

One use of this personalisation could be on-demand tutoring, potentially for pupils with limited support at home, for distance learning for pupils in remote communities, or teacher training for those serving such communities. AI tutoring could also help to make access to tutoring more affordable, with unequal access to human-delivered tutoring by socio-economic background an issue the Sutton Trust has highlighted for many years.[11]

AI can also potentially offer round the clock availability for tutoring, answering general questions and coaching while also offering instant answers and feedback where teachers might generally take days or even longer. This is certainly a potential benefit. However, there is a dearth of evidence on the quality and effectiveness of AI tools in educational settings. We should therefore be vigilant about the possible emergence of a two-tier situation with wealthier children getting in-person tutoring and less advantaged pupils AI tutoring, the quality of which is yet unknown. Similarly wealthier children may get higher quality AI tutoring tools than worse off children.

Saving teacher time

A key strength of AI lies in the automation of routine processes and tasks such as marking, administrative work, formulaic letter writing, replying to general questions or assessing learning patterns.[12]

Indeed, many of the benefits of AI in schools identified so far are focused on streamlining processes and saving time for teachers through the automation of marking, feedback, teaching resources and communications. Recent polling by Teacher Tapp found that the top ten uses of AI in education in the UK were generating model texts, writing reports, creating resources, lesson planning and curriculum development, writing letters and emails, generating quiz and multiple choice questions, simplifying and differentiating text, creating revision resources, providing model answers and essay structures and generating creative content and stimuli.[13] These are all tasks that teachers would otherwise be expected to do themselves, but for which AI offers potential time savings. Recent research has shown using AI for such tasks can indeed save teachers time. A trial commissioned by the EEF found that KS3 Science teachers spent 31% less time on average for weekly lesson planning when using ChatGPT with aid of a guide over a 10 week period compared to KS3 teachers who didn't use any generative AI tools.[14]

Case study 1: Thistle Hill Academy Primary School

Thistle Hill Academy is a state-funded primary school in Minster-on-Sea on the Isle of Sheppey in North Kent – one of the most deprived areas both in the county and nationally. Currently 54% of the school's pupils are eligible for Pupil Premium and 52% have SEND with 27 EHCPs. The school, part of the Stour Academy Trust, a small MAT consisting of 8, soon to be 9, primary schools, also has a Special Resource Provision (SRP) unit for some of its pupils with EHCPs. Talking to the Sutton Trust, Headteacher Rebecca Handebeaux said: 'Our key objective in using AI is reducing barriers to learning. We have a relatively deprived intake so for us it is a priority to make sure all our pupils have access to the same resources.' The school provides devices to all pupils from Year 3 and incorporates learning about the risks of technology, AI and data sharing across the curriculum.

Thistle Hill has been seriously using AI for a year. 'It's like an extra adult in the room,' Ms. Handebeaux explained. 'This is important not only for the learning experience itself but also to address the serious problem of teacher retention.' The school shares an AI policy with the other schools in the MAT whose digital lead coordinates and supports AI work across the Trust. The MAT researches and approves tools for use before making them available to schools. The school is a Microsoft Educator school and uses Reading Progress and Dynamic Maths among other AI apps to support personalised learning.

The school has its own 'digital champion' who takes responsibility for overseeing use of AI across the school. Ms. Handebeaux stressed the importance of taking a measured approach to AI. 'Our digital champion will introduce a new AI tool each term, explaining what it does and how to use it. School leaders will have training on it before being introduced into CPD plans across the school to make sure all teachers fully understand the tool before putting it to use. We also celebrate good use of AI, whether that's pupils or teachers, on a weekly basis identifying our MIE (Microsoft Innovative Educator) Champion of the Week.'

The parents are on board with this transition as it has been done slowly and carefully. AI is used across the curriculum, for instance, we get children to write a description of something and then copy it into an AI tool that will create a virtual reality (VR) image that the child can see in a VR headset. They then go back and edit the text to improve and alter the image to make it more like they had intended. This kind of opportunity doesn't make the children lazier. On the contrary, it enhances enthusiasm for learning and makes them all the more excited to go back and rewrite their texts.'

The UK currently has a serious teacher recruitment and retention crisis[15] and one of the factors driving the problems with attracting and keeping teachers is excessive workload.[16] Furthermore, we know that this crisis also disproportionately impacts disadvantaged pupils and schools.[17] Consequently, AI not only offers potential benefits for individual teachers or schools, but also the whole education system.

Data and evidence deficits

There is an emerging body of research surrounding AI in schools and education more broadly. This is not only welcome but essential, not least because it already points to important complexities in the efficacy of using AI in educational contexts.

For instance, recent research from the EEF looking at the quality of EdTech interventions for disadvantaged students found that although there was an average positive effect from using the technologies, which included AI, for disadvantaged pupils the average effect was less.[18] This is of fundamental importance, particularly given the hopes for using AI to address disadvantage. It suggests, in fact that EdTech has the potential to widen attainment gaps rather than close them leading the EEF to call for further research in this area.

Recent research from the Massachusetts Institute of Technology (MIT) has also found experimentally that in the educational context of writing an essay, participants who worked with LLM AI tools performed less well when having to write without the support than participants who worked first without AI tools. This was due to 'significantly different neural-connectivity patterns.' In other words the brain became used to the AI support and started scaling down some functionality.[19]

Schools, teachers and educationalists need strong data and evidence to inform advice, guidance and practice in schools. However, given the novelty of the technologies and the speed with which AI use in schools has increased, it is perhaps unsurprising that there is a lack of long-term research evaluating best practices, impacts and outcomes of using AI.[20] There is limited evidence available, particularly related to school and pre-school aged children. For example, in a systematic review of research in the ethics of digital trace data use in learning and education, Hakimi et al. found that a very large proportion of existing research focuses on higher educational contexts with a lack of attention to ethical requirements in schools and early years in particular.[21]

However, that pace of change makes the imperative for more robust data and evidence all the more urgent. There are risks involved in schools experimenting and moving ahead with AI tools without knowing for sure whether those they are using are safe or pedagogically sound. Indeed one recent study on the use

of ChatGPT4 for studying maths in US high schools found that although it could improve students' maths performance in practice sessions, some of the same students would underperform when AI was subsequently removed, suggesting reduced skill acquisition.[22] Without a solid evidence base teachers cannot be sure how best to balance learning how to use AI effectively with being able to also work without it.

Data quality and algorithmic bias

The quality of outputs from an AI tool is significantly dependent on the quality of the data used to train it on. In essence, AI is trained on human-created content which means it can easily reproduce or even exacerbate human bias and prejudice, intentional or unintentional.[23] Recent research has shown that at least for large language models (LLM) like ChatGPT there are risks that training data has 'problematic characteristics resulting in models that encode stereotypical and derogatory associations along gender, race, ethnicity and disability status.'[24] Large data does not guarantee diversity and when 'current practice privileges the hegemonic viewpoint,' data is potentially more resistant to change than humans are, with values and bias encoded into systems.[25]

This is potentially a risk for education in various ways. Pupils and teachers may reproduce such prejudices if they use AI to produce educational content, even if unwittingly, and algorithms used for grade prediction or assessment may be biased against under-represented groups. In the UK context this was famously a problem during the Covid-19 pandemic, when an algorithm was used to calculate A-level grades after exams were cancelled in 2020. The algorithm was quickly withdrawn once regulators realised it gave disproportionately negative outputs to more deprived schools.[26]

Another issue is that of 'hallucinations' in general purpose AI tools. This refers to the technologies producing factually incorrect outputs in response to users' queries. For teachers this means there is a risk, if not attentive, of using inaccurate resources in the classroom, and for conscientious teachers it will mean having to carefully check through any outputs they use to make sure it is factually correct. For pupils, beyond the simple risk of getting things wrong in their assignments, there is the more fundamental risk that they learn things that are not true.

However, although the main concern is usually about AI reproducing human prejudices, others have suggested that AI could actually be used to help eliminate bias and prejudices commonly found in educational settings by designing systems to be culturally sensitive and fostering more inclusive educational environments. Hosseini suggests that suitably designed intelligent systems could be used to identify patterns of discrimination or bias in human-produced content – marking for instance. Such systems could be trained to

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alert teachers or administrators who would be able to act as necessary in a timely fashion.[27]

Privacy

The protection of personal data, especially related to pupils and young people, needs to be paramount in the use and development of AI tools in education. However, recent research has shown this to be an area of concern, with a lack of transparency.[28] There are regulations outlining requirements for education technology providers in the UK.[29] However, the code does not apply to all educational technology companies and products or schools.[30] If AI is used in conjunction with educational systems that hold personal and/or sensitive data about teachers and pupils (such as free school meal or Pupil Premium eligibility, attainment data, behavioural records etc.) kept by most schools, there is a clear need for clarity about ownership of the data and how secure it is.[31]

Users of general purpose AI consent to their data being used, but this could mean they unwittingly jeopardise the privacy of others' data as well: 'If personal data about pupils or staff – for example data for the generation of a pupil report or for generating personal feedback – is shared with these generally available systems, there is a risk that some or all of the data shared could appear in other outputs.'[32]

Unequal access

As Sutton Trust research has shown, unequal access to technologies and their impact on learning is not new.[33] Indeed, so-called digital divides have been recognised in education for over 20 years[34] and many of the issues that related to computers and the internet more generally can also apply in the context of AI. Unequal access to AI technologies can occur as a result of socio-economic factors like income, wealth or class; geography such as urban-rural differences and poor connectivity 'cold spots'; digital literacy and skills gaps among users – found to be a particular issue during the Covid-19 pandemic;[35] as well as the impact of regulatory regimes or government policies or cultural and linguistic barriers.[36]

In the context of this report, we are concerned with differences in access to AI across different types of schools, as well as between different groups of students. It is important to recognise that access alone does not necessarily lead to improved outcomes. However, it is an important pre-condition for other factors to be effective. Private schools or those in wealthier areas are likely to have greater access to resources and therefore be able to afford to invest both time and money in more sophisticated AI solutions.[37]

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Disempowering teachers and pupils

Pupils using AI to cheat or complete their homework has become a perennial concern for educators.[38] However, such use of AI is not only a matter of fairness and honesty, but also raises concerns about pupil autonomy: is AI depriving pupils of crucial learning skills and abilities?[39] At the same time, as teachers use AI more and more for creating class content, teaching plans, quizzes and much more, are their roles also being delegated to AI enabled systems and the commercial organisations behind them?[40] In other words, should we be concerned about AI undermining both teachers' and pupils' autonomy, creativity or ultimately even abilities?

Ethical issues

The ethical issues surrounding AI in schools relate to some of the challenges outlined above. Data privacy and protection, for instance, are ethical concerns as well as legal ones. Inappropriate use or sharing of sensitive data do not only have serious consequences regarding safeguarding and pupil safety but also constitute a serious ethical issue. Similarly, the issue of data quality and hallucinations raises the question of the value we put on truth and accuracy. Given that AI systems do not currently appear to be limited to truth[41] is it appropriate that they are used to teach our children?

For those concerned about a fair society, inequality of access is also an ethical issue. As Obed Boateng has put it: 'Without addressing systemic barriers, such as poverty, resource allocation, and teacher training, AI will remain a tool that benefits the privileged rather than an equalizing force. The real question is not whether AI can close the learning gap, but whether we as educators, policymakers, and society will ensure that it is implemented ethically, equitably, and inclusively.'[42] One might also argue that undermining teacher and pupil autonomy and creativity is also an ethical concern, or at the very least one that questions the value we put on these attributes.

While not discussed at length here, other wider ethical issues have also been raised on the use of AI, including but not limited to the environmental sustainability of the technology,[43] intellectual property issues concerning how the models have been trained,[44] and the potential for widescale job displacement.[45]

Transparency

A fundamental issue with AI tools is the so-called 'black box' problem.[46] That is the challenge of knowing how a certain decision or output has been reached using the technology. If AI is to be used to help teachers suggest work for their pupils, to grade pupils' work, to recommend learning or careers pathways or to analyse other aspects of their school experience then the black box problem

becomes an issue. Teachers and school leaders need to be accountable for decisions made, but the use of AI risk them being unable to explain these decisions clearly.

Regulation

While the Government and Information Commissioner's Office are working on updated policies and guidelines, currently there is no specific legislation for AI in the UK,[47] a potential concern for the use of AI in education.

Government policy

The Government has so far been positive about AI in the classroom, saying that teachers should use AI tools for lesson planning, creating resources, marking work, giving feedback to students and for administrative tasks. Back in 2021 the Government (then Conservative) launched its National AI Strategy.[48] The strategy covered a wide range of AI applications across the economy and society including education with the emphasis on developing the necessary skills for the future economy.

In March 2023, the Department for Education (DfE) set out its position on using AI in education for the first time, covering the limitations as well as the opportunities and considerations about data and intellectual property and how to support students in acquiring the appropriate skills.[49] In October 2023 the DfE held a two day 'hackathon' with teachers and data scientists to investigate how to use AI most effectively in schools.[50]

In November 2023 the DfE published fuller guidance on the use of generative AI in education following a call for evidence.[51] This position was recently updated to give more specific and detailed guidance[52] accompanied by tailored training resources for teachers and school leaders.[53]

Advice from the DfE to school leaders outlines the need to consider AI as part of any school's digital strategy. In this guidance school leaders are instructed to consider the following:

- Vision: defining a clear purpose for using AI to support teaching, learning, and operations.
- Strategic alignment: linking AI use to a school's development plan.
- Infrastructure: ensuring systems can support safe, effective AI use.
- Staff skills: investing in training so staff can use AI confidently and critically.[54]

These materials for schools are generally supportive and encouraging of teachers in England using AI,[55] although they also issue clear warnings to teachers about their responsibilities. Alongside advice on how to use AI to save time and cut down routine tasks, the DfE cautions that 'teachers, leaders and staff must use their professional judgement when using these tools. Any content produced requires critical judgement to check for appropriateness and accuracy. The quality and content of any final documents remains the responsibility of the professional who produced it and the organisation they belong to, regardless of the tools or resources used.'[56]

Ofsted also supports the use of AI in schools 'where it improves the care and education of children and learners.'[57] This means considering schools' use of AI by the effect it has on the more general criteria that Ofsted inspects. Consequently, the use of AI can be part of a normal inspection visit, but Ofsted will not directly inspect the quality of AI tools.[58]

New data

The data collected for this research brief focuses on how teachers are using AI in schools today, with a particular emphasis on any emerging inequalities in use between different types of school, both between the state and private sector, and between different schools within the state sector. It updates data from other surveys on how teachers are using AI but also delves in more detail into issues of training and support, school preparedness (through confidence levels, adoption of AI strategies and having a school AI lead) as well as issues relating to inequalities in the education system related to FSM eligibility, private vs state schools and schools of different Ofsted ratings.

Methodology

Polling for this report was conducted by Teacher Tapp, who surveyed teachers in England in both state and private schools between 3rd and 14th April 2025. Teacher Tapp surveyed over 10,000 teachers, with the results weighted to reflect national teacher and school demographics such as school funding and phase, teacher age, gender and level of seniority. The survey included more than 600 headteachers and more than 2,000 senior leadership team teachers (excluding heads).

Case studies

This report incorporates four case studies spread throughout the text. These include one state primary school using AI to deal with high levels of disadvantage and SEND in a deprived area; a private school that has invested heavily in staff time and other resources to commit to integrating AI into its curriculum in innovative and responsible ways; a large MAT coordinating and

guiding schools through their emerging AI journeys and a charity supporting all kinds of schools with free training and guidance for the safe and effective use of AI in their settings. The case studies, based on interviews conducted for this research, bring to life some of the possibilities and opportunities that AI is offering school communities while also offering sector insights as to how some of the accompanying challenges may be navigated.
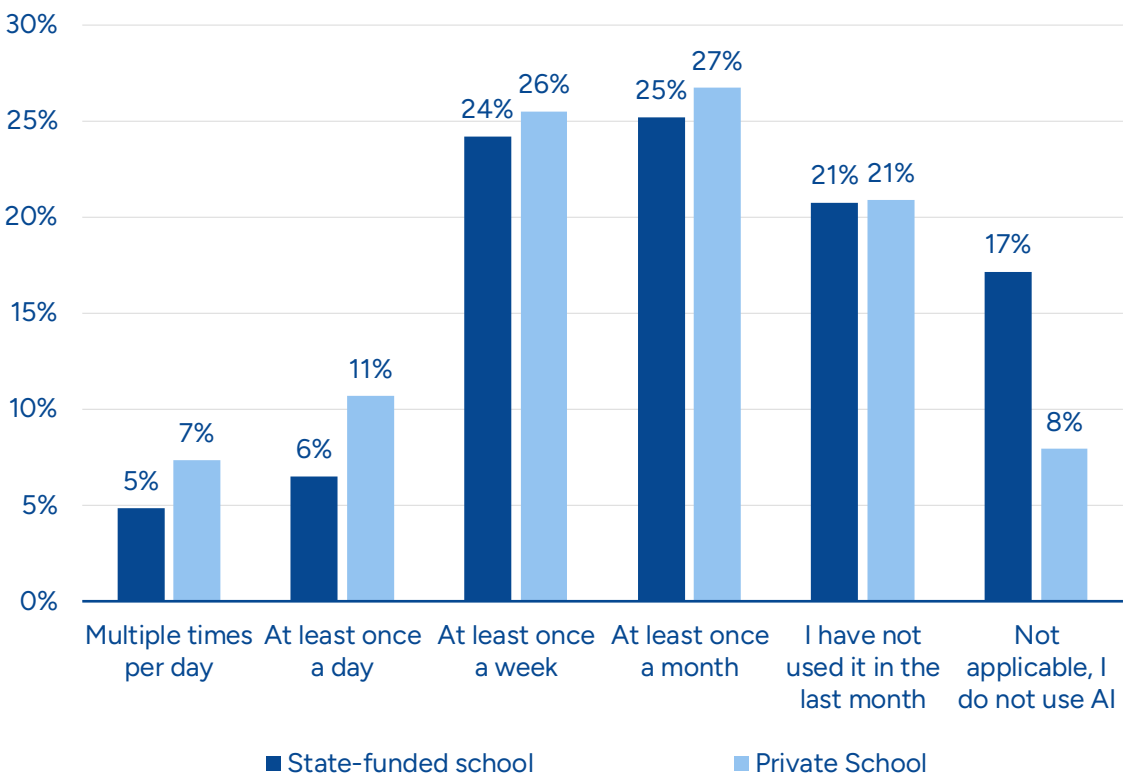
Use of AI in schools

Who is using AI?

Most teachers are now using AI to some degree, with 62% of teachers reporting they had used AI tools for school work at least once within the previous month, and only 16% having not used AI.

Private school teachers are nearly twice as likely (11% vs 6%) to use AI tools at least once a day, with only 8% of private school teachers not using AI compared to 17% of state school teachers (see Figure 2).

62%

of all teachers said they had used AI tools at least once within the previous month.

Figure 2: In the past month, how often have you used AI tools in your work as a teacher? (School type)

	State-funded school	Private School
Multiple times per day	5%	7%
At least once a day	6%	11%
At least once a week	24%	26%
At least once a month	25%	27%
I have not used it in the last month	21%	21%
Not applicable, I do not use AI	17%	8%

The proportion of teachers using AI rises, as would perhaps be expected, in schools where teachers are required to do so. Such schools are actually very

few in number – just 4% (around 400 respondents in this sample) – but in those schools, 89% of teachers had used AI at least once in the past month, nearly 30 percentage points higher than in other schools (60%). It may be that proactive school policies boost AI use among teachers or there is more proactive training in those schools, although it could be that schools where AI is already more commonly used are then more likely to adopt such policies.

There is some variation across English regions in the extent of AI use, with teachers in London using AI more, at 67% using it once a month or more. This compares to 56% in Yorkshire and the North East, the area with the least AI use. Similarly, whereas 21% of teachers in Yorkshire and the North East said they do not use AI, this figure was only 12% in London.

Among state schools, there was little significant difference in the proportion of teachers using AI at least once a month between primary and secondary schools (61% vs 62%), most and least affluent schools (both 61%) or Ofsted ratings (Outstanding 65%, Good 61% and Requires improvement/Inadequate 60%). There was also relatively little difference between teachers of different seniority, the largest difference being between classroom teachers (58%) and Senior Leadership Team (SLT) teachers excluding headteachers (65%).

Where there was a more notable difference was between teachers of different subjects with a gap of 25 percentage points between maths (45%) and English (70%) teachers and other subjects ranged in between. In terms of age, older teachers were less likely to have used AI in the last month than younger teachers. Whereas 54% of teachers over 50 and 58% of teachers in their 40s had used AI, this rose to 69% and 65% for teachers in their 20s and 30s respectively.

How AI is used

AI tools were most widely used by teachers across all schools for lesson planning and preparation (44%). This was consistent across private and state schools. However, private school teachers were more likely than their state school counterparts to use AI for all other tasks, particularly for marking (12% vs 7%), creating assessments (24% vs 14%), writing pupil reports (29% vs 11%), continuing professional development (CPD) (14% vs 8%) and communicating with parents (19% vs 11%) (see Figure 3). This suggests that private school teachers are more likely to have the use of AI integrated across different aspects of their work.

There were also some striking contrasts between state and private schools in how AI was being used beyond lesson planning and preparation. The largest contrast at secondary level, for instance, was in writing pupil reports (30%

private, 9% state) while at primary level the largest contrast was in communicating with parents (27% vs 10%).

Case study 2: Alleyn's School

Alleyn's school is an independent co-educational day school for pupils from age 4 to 18 located in South London. The school has been increasingly incorporating AI into its teaching, learning and administration over the last three years. Deputy Head, Dr. Tom Durno, explained that the launch of ChatGPT coincided with a school curriculum review focusing on jobs for the future. This led to the school's first AI strategy document in 2023, now in its third revision. What started as a straightforward tech strategy quickly developed into a broader philosophy of how AI should be integrated across the curriculum. The school dubs this curriculum the Alleyn's intelligence quotient or AiQ. AiQ introduces pupils to all aspects of AI including social and environmental impacts, data privacy and ethical use.

The main AI packages used by the school are Microsoft Co-Pilot Enterprise and ChatGPT Pro though other tools are also used. The AiQ curriculum is overseen by the Director of AiQ supported by two curriculum leads. The Assistant Head (Teaching and Learning), alongside two teaching and learning leads, focuses on CPD and classroom implementation. The Director of Digital Services supports all technical aspects of classroom delivery, and there is also an AiQ Lead for the junior school. The school uses AI-based intelligent and dialogue-based tutoring systems, language learning applications, administrative tools and has its own school chatbot which Dr. Durno explained has saved a lot of staff time dealing with enquiries.

Teachers are not obliged to use AI but have all had compulsory CPD and heads of department are to be required to report annually on the AI innovations being adopted in their departments.

Dr. Durno explained how the school benefited enormously from collaboration with MIT in Boston which offers support for schools through its Day of AI platform. Staff from the school visited MIT in 2024 and have collaborated with staff since, including hosting two final year undergraduates who helped run AI projects and activities in the school across different year groups as part of their degree studies. Asked about whether state schools could have access to these resources, Dr. Durno said 'We are always happy to share and work with state schools, and the MIT resources, like many others, are freely available. Beyond finding host families for the UG students, their time in our school, which was phenomenal, did not cost us anything. Many less-well resourced schools could do a lot of what we have done. We collaborate enthusiastically with local state schools through the Southwark Schools Learning Partnership, which has had a themed year on AI.'

**Figure 3: In the past month, what tasks have you used AI tools for in your work at school? (School type)**
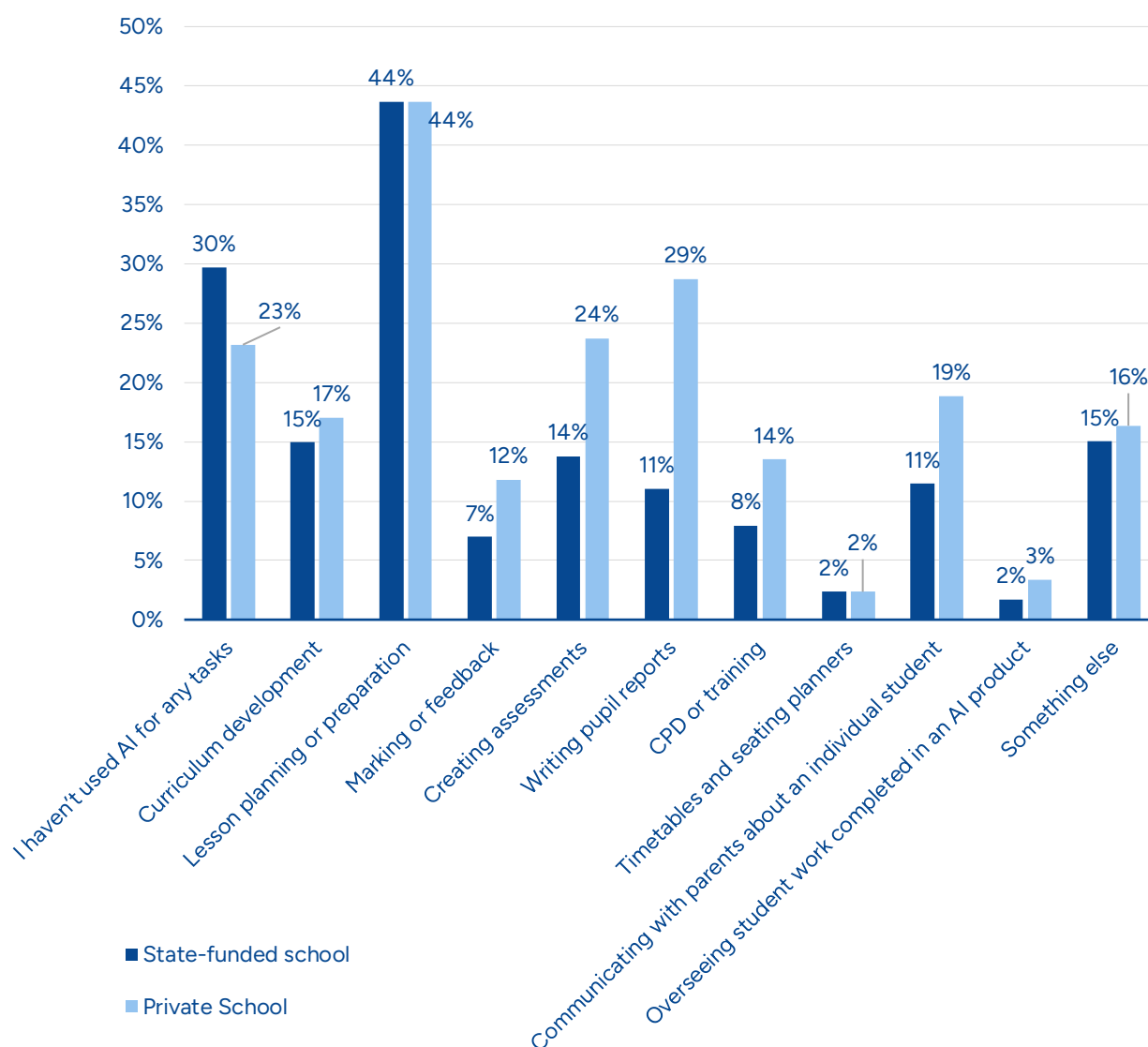
Interestingly, schools with better Ofsted ratings are using AI more than schools with lower ratings across most tasks (see Figure 4).[59] The largest contrast here, as in private secondaries, was also in writing pupil reports (16% vs 9%).

Figure 4: In the past month, what tasks have you used AI tools for in your work at school? (Ofsted rating)
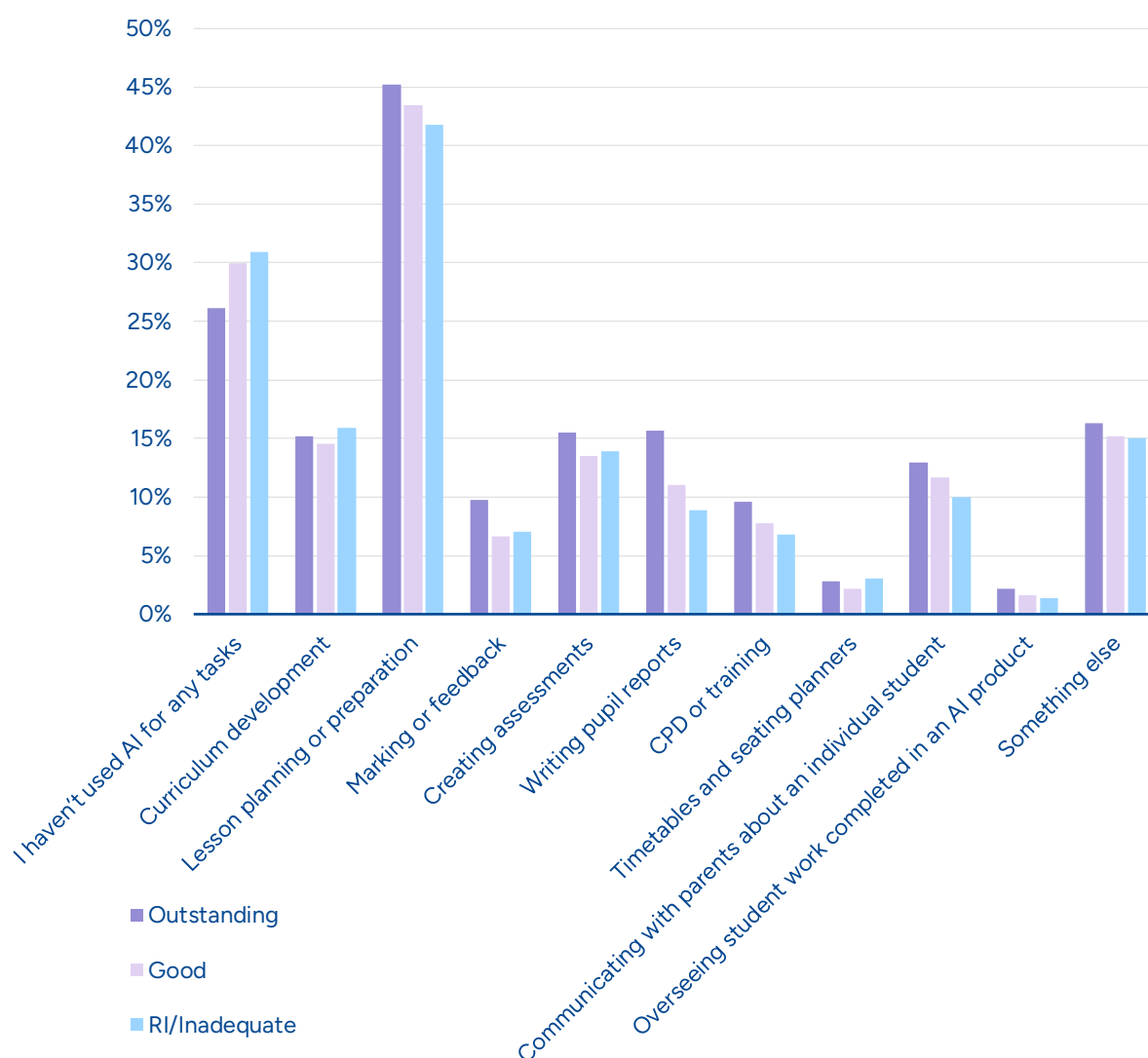
There was little variation in AI use across schools with more and less affluent intakes (based on FSM quartiles), although the latter were slightly more likely to use AI for lesson planning or preparation, as well as for curriculum development (see Figure 5).

Figure 5: In the past month, what tasks have you used AI tools for in your work at school? (FSM quartiles)
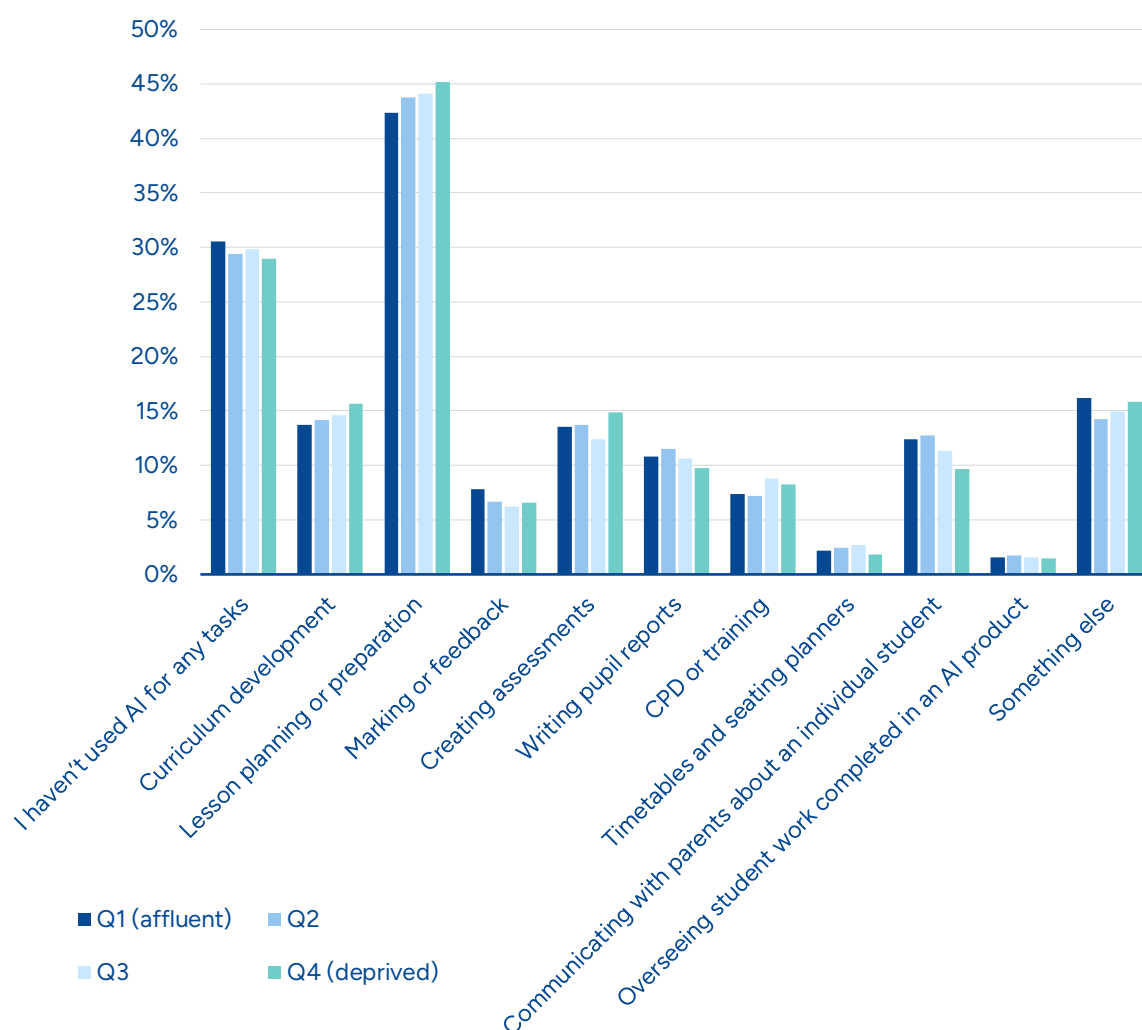
AI is clearly helping teachers save time. Among all teachers who used AI, 73% reported it saved them time. A majority (52%) said that AI helped them save up to two hours in a week at work and only 13% said that AI did not help them save time at all, although this did rise to 18% in private secondary schools. Private primary school teachers were most likely to say AI saved them more time, with 29% saying it saved them more than 3 hours per week. This compared with just 20% in state primary schools or 21% in schools in general. There was not much difference in the proportion of teachers saying AI saved them time across the state and private sectors. Whereas 23% of private school teachers said it saved them 3 hours or more, 21% of state school teachers said the same with 75% and 73% respectively saying it saved some time (including up to 3 hours).

Training and support

The levels of training and support for teachers is an important issue for the rollout of AI in schools. As we have seen, previous surveys have suggested that teachers feel significantly under-supported in terms of training. For teachers to effectively and responsibly integrate AI into their classrooms, they need a good understanding of how to use the technology effectively, as well as of the potential benefits and risks.

However, our survey found that only 23% of teachers had some kind of formal training, compared to 33% who had had no training at all. Among teachers who had had some kind of training they were most likely to have either taught themselves (22%) or had informal support from a colleague (23%). 18% had had formal training from a colleague or an in-school session and only 6% from an external provider.

There were also considerable differences across school types and settings. This makes training and support likely one of the most important factors in the AI divide, given it is fair to assume that teachers receiving more training are likely to be more knowledgeable about how to make the most of the technology. The more teachers are left to work it out for themselves, the higher the risk that mistakes or bad practice could occur. As the results below show, wealthier schools and pupils are far more likely to have trained teachers than their less affluent peers.

In our survey, private school teachers (45%) were more than twice as likely to have had formal training of some sort than their state school counterparts (21%) (see Figure 6). In secondary schools the difference between school types rises to 53% (private) vs 25% (state), compared to 32% (private) vs 17% (state) in primaries. While more than a third (35%) of state school teachers had received no training at all in AI, this was only the case for less than a fifth (18%) of private school teachers.

Private school teachers (77%) were also more than 30 percentage points more likely to have had some kind of informal training (online course, support from colleagues or self-taught) than state school teachers (45%). This was 80% for private secondary school teachers compared to 50% in state secondary schools and 72% for private primaries compared to 41% in state primaries.

Among private school teachers similar proportions had either taught themselves (35%) or received informal support from a colleague (36%) or formal training from a colleague or in-school session (36%). In the state sector these were 21%, 21% and 16% respectively.

2x

Private school teachers (45%) were twice as likely to have had formal training than state school teachers (21%).

Figure 6: Have you received any training or support on using AI in your role in the last 12 months? (School type)
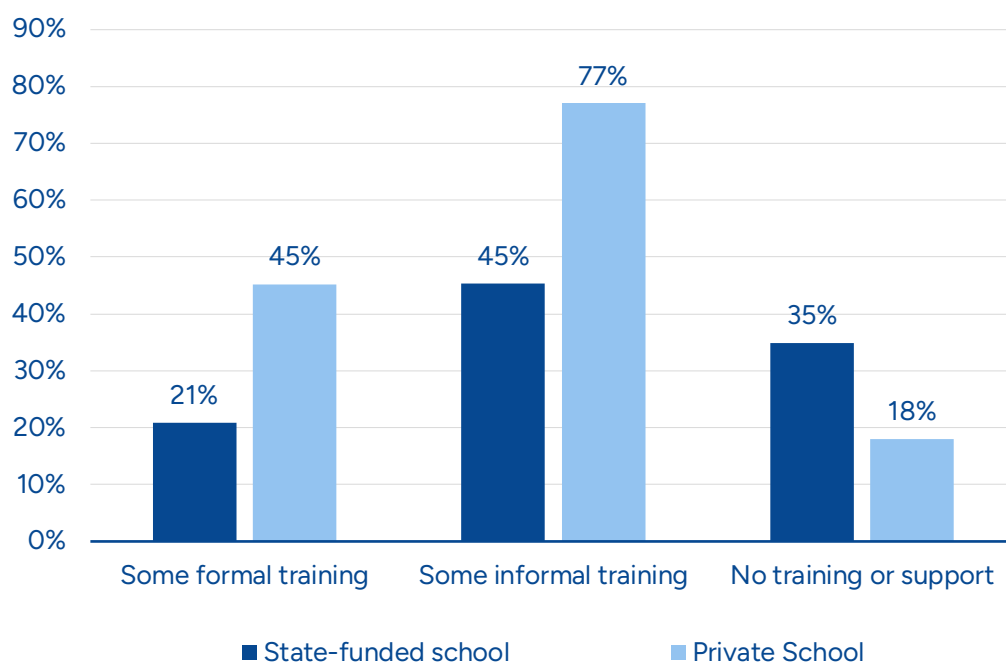
Within the state sector we also found clear differences in levels of training across schools with more and less affluent pupils. 26% of teachers in schools with the most affluent intakes (FSM Q1) had received formal training compared to just 18% in the least affluent (FSM Q4) schools (see Figure 7). At the same time, teachers in schools with the most affluent intakes were also 13 percentage points more likely to have had informal training of some kind than those in the least affluent schools (54% vs 41%). Only 12% of teachers in the least affluent schools had had formal training with a colleague or in-school session while 20% had taught themselves and 37% had had no training at all. This compared to 20%, 25% and 30% respectively for teachers in the most affluent schools.

As we have seen, there is relatively little difference across state school types as to how much AI is being used, but this shows us that there are considerable differences in relation to the support that teachers are getting in more and less affluent school settings.

Figure 7: Have you received any training or support on using AI in your role in the last 12 months? (FSM quartiles)
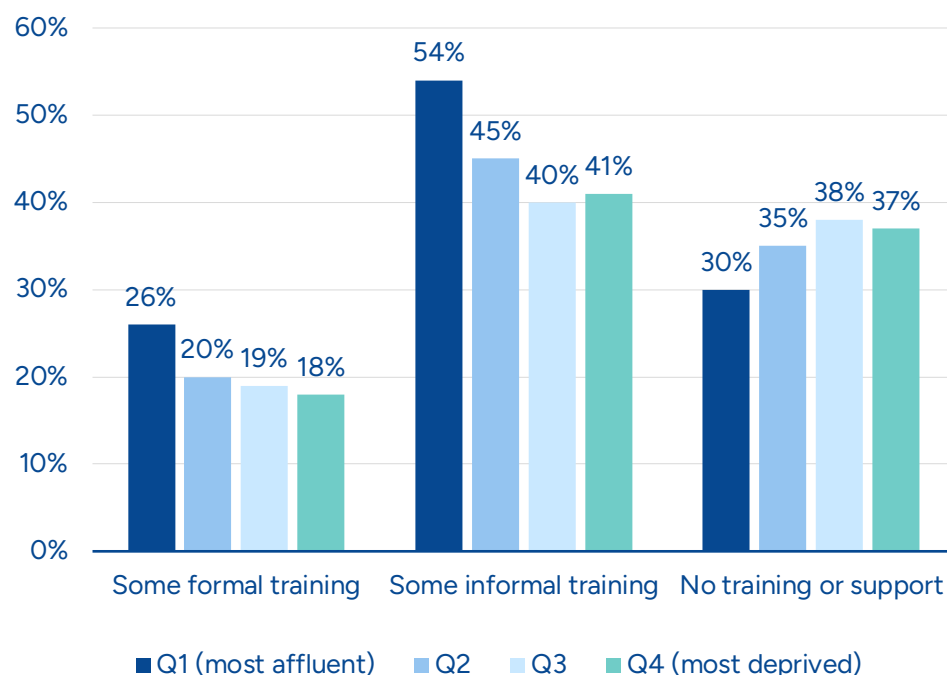
Teachers in an 'outstanding' rated Ofsted school were more than three times more likely to have had formal training (35%) than in one with a 'requires improvement' or 'inadequate' rating (11%) and 24 percentage points more likely to have had informal training (61% vs 37%) (see Figure 8). In 'outstanding' schools, 28% of teachers had had formal in-school training compared to just 9% in 'requires improvement/inadequate' schools. Nearly a third (29%) of teachers in outstanding schools had taught themselves and another 29% had informal training from a colleague. This compared with 17% for both of these forms of training in 'requires improvement/inadequate' schools. Meanwhile, more teachers in 'outstanding' schools had had some kind of training compared to those with 'good', 'requires improvement' or 'inadequate' ratings.

Figure 8: Have you received any training or support on using AI in your role in the last 12 months? (Ofsted rating)
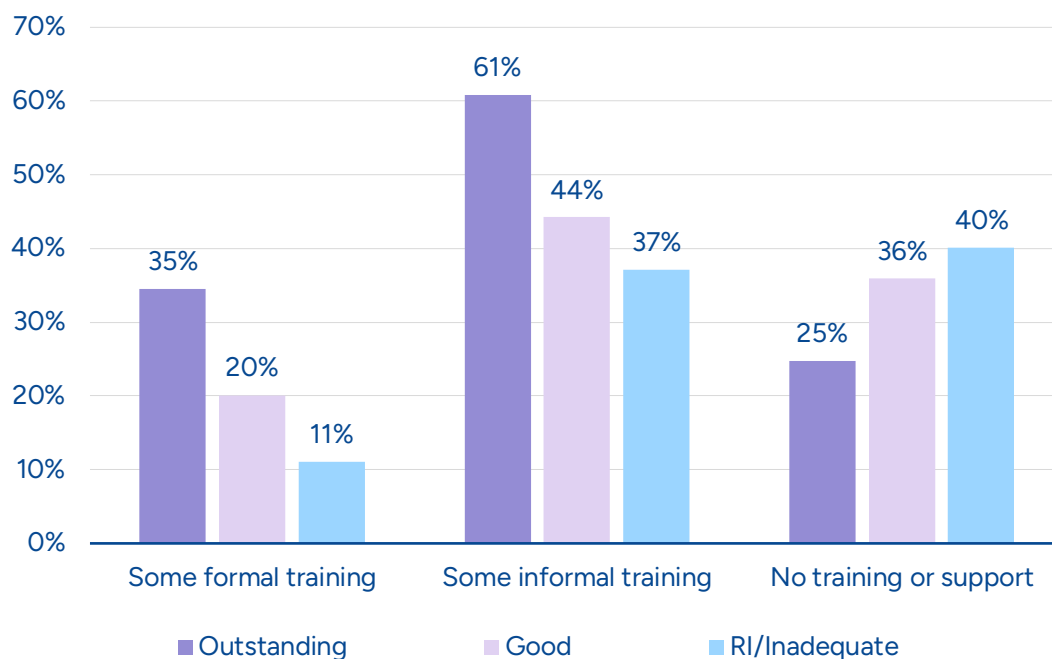
Teachers in schools requiring teachers to use AI were also more than twice as likely (46% vs 22%) to have had formal training and 35 percentage points more likely to have had informal training (82% vs 47%) than teachers in schools not requiring the use of AI.

Case study 3: United Learning

United Learning is the largest multi-academy trust (MAT) in England with over 90 state-funded academies across primary and secondary as well as 15 independent schools. United Learning is building up its use of AI across its schools but does not intervene directly at a school level. Rather the trust sees its responsibility as putting in place the 'guardrails' and providing as much advice and guidance to schools, alongside providing learning and sharing opportunities for its teachers and school leaders.

Lauren Thorpe, Chief Transformation Officer for the MAT is the lead coordinator for AI across the trust's schools. Speaking to the Sutton Trust, Ms. Thorpe stressed the importance of increasing AI awareness to give teachers and school leaders the skills and ability to safely navigate a rapidly changing AI landscape. 'We cannot centrally make every decision on AI at the school level,' Ms. Thorpe said. 'Indeed, with AI baked into more and more tools in one form another it can be difficult for users to recognise exactly what AI may be doing in software they already use. What we can do is make available to teachers tools we know are safe and the ability to make informed judgements as they further explore their use of the technologies.'

The trust has an internal digital marketplace where approved tools are catalogued for schools ensuring software is secure with ethical data management. The MAT also has an AI Toolkit for teachers and school leaders with guidance on AI use for both teachers and pupils.

However, the rollout of AI in schools is a constantly evolving process. Ms. Thorpe outlined the MAT's short-term roadmap which includes building up use of Microsoft Co-Pilot and MS Teams Premium – built into core productivity tools adopted by by the trust; expanding the digital marketplace and working with software providers to explore opportunities to better use AI; developing a digital skills framework with a focus on safe, efficient use of AI and developing and piloting AI agents tailored for specific purposes. This includes, for instance, pilot AI marking trials with assessment partners and use of AI and automation to reduce administration in schools.
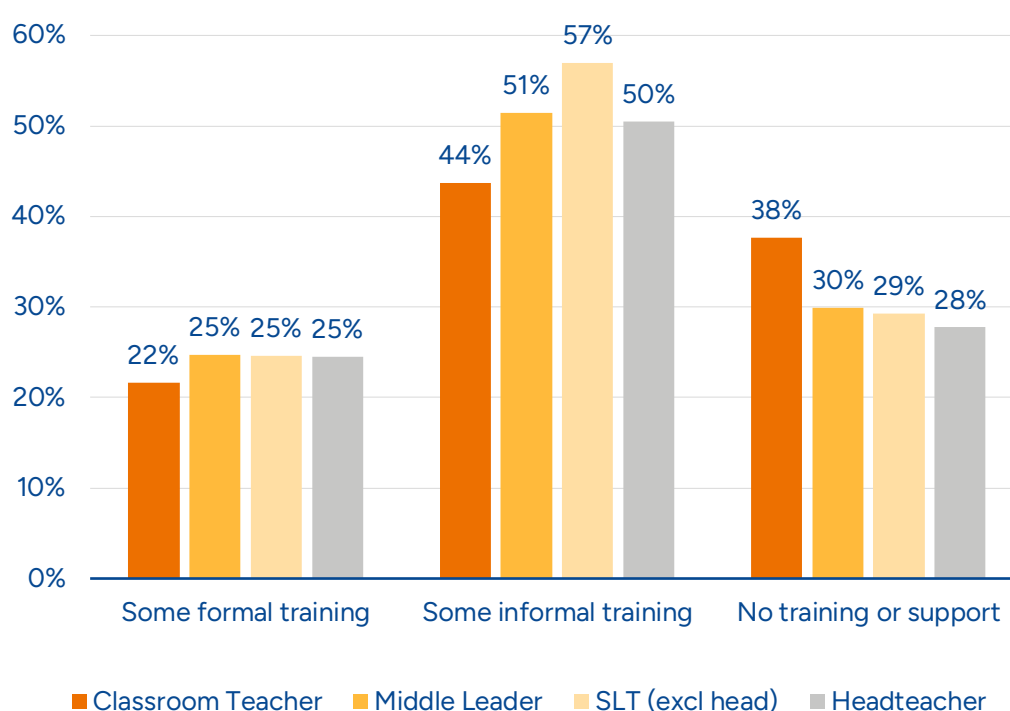
Ms. Thorpe stressed the importance of schools taking a cautious approach to using AI to ensure it is done safely and effectively. 'Unlike some other contexts, there is no first-mover advantage for schools with AI. There is for the tech providers, but not really for schools so the most powerful thing we can do is to sense check all the new products that we are confronted with. We have to play the discerning consumer because our choices will shape the future. What would worry me most would be for schools to leap in too quickly without fully understanding the implications of what they are doing.'

Seniority of teachers

The level of formal training varied little across seniority of teachers. However, there was a much clearer contrast in terms of informal training (see Figure 9) with 57% of senior leadership team teachers and 50% of headteachers having had informal training compared to just 44% of classroom teachers.

However, a third of headteachers (33%) said they were not sure how to use AI compared to a just a quarter (26%) of classroom teachers. Headteachers were also the most likely (36% vs 29% for classroom teachers) to say that a lack of training or support stopped them using AI more often.

Figure 9: Have you received any training or support on using AI in your role in the last 12 months? (Teacher seniority)

Legend: Classroom Teacher, Middle Leader, SLT (excl head), Headteacher

Some formal training: 22%, 25%, 25%, 25%
Some informal training: 44%, 51%, 57%, 50%
No training or support: 38%, 30%, 29%, 28%

Once again, we found large differences between regions, with teachers in London nearly twice as likely to have had formal training in AI (30%) than those in Yorkshire and the North East (17%) and 16 percentage points more likely to have had informal training (59% vs 43%).

Case study 4: Good Future Foundation

The Good Future Foundation is a charity working with teachers in any school to help better integrate AI tools into their work. Their mission is to tackle the emerging gap between schools with the means to embrace AI and other tech solutions and those without. The charity was founded by Steven Chan, the tech entrepreneur behind Goodnotes. However, Executive Director Daniel Emmerson, talking to the Sutton Trust emphasised that the Foundation is completely brand and tech neutral – it is a key policy not to promote or suggest any particular brands or tools in their work with schools.

What the Foundation does offer is free comprehensive, tailored support for schools and MATs setting out on their AI journey. 'Every school is different,' Mr. Emmerson said, 'so we always start out by talking with the staff to identify the priority needs of the school. Most commonly this is training on data privacy, intellectual property rights and safeguarding but we have a range of other options available.' Good Future sees learning about AI as an iterative process and recognises the importance of sharing best practice across schools.

The Foundation offers free CPD for teachers, often going into schools for Inset or other training days. To support teachers and school leaders and guide them through the process of rolling AI out safely and effectively in their schools, Good Future offers four levels of AI Quality Mark to recognise their efforts and progress. This is a self-assessment process moderated by the Good Future Foundation to ensure consistency and quality.

Mr. Emmerson said 'All schools are facing the challenge of understanding how best to use AI and we know that some schools have more resources than others. We will work with any school but target schools for us are those with more limited resources. Many teachers and school leaders just don't have the knowledge at the moment and don't have the time in busy schedules to find out about AI on their own. We are there to support them and fill that gap and we don't charge them anything. For us AI equity is a vitally important issue.'

School preparedness for AI

Confidence and barriers

Teacher's confidence levels offer a clear indication of readiness to welcome AI into their classrooms. However, only two fifths (42%) of teachers report they are either very or fairly confident in using AI tools in their role. This rose to 51% in private schools vs 41% in state schools (see Figure 10). Conversely, in state schools nearly a quarter (24%) of teachers said they were not at all confident using AI tools, compared to just 15% saying the same in private schools.

Figure 10: How confident are you in using AI tools in your role? (School type)

Legend:
- Very confident
- Fairly confident
- Somewhat confident
- Not at all confident
- Cannot answer
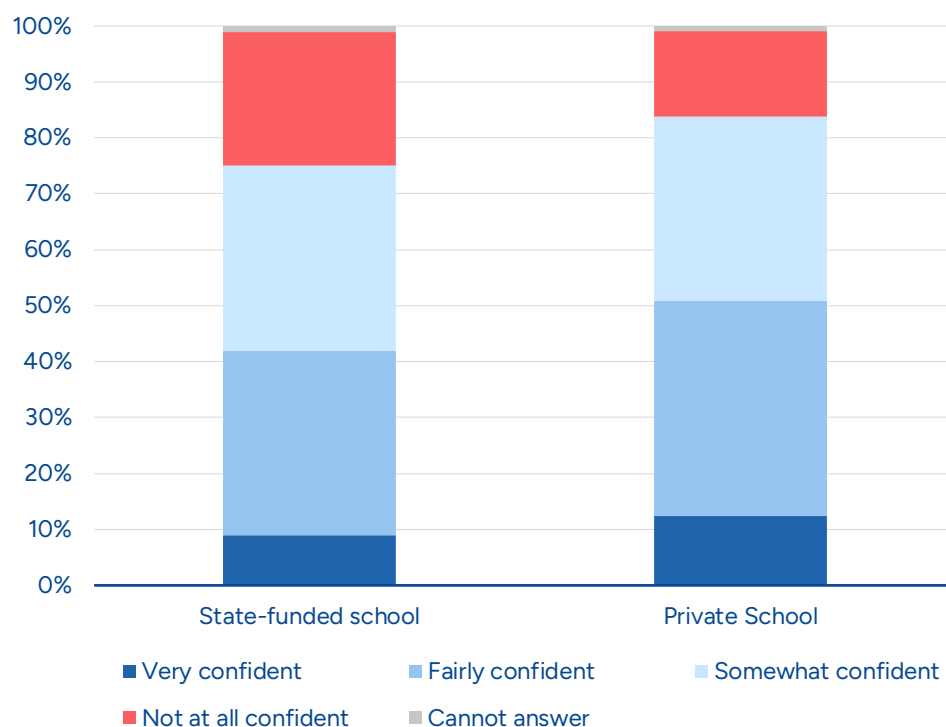
## School strategy and responsible staff member

A recent review document compiled by a coalition of 23 groups of schools across state and private sectors put a strategic approach to AI foremost among its recommendations for school and MAT leaders.[60] However, 88% of those surveyed here reported their school has no clear school-wide staff strategy on using AI. There were however clear differences between different sectors. Private school teachers were three times more likely (27% vs 9%) to say their school has a clear school-wide staff strategy on using AI, and while 90% of state school teachers said their school has no strategy, this figure was 71% for private schools (see Figure 11).

Figure 11: There is no school-wide staff AI strategy in my school and no-one has clear responsibility for monitoring AI. (School type)
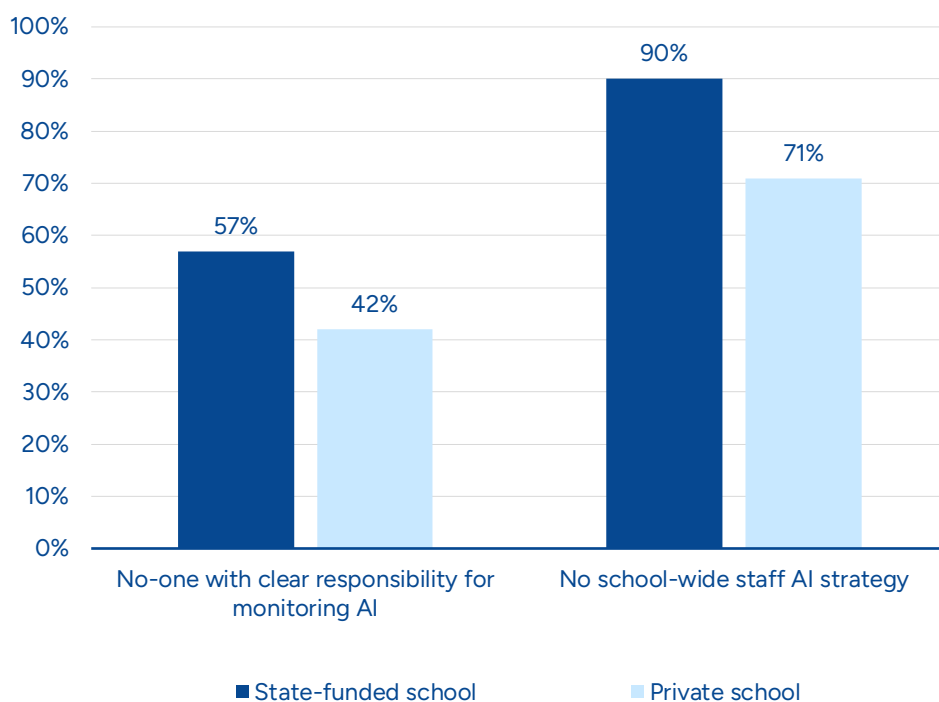
Although few state schools had a school-wide AI staff strategy, Ofsted 'outstanding' schools were three times more likely to have one (18% vs 6%; Figure 12) than schools rated 'requires improvement' or 'inadequate'.

Figure 12: Does your school have a clear school-wide staff strategy on using AI? (Ofsted rating)
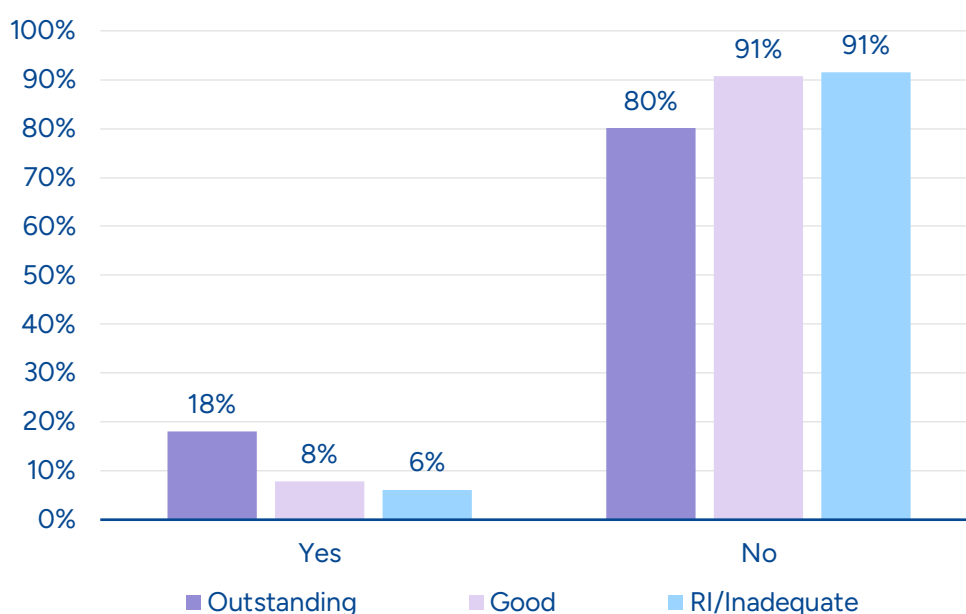
Surprisingly, 65% of teachers in schools where the use of AI was expected said their school had no school-wide AI staff strategy, and 37% said there was no-one in the school with responsibility for monitoring how AI was used.

There was a similar situation regarding how many schools have a designated staff member responsible for AI. More than half of schools (55%) did not have anyone with clear responsibility for monitoring how AI was used in their school. This was 57% for state school teachers, compared to just 42% in private schools (see Figure 11). In state schools with the least affluent intakes (FSM Q4) this was 58%, compared to 52% in those with the most affluent (Q1).

The person responsible for AI in the schools with a designated staff member was most often a member of the senior leadership team taking this on alongside other responsibilities.
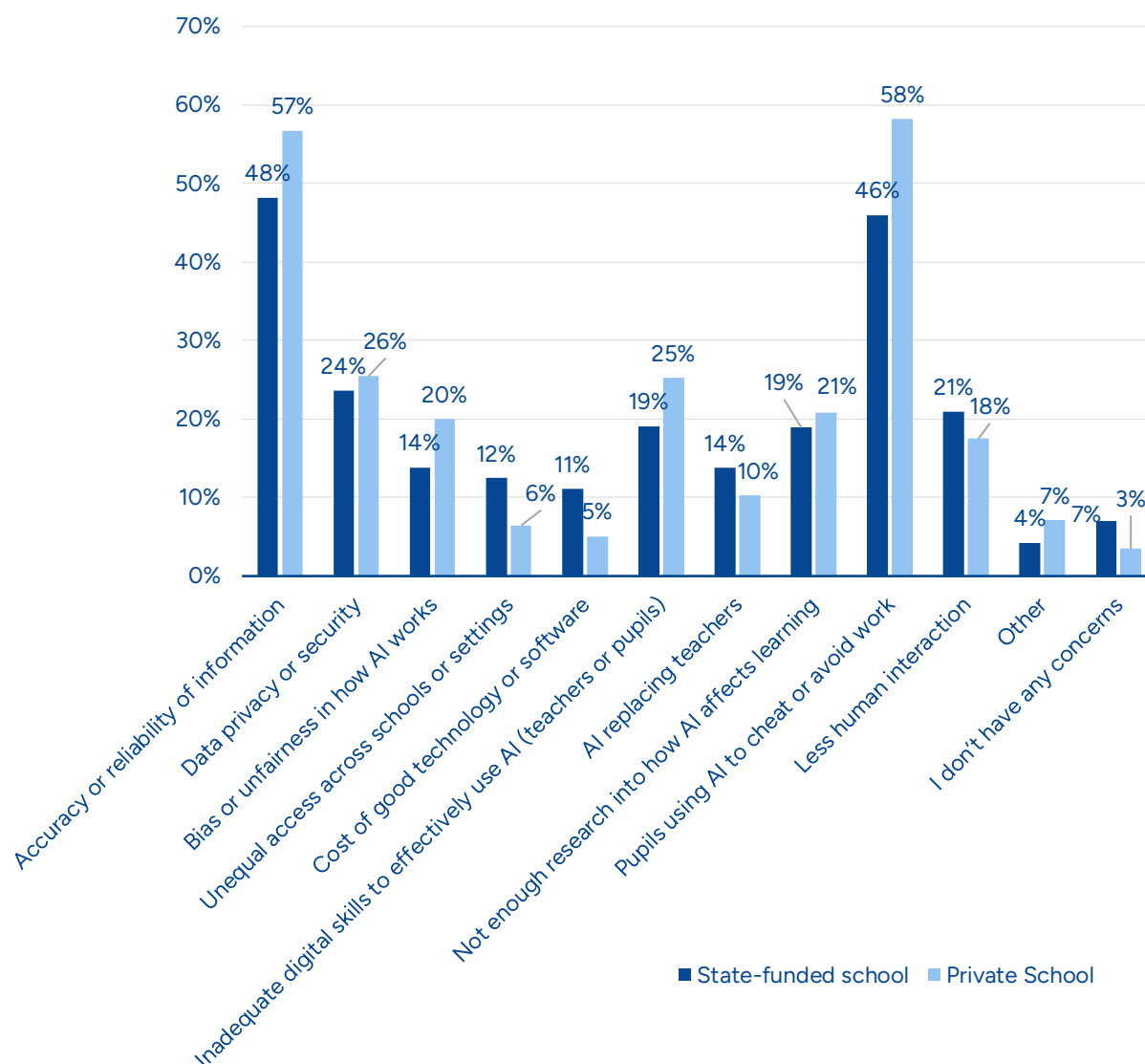
Concerns about the use of AI

Unsurprisingly, the vast majority of teachers had some concerns about the use of AI in schools, though the nature of these concerns varied across school types. More than nine out of ten teachers had concerns about AI and only 7% said they did not have any.

Overall, private school teachers were more likely to have concerns about using AI than state school teachers, with the largest differences in concerns related to pupils cheating (58% private vs 46% state) but also accuracy or reliability of information (57% private vs 48% state) and bias or unfairness of how AI works (20% private vs 14% state) (see Figure 13). Concerns about cheating were twice as prevalent at secondary schools compared to primary schools (62% vs 31%) and more common in schools with more affluent intakes (52% in the most affluent schools vs 43% in the least affluent).

Meanwhile state school teachers were twice as likely (12% vs 6%) as private school teachers to be concerned about unequal access across schools or settings, the cost of technology (11% vs 5%) and AI replacing teachers (14% vs 10%).

Figure 13: What concerns, if any, do you have about the use of AI in education? (School type)

Bar chart showing percentages for State-funded school and Private School across concern categories:

- Accuracy or reliability of information: 48%, 57%
- Data privacy or security: 24%, 26%
- Bias or unfairness in how AI works: 14%, 20%
- Unequal access across schools or settings: 12%, 6%
- Cost of good technology or software: 11%, 5%
- Inadequate digital skills to effectively use AI (teachers or pupils): 19%, 25%
- AI replacing teachers: 14%, 10%
- Not enough research into how AI affects learning: 19%, 21%
- Pupils using AI to cheat or avoid work: 46%, 58%
- Less human interaction: 21%, 18%
- Other: 4%, 7%
- I don't have any concerns: 7%, 3%

Legend: ■ State-funded school ■ Private School

Discussion

The introduction of AI to educational settings is a major change, and one that will take time for teachers, school leaders and government to adapt to. Findings here have outlined many of the challenges thrown up by that process. Of particular concern are the ways in which some private schools are racing ahead of their state sector counterparts, as well as divisions beginning to open up between state schools. While the benefits of the use of AI in different ways are not yet clear, at times of disruption it is often those at the top of existing hierarchies who have the time, resources and flexibility to adapt and take

"Action is urgently needed by government to ensure that AI acts as a gap closer, rather than a further factor that exacerbates the already growing attainment gap between poorer students and their better-off peers."

advantage of the positives. The move to remote learning during the Covid-19 pandemic is the most vivid recent example of this, and data in this report demonstrates the potential emergence of a similar trend. Those in more advantageous positions pushing ahead with new technology, while others are left behind. It will take concerted effort by government and by schools to reverse this trend. Action is urgently needed by government to ensure that AI acts as a gap closer, rather than a further factor that exacerbates the already growing attainment gap between poorer students and their better-off peers. There are several steps government should take to help tackle this growing divide, outlined below.

Training

Our findings here show that most teachers are not receiving adequate training on AI, and do not have sufficient confidence in use of the technology, with the private sector far ahead of the state sector in providing specific support. Research has shown that teachers' confidence levels are a key factor relating to the effective use of information and communication technologies in the classroom. To prevent gaps from widening between school types, government should ensure that all state school teachers have access to high quality training and guidance on how to use AI, both in initial teacher training, and to upskill existing teachers in schools. Senior staff members and leaders should prioritise upskilling themselves if necessary before moving onto whole school processes.

The technology offers great opportunities for schools and teachers to streamline processes, saving teachers time in preparation and administrative tasks. There are also challenges for teachers to navigate, from data privacy issues to potential biases in the models used. Teachers are showing an enthusiasm to experiment as the technology develops, with the majority now using AI in some way to some extent, but teachers will only be able to make the most of the benefits AI offers and avoid the potential pitfalls with the proper training, access to high quality resources and ongoing development opportunities.

While government's existing guidance is welcome, teachers have already been using AI for a couple of years now, with government guidance lagging behind the actual use of AI in schools. Recent guidance does provide welcome detail but it is currently fairly light touch. For instance, although there are now more resources available online for those who find them, there is no guarantee that teachers will use them. There is no clear mechanism yet for these resources to be incorporated more systematically into teachers' professional development. More support, including more detailed guidance, is needed to help schools to make the most of AI along with clearer mechanisms to support teacher

development in this area. This training and guidance should be regularly updated as the evidence base grows.

Building the evidence base

While the evidence base is gradually growing, there is still very little evidence on how best to use AI in education. Often, schools are implementing AI strategies without a strong evidence base. As the technology develops, building that evidence base will be another key role for government. This will need to cover a wide range of issues, from how AI can best be used to support learning, to how it can best aid and assist teachers to reduce their workload.

In which areas can AI support learning, and are there areas in which learners can best develop without the assistance of AI? How can students best be supported for a future workplace in which AI will dominate, during a time where this technology is developing at pace? And similarly, how best can teachers make use of the technology, from lesson preparation to marking, from letter writing to personalised tutoring?

Organisations like the Education Endowment Foundation will play a key role in giving independent assessments on potential interventions and making that evidence accessible to practitioners. Government must ensure they have adequate funding for this vital work in the coming years.

In the meantime, government should ensure that the upcoming curriculum review integrates the existing evidence on the use of AI, as well as ensuring young people are equipped for a world in which use of AI becomes the norm. This should include teaching young people about the benefits and the potential downsides of AI, including the risk of bias and misinformation.

In relation to the evidence base, it is also worth noting that technology companies often own the data that comes from trials they are involved in and that data is not always shared. There therefore needs to be an obligation, possibly with incentives, for technology companies to share this data at least with the customer or user they are working with, but ideally also for the broader educational community.

Monitoring use and spreading best practice

When technology is evolving quickly, it is somewhat inevitable that early adopters – those with the time, money and/or inclination to invest into the new technology – will push the field forward and develop new uses and approaches. But that approach is highly likely to lead to inequalities, with the independent

sector, as well as state schools where teachers are less stretched (likely those with the more affluent intakes) are the most able to push forward the use of AI in the classroom. The challenge for government is ensuring that it enables as many teachers as possible within the state sector to do this type of experimentation in a safe, supported and monitored fashion. Then where new approaches appear successful, learnings can be tested and scaled across schools.

Unsupported or unmonitored experimentation also comes with risks related to data security. Many teachers left to learn for themselves will go first to largely generic AI tools which may not have the necessary data protection measures in place to be used in education.

Government should closely monitor the use of AI in schools, to understand the ways in which the technology is being used, and to keep an eye on any inequalities in access and use that surface, as well as any cases of improper use. On an ongoing basis, government should look to tackle any such issues as and when they emerge.

Encouraging AI use within schools

As well as improving training, it is vital that the right structures are in place within schools to promote positive uses of AI. Again, private schools are already ahead of the game on this issue, being more likely to have dedicated staff and resources.

All state schools should have a member of staff within the school's senior leadership team with the time and support to build their knowledge and experience in the area, and then to spread that knowledge across the school. This should include organising training for staff on an ongoing basis as the technology and potential uses evolve, ideally with the support of government guidance and resources as outlined above.

Within the school, staff should also be careful to monitor any inequalities in access to AI, as well as how it is being used, between students. To ensure that the issue of disadvantage is always part of the discussion communication within the school will be crucial and the member of staff with responsibility for AI should work closely with the school's Pupil Premium lead as well as other staff to act as necessary on any gaps that appear.

Tackling the disadvantage gap

As outlined earlier in this piece, long before the development of AI, there has been an ongoing digital divide between students from different socio-economic backgrounds. This impacts on young people's ability to learn outside of lessons, including completing homework and revision, and with the development of AI there is a risk that this gap becomes even more consequential for lower income students.

Access to a device to work on should in 2025 be viewed as a necessity, with additional dedicated money provided to schools to allow them to provide devices for all students eligible for Pupil Premium who need them. Doing so would help to ensure students from all backgrounds can make the most of ongoing advances in learning technology.

Moving forward

The education sector is at a point of great opportunity and risk. AI could act as a major leveller, or it could be a gap widener. The role the technology plays will depend on the action of government, and efforts within schools, over the coming years. Together, the choices made today will determine opportunity in the classrooms of tomorrow.

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