# As System Leaders, how should Multi Academy Trusts and groups of schools respond to the provocations of artificial intelligence?

**A set of insights and recommendations
from 23 groups of schools**

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## Executive Summary

This report, charts a project that ran between February and July 2024 involving leaders from 23 Multi Academy Trusts (MATs) and school groups, encompassing 413 schools, 32,000 staff, and approximately 250,000 students across England. The project, supported by Educate Ventures Research (EVR) and a number of international experts, examines how MATs and school groups should respond to the challenges and opportunities presented by artificial intelligence (AI) in education.

We present a **MAT AI Guidance Framework** which offers a structured approach for Multi Academy Trusts and groups of schools to navigate the complexities of integrating AI into their educational practices. This framework consists of 10 key question sets, each addressing a crucial aspect of considering AI in education. This framework provides a roadmap for MAT leaders to thoughtfully and systematically approach AI. It ensures that all key aspects - from high-level strategy to practical implementation and ethical considerations - are thoroughly examined. By working through these question sets, MATs can develop a robust, well-considered approach to harnessing the potential of AI in education while navigating its challenges.

**Key findings and recommendations include:**

1. Strategic Approach: MATs must develop clear AI strategies aligned with their educational vision, addressing governance, safeguarding, and ethical considerations.

2. AI Literacy: There is a pressing need for comprehensive AI awareness and literacy training for all stakeholders, including students, staff, families, and policymakers.

3. Curriculum and Assessment: The integration of AI necessitates a review of curriculum content and assessment methods, with a focus on developing critical thinking and AI literacy skills.

4. Equity and Access: MATs must address potential digital divides and ensure equitable access to AI technologies across all schools and student populations.

5. Staff Development: Ongoing professional development is crucial to equip education stakeholders with the skills to effectively address the opportunities and risks associated with AI.

6. Ethical Considerations: Robust frameworks are needed to address data privacy, bias in AI systems, and the ethical use of AI in education.

7. Research and Evaluation: MATs should conduct and participate in ongoing research to evaluate the impact of AI on learning outcomes and teaching practices.

8. Collaboration: Enhanced cooperation between MATs, educational bodies, and technology providers is recommended to share best practices and develop standardised approaches to AI implementation.

The report also includes a set of **practical actions** that system leaders can take together to support the effective integration of AI into education. These include:

1. Advocate for and support the development of a centralised repository for Data Protection Impact Assessments (DPIAs) specific to educational technology tools.

2. Develop a comprehensive AI governance strategy addressing children's rights, data protection, and safeguarding in the evolving educational technology landscape.

3. Participate in the upcoming curriculum review to champion the integration of AI education across all educational stages, and a revision of the 1:1 device provision policy.

4. Support the creation of a national working group to identify MAT functions that could benefit from AI.

5. Actively engage with media partners to ensure nuanced and accurate coverage of AI in education.

6. Engage with marketplace solutions and supplier associations to advocate for improved filtering and quality assurance mechanisms for AI-related educational products.

The report emphasises that while AI offers significant potential to enhance educational practices, its integration must be approached thoughtfully and responsibly. MATs must balance technological innovation with the fundamental human aspects of education, ensuring that AI enhances rather than replaces crucial human interactions in the learning process.

The findings underscore the need for a nuanced, context-sensitive approach to AI integration, recognising that there is no one-size-fits-all solution. As the education sector navigates this complex landscape, ongoing collaboration, research, and adaptation will be essential to harness AI's potential whilst addressing its challenges.

This report serves as a starting point for MATs and school groups to develop comprehensive strategies for AI integration, aiming to create learning environments that prepare students for success in an increasingly AI-driven world while maintaining the core values of education.

## Background

This project arose as a result of a number of multi academy trusts and families of schools coming together with a shared interest in the system leadership provocations raised by issues around artificial intelligence. This report is the culmination of a project completed between February-July 2024 by leaders from a group of Multi Academy Trusts (MATs) and families of schools who collectively represent the leadership of 413 schools, approximately 32,000 staff and ¼ million young people across England. Working together February-July 2024, this group has benefitted from AI specific guidance from Educate Ventures Research, alongside a number of international thought leaders with expertise spanning across education, business, technology and organisational leadership.

This report is designed for those involved in school-specific system leadership, including the many stakeholders working within and around schools to support a safe, purposeful and intelligent approach to the use of AI by young people and the schools workforce. It provides:
- A structure to guide school and group leaders as they navigate their way through responding to the many provocations and considerations raised by AI.
- A series of insights and recommendations from school leaders at the very front of conversation in this space.

### What do we mean by AI in schools?

There are many definitions of AI and a wide range of opinions about what constitutes the 'right' definition. For the purposes of this project, we have been guided by the European Commission High-Level Expert Group on Artificial Intelligence definition:

> "Artificial intelligence (AI) refers to systems that display intelligent behaviour by analysing their environment and taking actions -- with some degree of autonomy -- to achieve specific goals. AI-based systems can be purely software-based, acting in the virtual world (e.g. voice assistants, image analysis software, search engines, speech and face recognition systems) or AI can be embedded in hardware devices (e.g. advanced robots, autonomous cars, drones or Internet of Things applications)."

This definition is not specific to generative AI of the sort used by tools like ChatGPT and it is important to be clear about what this project refers to by the use of AI, because since the launch of Chat GPT in November 2022, the term 'AI' has often been incorrectly attributed just to Large Language Models (LLM) becoming accessible to everyday consumers. This misuse of the term AI is unhelpful because it sidelines products that utilise AI functionality (e.g. data analytics, adaptive learning tools, chatbots, image generators etc), and suggests that the presence of AI is on an opt-in basis - ignoring the aggressive permeation of AI in the everyday lives of children and adults as global citizens (e.g. facial recognition, location tracking, educational user data, organisations combining complex personal consumer datasets). This is important, because these issues become central to how children and adults experience their lives holistically - not just within school. With societal issues historically tending to become school priorities (Brighouse & Waters, 2021), a pro-active response to this contemporary consideration by school system leaders becomes vital. Other nations, including Singapore have already recognised this and begun a country-wide strategic intervention, with specific leadership within education.

In a contemporary landscape, conversations concerned with AI in schools are likely to be provocative, and conversations which pivot specifically around AI tools are likely to change rapidly from one week to

the next. Reflecting this fast pace of change, a great deal has been written and spoken about AI in education, particularly in the last few years. A wide range of perspectives have been seen and heard, with many feeling deeply passionate about particular viewpoints or issues. This project does not intend to replicate those insights, concerns or arguments here. Instead, colleagues wishing to read contemporary, evidence based material on AI aimed specifically at school leadership, are instead signposted to:

- **Co-intelligence: Living and working with AI.** Mollick, E. (2024). Portfolio (Penguin Random House).
- **Understanding AI for School: tips for school leaders** (2023) Teacher Development Trust.
- **AI for School Teachers:** Luckin, R., George, K. and Cukurova, M (2022)**,** Routledge, London
- **Machine Learning and Human Intelligence**: the future of education for the 21st century. Luckin, R. (2018)
- **The fourth education revolution:** will artificial intelligence liberate or infantilise humanity: Seldon, A., and Abidoye, O. (2018) Buckingham, University of Buckingham.

In the report that follows we first contextualise the field of artificial intelligence in education with a brief review of the literature. We then describe the MAT AI Guidance Framework and provide thematic project findings. With each finding, there are recommendations which school and system leaders are encouraged to consider in relation to their own role and future actions.

We very much hope that readers will enjoy reading this report and find that its contents useful as they navigate their engagement with AI.

## Research about AI in Education Pre ChatGPT

Way before the launch of ChatGPT on 30 November 2022, AI in education had emerged as a promising field with the potential to revolutionise both teaching and learning outcomes. However, the evidence is clear that the integration of AI in education is not a simple plug-and-play solution, but rather a complex process that requires careful planning, continuous evaluation, and adaptation to specific educational contexts. As AI continues to evolve, further research will be crucial in understanding its long-term impacts on education and in developing best practices for its effective and ethical use in teaching and learning.

Evidence from the research literature suggests that AI-enabled adaptive learning environments can create customised learning experiences that accelerate pupils' self-directed learning (Liang et al., 2021). This technology allows pupils to engage in learning activities at their own pace and convenience, while also receiving timely feedback and guidance, with limited reliance on teacher intervention (Keerthiwansha, 2018; Yong, 2020).

Several studies have found positive effects of AI-enabled tools on learning achievement, particularly through personalised learning and feedback (Lin et al., 2022; Roschelle et al., 2018; Tamim et al., 2021; Zheng et al., 2021). For instance, Zheng et al. (2021) found a high effect size of AI-enabled tools on learning achievement through personalised learning and feedback in their meta-review of 24 articles published between 2001 and 2020. Similarly, Lin et al. (2022) reported small to medium significant positive overall effect sizes of AI-enabled tools in the classroom on pupils' learning achievement.

For language acquisition, AI tools have been employed to augment the learning process through error identification, feedback provision, resource utilisation, and language ability assessment. Learners using

these tools exhibited noticeable improvements in their language abilities, attitudes, knowledge, and usage (Woo & Choi, 2021; Yang & Kyun, 2022).

However, Sharadgah and Sa'di (2022) cautioned that many AI tools are not suitable for younger learners and require thoughtful integration into the teaching process, once again highlighting the importance of implementation research. Their systematic review stressed that despite some promising early evidence of AI enhancing and supporting pupil language learning, many of the tools are not suitable for younger learners and have to be integrated into the teaching process thoughtfully. The authors also noted that the evidence in this space is limited and requires further investigation.

Regarding the impact of AI on teaching practices and workload, the literature suggests that AI can facilitate various aspects of teachers' work. AI has shown promise in supporting lesson planning (Pender et al., 2022), assessments (Luckin, 2017; Beailly et al., 2022), and personalised pupil feedback (Molenaar, 2021; Lim et al., 2020). Celik et al. (2022) found that timely monitoring of learning processes was one of the most prominent advantages of AI in education.

AI can also assist in decision-making by providing suggestions for learning content based on individual pupil preferences and performance data (Fitzgerald et al., 2015). Moreover, AI can generate ideas for course activities, which can save teachers time and effort in designing engaging lessons (Dalvean & Enkhbayar, 2018). In terms of lesson implementation, AI can provide timely monitoring of pupils' progress, enabling teachers to track their performance and provide timely interventions when needed (Swiecki et al., 2019).

In addition, AI can enhance pupil-teacher interactions by providing opportunities for personalised learning experiences (Lamb & Premo, 2015). In the realm of assessment, AI can facilitate automated evaluations, such as automated essay scoring systems, which can streamline the grading process and provide objective feedback (Kersting et al., 2014). Yuan and colleagues (2020) argue that automated essay scoring systems not only enhance the effectiveness of essay scoring but also make it more objective, reducing potential bias in the assessment process.

However, the integration of AI in teaching practices also raises concerns about job displacement, ethical considerations, and potential biases (Blikstein & Blikstein, 2021). The literature emphasises the need for caution when applying AI in educational contexts, citing instances where AI has led to unintended consequences, such as the 2020 A-level grading controversy during the COVID-19 pandemic (Kolkman, 2020). This incident highlighted the potential for AI systems to perpetuate or exacerbate existing inequalities if not carefully designed and implemented.

It is important to note that the effectiveness of AI-enabled adaptive learning tools may vary depending on the context. There is a lot to be learnt from implementation research, which originated in the field of medicine (Peters et al., 2013) and has been adopted within educational technology research to explore the way that the circumstances and actions involved in a technology's implementation impact on its success or failure (e.g. Allison, 2023). When it comes specifically to AI in education, Chaudhry et al. (2022) warn that AI systems trained on data from one educational context may not perform optimally in another, highlighting the need for careful consideration of demographic and contextual factors when implementing AI in education. For example, an AI system trained on data with mostly primary level English white male students from urban independent schools and designed for classrooms with two teachers and around twenty students may not work as well in state schools with students from different races and genders with thirty-plus students in classrooms. Furthermore, even teachers within the same

school, department or year group are likely to utilise tools differently depending on their pedagogical beliefs and life experiences (Aubrey-Smith & Twining, 2024). These nuances result in different lived experiences for both teachers and students, creating different manifestations of impact.

The ethical dimensions of AI systems should be taken into consideration before being deployed in educational contexts. Baker and Hawn (2021) discuss numerous instances of AI going wrong in the real world with devastating effects, emphasising the need for rigorous testing and evaluation of AI systems before their implementation in sensitive areas such as education.

As can be seen from this very brief review, research literature was suggesting promising potential for AI in education before the launch of CPT. There is evidence that AI can be used to enhance both teaching and learning outcomes, yet the literature also emphasises the need for thoughtful implementation, consideration of ethical implications, and awareness of contextual factors that may influence its effectiveness.

## Research about AI in Education after the release of ChatGPT

It is certainly the case that the rapid advancement of generative AI technologies has precipitated a significant shift in educational interest in AI. However, whilst recent studies are starting to illuminate the situation, it is very early days in the process of gathering evidence about the real impact of generative AI technologies within education and there is little empirical evidence to draw on at the current time. There are a few publications, reviews and metanalysis and this number will grow over time. It will be important to track this literature to see if the early findings are consistent, and if the situation changes as the technologies evolve. Sampling from the limited number of papers currently available suggests that while AI offers promising opportunities for personalised learning and enhanced educational efficiency, it also presents substantial ethical and practical challenges that require careful consideration.

The integration of AI into education presents both significant opportunities and substantial challenges. On the positive side, generative AI technologies offer significant potential to enhance and personalise the learning experience. Meniado's (2023) rapid review highlights ChatGPT's capacity to support language learning through personalised content generation, instant feedback, and extensive practice opportunities. This aligns with the findings of Montenegro-Rueda et al. (2023), who emphasise AI's ability to adapt to individual student needs and learning styles, thereby improving student motivation and engagement. The implementation of AI-powered tutoring systems, exemplified by the NSWEduChat initiative in New South Wales, Australia (New South Wales Department of Education, 2024), demonstrates the potential for AI to provide equitable access to high-quality educational support. Such systems are particularly beneficial for students in rural and remote areas, addressing issues of educational inequality highlighted by Yu and Guo (2023).

AI tools examined in the literature reviewed here, show promise in augmenting teaching practices and improving efficiency. Meniado (2023) notes ChatGPT's utility in lesson planning, material development, and assessment processes. This is corroborated by Samala et al. (2024), who emphasise AI's potential to reduce teachers' workload by automating routine tasks such as grading and answering frequently asked questions. The NSWEduChat case study further illustrates how AI can optimise teacher time and facilitate more personalised learning support.

There are also positive findings with respect to assessment and feedback. Both Meniado (2023) and the NSWEduChat project highlight AI's potential in automating certain aspects of assessment, such as

generating exam questions and providing detailed feedback on written work. Samala et al. (2024) expand on this, noting that AI can provide instant feedback to students, a feature particularly valuable in large classroom settings where individual attention from teachers may be limited. This automation could significantly reduce the administrative burden on educators, allowing for more frequent and comprehensive assessments.

However, there are also substantial challenges. For example, one of the recurring themes across the literature relates to the ethical implications of AI use in education. Ogunleye et al. (2024) emphasise the need for robust ethical guidelines and regulatory frameworks to address issues such as plagiarism, bias, and data privacy. This concern is echoed by Samala et al. (2024), who raise alarm about the ease with which students might use AI tools for cheating or plagiarism, highlighting the need for robust detection systems and clear ethical guidelines.

There are also challenges with respect to accuracy and reliability. While AI systems like NSWEduChat demonstrate improved accuracy compared to free AI tools, Meniado (2023) cautions about the potential for inaccurate responses from AI. This underscores the importance of human oversight and critical evaluation of AI-generated content. Yu and Guo (2023) further emphasise the need for careful design and implementation to avoid exacerbating existing educational inequalities.

There are also concerns about potential skill deterioration in learners due to over-reliance on AI tools (Meniado, 2023). Educators must strike a balance between leveraging AI support and ensuring students develop essential skills independently. This aligns with the recommendation from Montenegro-Rueda et al. (2023) to view AI as a complementary tool rather than a replacement for human educators.

A further area of concern noted is with respect to equity and access. While AI has the potential to democratise access to educational resources, as demonstrated by the NSWEduChat project, for example, there remains a notable gap in research contributions from the Global South (Ogunleye et al., 2024). This highlights the need for more inclusive development and implementation of AI educational technologies. Yu and Guo (2023) stress the importance of considering socioeconomic, cultural, and institutional factors when implementing AI in educational settings to ensure fairness and avoid bias.

As is so often the case with new interventions, there are also concerns raised about teacher training and readiness. Montenegro-Rueda et al. (2023) identify a critical gap in teacher training as a major obstacle to effective AI implementation. Their research reveals that many educators feel unprepared to integrate AI tools into their teaching practices, suggesting a pressing need for comprehensive professional development programmes.

From the particular perspective of the project being discussed in this report, there are some implications for school and system leaders available from this early small literature that align well with the findings we report here. For example:

1. **Policy Development**: Establish clear guidelines for the ethical use of AI in teaching, learning, and assessment practices. This should include protocols for data privacy and security, as highlighted by Yu and Guo (2023).
2. **Professional Development**: Invest in comprehensive training programmes to ensure educators can effectively and responsibly integrate AI tools into their practice. This addresses the gap identified by Montenegro-Rueda et al. (2023).

3. **Infrastructure and Security**: Develop robust AI infrastructure and security measures to protect student data and ensure equitable access. This is crucial given the concerns raised about data privacy and security (Yu and Guo, 2023).
4. **Curriculum Adaptation**: Consider updating curricula to incorporate AI literacy and critical thinking skills necessary for an AI-augmented world. This aligns with the need for a balanced approach that leverages AI while preserving essential human elements of education (Samala et al., 2024).
5. **Ongoing Evaluation**: Implement systems for continuous evaluation of AI tools' impact on learning outcomes and teaching practices. This addresses the call for longitudinal studies by Samala et al. (2024) to understand the long-term effects of AI use in education.
6. **Collaborative Research**: Engage in partnerships with researchers and developers to contribute to the ongoing development and refinement of AI educational technologies. This supports the interdisciplinary collaboration advocated by Yu and Guo (2023).
7. **Ethical Framework**: Develop and implement a robust ethical framework for AI use in education, addressing concerns about academic integrity, bias, and fairness (Ogunleye et al., 2024; Samala et al., 2024).

The future of education may well be shaped by how effectively we navigate this delicate balance between innovation and responsibility in the use of AI particularly generative AI. School and system leaders are at the forefront of this transformation, and their informed decisions will play a crucial role in shaping the educational landscape of tomorrow. There is promise and there is challenge, and probably the only conclusion that we can draw with any certainty at the moment is that it is imperative that those involved in leading education institutions and systems embrace learning about AI as a priority.

Generative AI technology is evolving quickly and it is important that we all work together to stay abreast of developments, to learn from each other and to speak truth to power, when we have concerns about the way these technologies are delivering impact of concern. Yes, there is huge potential for positive outcomes from their use, but there is also a huge amount of uncertainty about exactly what is happening when these technologies are being used. If we want to reap the benefits, then we must tread carefully while we await future research and evidence about how best to implement and integrate these powerful technologies into our education systems. As the field evolves, ongoing critical analysis and empirical investigation will be crucial to fully realise the potential benefits of AI in education while mitigating the associated risks.

## The MAT AI Guidance Framework

For school system leaders, AI technology and its provocations fits within a much broader educational leadership landscape. The timeline of this project included the lead up to a general election with a change of government bringing associated political, economic, accountability and social change for the education sector. For multi-academy trusts, non-political organisations such as the Confederation of School Trusts (CST) and the Queen Street Group highlight the importance of schools and trusts as civic leaders, embedding resilience and sustainability in organisational planning amidst an often rapidly changing political and socio-economic landscape. Contemporary issues, such as how to respond to AI, mental health and wellbeing, recruitment and retention, curriculum and assessment reform, financial pressures and so forth are in abundance; each interconnected and interdependent, yet each requiring different forms of strategic and operational action. School system leaders are often reminded by leadership experts, professional mentors and specialist advisory bodies to pivot around a clear vision for the purpose and parameters of their organisation - a challenge in itself, for leaders already working at capacity.

Every trust, school and leader, will bring their own unique combination of skills and expertise, background and experience, confidence and uncertainty, to any professional conversation. What this project has sought to offer is a guided pathway. We extend an invitation now, for every school system leader to join this shared journey ahead.

The table below outlines the core questions and discussions that those involved in this project explored in depth over 6 months. The work is framed here as a MAT AI Guidance Framework of 10 question sets.

The first two question sets in the framework have a high level strategic focus and need to be led by the CEO of the MAT (or group of schools) drawing in relevant colleagues and stakeholders. The following question sets are more operational (albeit at a strategic leadership level), and are likely to be delegated to senior leaders, leadership teams and targeted working groups.

The simplicity of The MAT AI Guidance Framework is not intended to suggest a simple pathway, but a way of surfacing the strategic thinking required, and then signposting existing partnerships, resources and support (rather than duplicating the many AI and school related offers that already exist in the sector).

Each group of schools is likely to respond uniquely to each question, taking account of the many and varied influences affecting the organisation structurally, as well as the individual people within those structures. Themes and insights that have arisen from across this project group are shared later in this report, along with associated recommendations.

Table 1: 10 Key Question Sets for Leaders

| Key Areas of Interest | Questions |
|---|---|
| Strategy & Vision | What does our organisation exist to achieve?<br>What does this mean for our learners, staff & families?<br>How is our education model achieved, and why is that the case?<br>What are the outcomes that we most value? |
| The Role of AI | Within this vision, what should the role of AI be?<br>How might AI support or challenge the vision?<br>Which role & remit (who) will hold overall strategic and/or operational leadership of AI?<br>How might AI impact our organisational structures and decision-making processes?<br>How do we ensure AI enhances rather than replaces crucial human interactions?<br>What aspects of our work should remain primarily human-driven, and where can AI add the most value?<br>How can we contribute to and learn from broader discussions about AI in education at [inter] national level? |
| Governance & Safeguarding | What governance and accountability frameworks need to be in place?<br>What are our AI Safeguarding responsibilities? |
| Finance, Data & Technology | What costs and savings should be considered?<br>What is the most appropriate data management plan for our organisation?<br>What technology and infrastructure are required across our stakeholder groups?<br>What infrastructure and resources will we need to support evolving AI technologies? |
| People & Community | What does implementation mean for our organisation?<br>What training should be offered to stakeholders and when?<br>What support should be put in place for different stakeholders?<br>How can we effectively communicate our AI strategy to parents, governors, and the wider community?<br>What opportunities exist for collaboration with other schools, MATs, or organisations in AI implementation?<br>How do we balance innovation with community expectations and values? |
| Staff Development | What training and support do our staff need to effectively integrate AI into their work?<br>How should the potential digital divide among staff be addressed to ensure equitable AI competency?<br>How should the human elements of working practices be maintained and enhanced as AI becomes more prevalent?<br>How can we use AI to free up time for more meaningful interactions between staff, students, families and our wider community?<br>What opportunities exist for using AI to enhance collaboration and resource sharing across our MAT? |

| Key Areas of Interest | Questions |
|---|---|
| **Curriculum & Assessment** | How do we prepare our students for an AI-influenced future workforce and society? How should we adapt our curriculum to incorporate AI literacy and emerging skills? What role should AI play in our assessment practices, and how do we ensure fairness and accuracy? To what extent can AI support personalised learning pathways, in harmony with our wider educational vision? |
| **Equity & Access** | How do we ensure equitable access to AI technologies across our schools and student populations? What strategies can we employ to bridge digital divides and socioeconomic disparities in AI access? How can we use AI to enhance inclusivity and support diverse learning needs? |
| **Ethical Considerations** | How do we teach stakeholders to critically evaluate AI-generated content and use AI ethically? What safeguards should we put in place to protect stakeholder data and privacy? How do we address potential biases in AI systems and ensure fair treatment of all stakeholders? |
| **Monitoring & Evaluation** | How should the impact of AI on our vision, strategies and operations be evaluated? How can we gather both quantitative and qualitative data to assess AI's effectiveness? How frequently should we review and adjust our AI strategy based on evidence of impact? |

## Insights from Multi-Academy Trusts

This report is the culmination of a project bringing together leaders from a group of Multi Academy Trusts (MATs) and families of schools who collectively represent the leadership of 413 schools, approximately 32,000 staff and ¼ million young people across England.

The MATs involved ranged in size from very small (2-5 schools) through to very large ~100 schools) and provide education for children aged 3-19, including through mainstream, special, alternative and nurture provision. Schools within these MATs are spread across England and represent catchments ranging from areas of high socioeconomic deprivation to more affluent areas, and intakes representing a breadth of pupil and family characteristics.
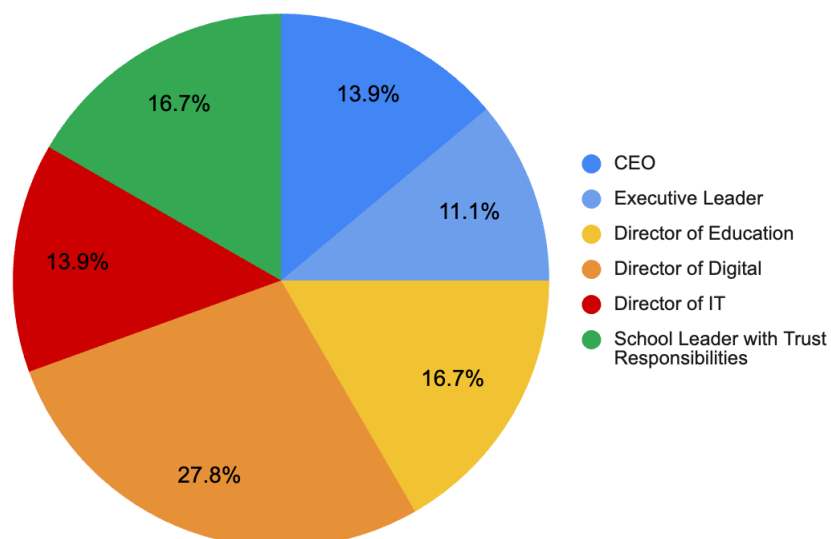
Throughout the project, participants took part in more than 40 different synchronous and asynchronous targeted data generation activities including roundtable discussions, research interviews, polling and surveys, collaborative boards and document construction, use-case design, small group discussions, document review, and feedback on reading tasks.
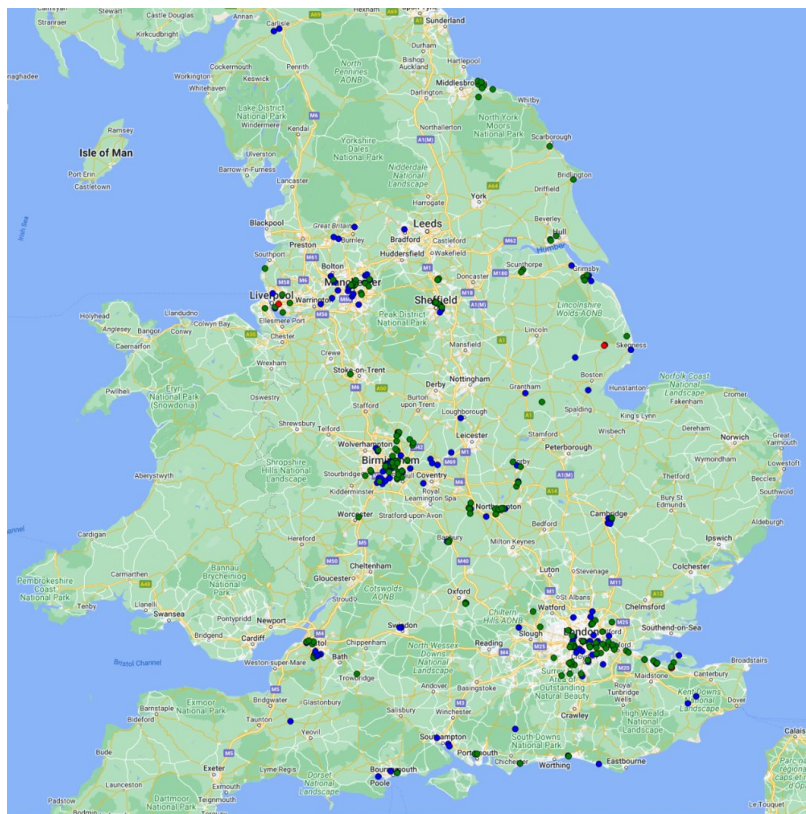
The findings from these activities have been converted into a set of recommendations that speak to the majority, but not all, of the sections within The MAT AI Guidance Framework outlined in Table 1 (reflecting the limitations of data generation over a 6 month period).

The key overarching finding across all of the MATs participating in this project is that no-one considers themselves as having addressed or solved all of the issues that are arising as a result of the provocations raised by AI. Whilst educators are known for their self-deprecation, this AI-specific view, shared by the majority of the sector, simply reflects that we are at a relatively early stage of mainstream AI presence and use.

Colleagues who took part in this project had job titles which were many and varied, but can be broadly grouped under the headings seen below, reflecting which leadership role these particular MATs assigned responsibility for AI to prior to this project.

Pie chart:
- CEO: 13.9%
- Executive Leader: 11.1%
- Director of Education: 16.7%
- Director of Digital: 27.8%
- Director of IT: 13.9%
- School Leader with Trust Responsibilities: 16.7%

Many of the MATs and participants involved in this project have already been actively supporting AI awareness raising across the wider schools sector, including through conference presentations and workshops, provision of INSET and staff training, sharing of resources, leadership of support networks and informal support. Part of their role typically includes awareness raising within their own MAT - which for many includes a large number of schools and hundreds or thousands of staff.

It is important to highlight that this group is not representative of the wider sector. Wider datasets gathered indicate that this project group were significantly more informed and confident about AI and its associated considerations than typical schools and educators at this point in time.

Those reading this report who are seeking detailed insights and school/trust based expertise are encouraged to reach out to those involved in this project (see project team list).

## Recommendations

Sections below set out 28 recommendations based on specific themes that emerged through this project. These recommendations are likely to be of interest to school and system leaders, policy shapers and makers, those involved in governance, accountability and communications, organisations providing AI related products and services, and the wider education ecosystem.

The high level recommendations are grouped here under considerations relating to:
- How MAT leaders conceptualise AI
- AI use by children and young people
- Knowledge, accuracy and reliability
- Safeguarding, data and privacy
- Staffing and workforce
- Curriculum, assessment and classroom practice
- School support

These recommendations are not exhaustive, nor do they attempt to claim extensive coverage across all aspects of AI consideration. However, the recommendations, combined with the MAT Guidance Framework (Table 1), aim to offer material and insights shared by those who are pathfinding in this space, for the benefit of the wider sector.

### Considering how MAT leaders conceptualise AI

1. **Tailor AI leadership resources to reflect diverse perspectives and priorities.** Encourage leaders to recognize their own strengths and potential blind spots regarding AI implementation. This approach will foster a more comprehensive understanding of AI's implications in education and promote openness to considering previously overlooked aspects of AI integration.

2. **For MAT leaders, invest time in examining personal belief systems, encompassing both pedagogical and leadership philosophies.** For Multi-Academy Trusts (MATs), consider Be Ready's MAT CEO mentoring programme which incorporates leadership expertise from renowned figures such as Andy Buck and Mary Myatt, alongside current MAT CEOs involved in this project, offering valuable insights for self-reflection and professional growth.

3. **Highlight the importance of engaging with contemporary research**. This ensures a current understanding of priorities, issues, and solutions for common challenges and opportunities. Those working in this space are strongly encouraged to contribute to research as well as to consume published research.

### Considering AI use by children and young people

4. **Make AI awareness training available for students, families, and staff (including governance).** Focus on transparency about appropriate AI use, explaining suitability through real-life examples rather than just policy. This approach will help stakeholders make informed decisions about AI use in both educational and real-world contexts, fostering critical thinking and digital literacy.

5. **Consider conducting in-depth, anonymous studies within schools to investigate how and why students use generative AI outside of school hours.** Involve students, families, and teachers in the research, focusing on specific tasks and contexts. This approach will yield

richer insights into the psychology of young people surrounding AI use, moving beyond surface-level generalisations to inform more effective educational strategies and policies.

6. **Consider further research into stakeholders' perceptions of AI use, particularly generative AI, by different parties in the educational ecosystem.** Focus on how these perceptions impact relationships, exploring aspects such as trust, credibility, fairness, equality and equity. This research will provide valuable insights to help navigate the complex social implications of AI adoption in education and inform policies that promote positive relationships amongst all stakeholders.

## Considering Knowledge, Accuracy & Reliability

7. **Address the complex challenges of AI bias and misinformation in education.** This could include expanding understanding of AI bias beyond output to include design, auto-marking, and adaptive products, as well as tackling the growing mistrust in human interactions and content credibility due to AI-generation. This might include, introducing AI and digital literacy as core subjects, embedding philosophical and social thinking across all year groups and developing whole-community education programmes on AI for learners, staff, and families. This approach will help foster a more nuanced understanding of AI's impact and build resilience against misinformation across your educational community.

8. **When considering future curriculum and assessment reforms, carefully examine how specific technologies, including AI, implicitly shape pedagogical approaches in curriculum design and classroom practice.** Pay particular attention to the impact these embedded pedagogies have on teacher job satisfaction and children's sense of identity as learners. This nuanced understanding will help create more balanced and effective educational strategies that harness technology's benefits whilst preserving the core values of teaching and learning.

9. **Prioritise assessment reform as a key strategy to address many of the challenges posed by AI in education.** Consider alternatives such as 'assessment when ready' approaches and evaluation methods that emphasise knowledge application alongside recall, discussion and stakeholder-validated evidence. These alternatives may help create a more flexible, relevant assessment system that better reflects learner capabilities in an AI-enhanced world, whilst mitigating concerns about AI-enabled cheating.

## Considering Safeguarding, Data & Privacy

10. **Develop a comprehensive AI governance strategy that addresses children's rights, data protection, and safeguarding in the evolving educational technology landscape.** This approach will enable your trust to proactively manage the risks and opportunities presented by AI in education, whilst ensuring compliance with current and future ethical and legal standards. To support this activity, engage with children's rights organisations and government bodies; Implement specialised AI-related safeguarding training; Contribute to and utilise a centralised repository of Data Protection Impact Assessments (DPIAs); regularly review and renegotiate technology contracts to account for emerging AI features, an maintain ongoing awareness of AI developments in education.

11. **Advocate for and support the development of a centralised repository for Data Protection Impact Assessments (DPIAs) specific to educational technology tools.** This resource should be accessible to individual schools and trusts, allow for customisation to suit specific organisational needs and contain core content from suppliers regarding data security and processing. By centralising these resources, we can significantly reduce duplicated efforts

across the education sector, streamline compliance processes, and ensure more consistent data protection practices whilst maintaining the flexibility needed for diverse educational settings.

12. **Proactively address the challenges posed by AI that is being integrated into existing educational technologies.** As data controllers, schools and trusts are responsible for data safety, yet suppliers often have more insight into new AI features. To manage this, regularly audit your digital tools for AI additions, engage with suppliers about these changes, and consider renegotiating contracts to clarify AI-related data protection responsibilities. Invest in AI training for staff and explore forming consortia with other trusts to increase leverage with suppliers. This approach will help ensure your data protection measures keep pace with evolving AI integration in your technology stack.

    7 Key questions to mitigate risks:
    1. Have the relevant regulations been considered? (e.g. GDPR or EU AI Act)
    2. Will the AI be collecting data and where will this data be shared and stored?
    3. Will any sensitive data (such as personally identifiable information) be collected?
    4. Have the intended users of the AI received training about the benefits and risks of using AI and best practice on how to mitigate the risks?
    5. Have all stakeholders been informed that AI is being used and consent obtained as needed?
    6. Does the use of AI align with your goals and is an evaluation plan in place?
    7. Has the AI model being used been identified and checked for known risks?

## Considering Staffing & Workforce

13. **Support fresh research into how AI is reshaping the teacher's role.** Partner with bodies like The Chartered College of Teaching, Teacher Development Trust, ASCL, National College and Institute of Teaching to explore AI's impact on teacher professionalism, education and development. Use findings to revamp teacher training, continuing professional development and our understanding of teaching expertise in an AI-enhanced setting. This proactive approach will better equip our teaching workforce for the future, ensuring AI integration bolsters rather than undermines the vital role of teachers.

14. **Support research into how AI may affect MAT organisational functions and staffing.** Similarly to the recommendation above, taking part in sector wide discussions about evolving organisational priorities, needs and associated staffing could offer helpful insights in relation to recruitment, professional development and retention. Support the creation of a national working group to identify MAT functions that could benefit from AI, informing future staffing and policy strategies.

## Considering Curriculum, Assessment & Classroom Practice

14. **Participate in the upcoming curriculum review to integrate AI literacy across all educational stages.** Engage with the DfE Curriculum Review National Roadshow in 2025, and draw upon experiences of MATs already implementing AI literacy programmes. In addition, promote the exploration of pedagogical beliefs among staff, using resources like 'From EdTech to PedTech' (Aubrey-Smith & Twining, 2024), to foster increased reflection and understanding.

15. **Recognise and respond to the evolving career landscape shaped by AI's pervasive influence on society.** Adapt curriculum and skills development programmes to better prepare Gen Alpha (current primary-aged learners) and Gen Z (current secondary-aged learners) for

future career pathways. Focus on cultivating skills likely to be in high demand, such as data science and entrepreneurship. This forward-thinking approach will ensure that young people are equipped with the competencies needed to thrive in an AI-driven job market, enhancing their future employability and adaptability.

16. **Advocate for and support the development of a more precise categorisation system for educational tools, particularly those incorporating AI.** This should clearly distinguish between tools that enhance teacher workflow and productivity, and those that directly aid the teaching or learning process. Engage with organisations such as EVR, AI in Education and EdTech Impact to lead this initiative. A clearer categorisation will enable more informed decision-making when selecting and implementing educational technologies, ensuring that the tools adopted genuinely align with pedagogical goals and operational needs.

17. **Champion and conduct small-scale impact studies on AI use in your schools.** Begin with simple, low-risk interventions like using AI image generators to enhance writing tasks. These studies offer a safe 'way in' to introduce AI tools across primary and secondary classrooms with minimal technology and training required. Document and share findings to contribute to the growing body of knowledge on AI in education. Encourage collaboration between schools to build a diverse range of case studies. These small-scale studies will provide valuable insights into the practical implementation of AI within the context of curriculum, pedagogy, assessment, and safeguarding concerns.

18. **Advocate for the inclusion of key AI considerations in initial teacher education programmes.** Work with initial teacher training providers, universities, and relevant educational bodies to develop a concise yet comprehensive module on AI in education. By ensuring new teachers enter the profession with this knowledge, we can foster a workforce that is better prepared to navigate the evolving AI landscape in education, make informed decisions about AI integration, and model responsible AI use for young people.

## Considering School Support

19. **Leverage the existing infrastructure of support networks to support your schools.** National networks (e.g. EdTech Hubs and Challenge Partner Trust Leaders), and those with regional hubs, are well-positioned to offer scalable. Tapping into these resources offers access to shared experiences, best practices, and practical insights from peers across the country. This collaborative approach supports the navigation of the many challenges of AI more effectively, ensuring educational innovation whilst avoiding common pitfalls.

20. **Diversify your school's research approach by reducing reliance on purely quantitative methods.** Whilst initiatives like Research Schools and NPQs have improved research skills, there is a need to embrace more qualitative approaches. This is crucial when evaluating AI in education, where understanding human intelligence is key. This balanced approach will ensure your school values human intelligence alongside technological advancements, leading to more insightful evaluations of AI in education.

21. **Advocate for the establishment of a non-politicised, non-commercialised body to help filter the overwhelming influx of AI tools and resources in education.** This organisation should develop a robust, context-sensitive framework to evaluate these tools, helping to identify those most relevant and impactful for specific school environments and individual priorities. This would reliable, tailored information, streamlining decision-making process and ensuring more effective implementation of AI resources.

22. **Seek out and utilise guidance on using generative AI for school communications, such as report writing and letter drafting.** Encourage organisations like The Key, the Confederation of School Trusts (CST), or relevant unions to develop and share template policy points and best practice guidelines. Adopting clear, well-informed policies on AI use in administrative tasks, will ensure consistent and ethical application across individual schools or across a trust, whilst potentially improving efficiency and communication quality. Proactively engaging with these resources will support those involved in navigating the integration of AI into administrative processes responsibly and effectively.

23. **Pro-actively participate in discussions with media partners to ensure that coverage of AI in education is nuanced, accurate, and grounded in real-world experiences from the school system.** This approach will foster a more informed public discourse, helping to build trust and understanding around AI's role in education amongst all stakeholders. By offering expertise and experiences to these organisations the sector will be providing evidence-based examples and stories that showcase the realistic impact of AI in education. This will serve to counteract over-generalised hype, unwarranted scaremongering, or exaggerated promises of transformation.

## Considering Policy (local & national)

24. **Support a comprehensive AI literacy and awareness training for all professionals involved in education policy, inspection and accountability roles.** This training should be on par with that provided to school leaders and teachers. Additionally facilitate opportunities for these system-based colleagues to visit and engage with school leaders who are actively implementing AI initiatives. This direct engagement will contribute to a more informed and nuanced understanding of AI's role in education across the wider system. This approach will help align policy, inspection, and accountability measures with the realities of AI implementation in schools, ensuring more effective and supportive frameworks for AI adoption in education.

25. **Encourage those leading on policy and accountability to define the parameters around what they will and will not lead in relation to AI.** This clarity, alongside clear expectations about the implications of those parameters will allow the sector to work together more effectively – with schools, systems, suppliers and the wider education ecosystem clear on what each can do to support each other.

26. **Encourage a revision of the 1:1 device provision policy as part of the National Curriculum review.** Highlight the potential for AI to exacerbate existing inequalities if access to technology is not addressed. Emphasise that many MATs have already achieved or are working towards a 1:1 device-to-student ratio. Initiate and participate in national conversations about addressing the inequalities between schools and MATs that do and do not offer this contemporary toolkit to their students. Stress the importance of providing equal opportunities for all learners to develop digital literacy and AI skills, regardless of their school's financial situation or leadership priorities. Championing this cause will help to ensure that all students have the opportunity to develop the digital skills necessary for success in an AI-driven world, reducing the risk of widening educational inequalities.

27. **Engage with marketplace solutions like EdTechImpact and supplier associations such as BESA to advocate for improved filtering and quality assurance mechanisms for AI-related educational products.** Participate in discussions to help define 'quality' in the context of AI

educational tools, ensuring that the evaluation process aligns with real-world educational needs and values. Actively contributing to this process will help to shape a more navigable and trustworthy AI marketplace for schools, enabling more informed decision-making.

28. **Actively engage with organisations developing innovative schooling models to explore AI's potential in enhancing not only individual operations but also inter-model relationships.** Collaborate with networks such as the DfE's Innovation Unit, The Open School, CST, Trust Leaders, and Queen Street Group to facilitate discussions on how AI can: support multi-MAT collaborations; enhance blended learning network; improve Open School models and bridge gaps for learners moving between different educational structures. This approach can lead to smoother transitions for learners, more efficient resource sharing between institutions, and a more cohesive, supportive environment for the wider school community.

## Conclusion

The findings from this project involving 23 groups of schools, representing over 400 institutions and a quarter of a million young people across England, reveal that AI technologies are catalysing profound reassessments of educational paradigms. These reassessments encompass all aspects of education, including learning, teaching, curriculum, assessment, and systemic structures.

Multi-Academy Trusts (MATs), alongside other groups of schools, face the complex task of navigating these transformations. They must carefully weigh AI's potential benefits against ethical considerations and the fundamental human aspects of education. While there is palpable enthusiasm for AI's educational prospects, significant apprehensions persist regarding its implementation, ethical usage, and effects on pedagogical practices.

This research underscores the need for a judicious, ethical, and strategic approach to AI integration in education. MATs must develop clear AI strategies and robust governance frameworks that address critical areas such as staff development, curriculum adaptation, equity and access, and ethical considerations. These strategies should aim to enhance learning experiences and tackle emerging challenges whilst preserving the essential human elements that underpin effective education.

A recurring theme throughout this research is the importance of maintaining a balance between technological innovation and the human-centred aspects of education. As AI technologies become more prevalent, there is a pressing need to redefine the roles of learners and educators, equipping students with both AI literacy and critical thinking skills, while supporting teachers in their transition to facilitators and guides in AI-enhanced learning environments.

The findings of the project reported here also highlight the potential for AI to personalise learning experiences, streamline administrative tasks, and provide data-driven insights. However, MATs must thoughtfully address concerns about data privacy, ethical use of AI, and the potential exacerbation of existing digital divides as they incorporate AI into their strategies.

As we look to the future, it is clear that the integration of AI in education will require ongoing collaboration, research, and adaptation. MATs and school groups must remain agile, continuously evaluating the impact of AI on their educational practices and adjusting their strategies accordingly. They must also engage with broader stakeholders to ensure that AI implementation aligns with community values and expectations.

The ultimate goal when it comes to AI in education, is to harness AI's potential to enrich and transform educational practices, ensuring they remain relevant, inclusive, and aligned with evolving societal needs. By approaching AI integration thoughtfully and responsibly, MATs and school groups can navigate the provocations of AI and shape a future of education that is both technologically advanced and deeply human-centred.

The journey ahead is complex and multifaceted, but by working together, sharing insights, and maintaining a focus on ethical and effective implementation, MATs and school groups can create learning environments that prepare our students for success in an increasingly AI-driven world.

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