

# AQA submission

## The Use of Artificial Intelligence and EdTech in Education

### **Education Select Committee Inquiry**

#### **Executive summary**

AQA is an independent education charity, providing high quality assessments that are fair, reliable and support students. Today, we're the largest provider of academic qualifications taught in schools and colleges. We set and mark exam papers for over half of all GCSEs and A-levels taken every year. But exams are only part of the story – we also make sure the content of our qualifications support great teaching. Our qualifications are designed to suit a range of abilities and include GCSEs, AS and A-levels, the Extended Project Qualification and Technical Awards. Our qualifications are internationally recognised and taught in more than 40 countries around the world and they're highly valued by employers and universities.

We are already leading the way in designing and delivering new technology that provides adaptive assessments to support teaching and learning; has the potential to improve the quality and reliability of marking; and to digitise exams to bring them into the 21<sup>st</sup> century. Underpinning all our work in this area is a commitment to proceed ethically and responsibly; harnessing the power of AI and technology, while being laser focused on the risks and challenges it brings. AQA strongly supports keeping 'education' in EdTech and therefore argues it should be used appropriately, in an evidence-led way which delivers educational value for students, teachers and the wider sector.

We welcome the opportunity to respond to the Education Select Committee's inquiry on the use of Artificial Intelligence (AI) and EdTech in education.

Our submission comprises three sections; how we are leading the way in AI and EdTech; how the system must operate in order to address the challenges and risks brought about by AI and EdTech as well as opportunities in ongoing educational reforms.

#### **Leading the way in AI and EdTech**

AI and EdTech have significant potential to improve educational outcomes when deployed ethically and with a clear pedagogical purpose. Below, we set out how we are already delivering a number of services to students and teachers.

#### **AQA Stride: adaptive, personalised and accessible learning**

[AQA Stride is](#) an adaptive formative assessment tool which we provide to schools. It offers detailed diagnostics and progress tracking, which allows teachers and students to see exactly where to focus. To date, 268 centres are 'active users' of Stride.

AQA Stride provides teachers with a precise picture of what each learner understands and where further support is needed. It helps teachers to identify misconceptions earlier on, allowing them to intervene before gaps widen, and to support targeted intervention by focusing attention on the specific concepts with which a student is struggling.

By personalising the sequence and difficulty of questions, AQA Stride creates tailored pathways that support learners who may struggle with linear or whole-class learning, with particularly strong benefits for disadvantaged and SEND students who gain most from timely feedback and targeted support.

For teachers, adaptive tools reduce the time spent creating bespoke materials, streamline communication with SENCOs and avoid unnecessary re-teaching of content already mastered. By rapidly identifying specific knowledge gaps, Stride also helps teachers focus their time where it is most needed, refine curriculum sequencing and provide more precise support.

Together, these features show how adaptive systems can strengthen learning, improve equity and transform provision for young people with SEND, those who are disadvantaged, care-experienced or taught in non-traditional settings.

Finally, AQA Stride produces data, insights and analysis, which help to inform education policy, including curriculum design and teacher training. We have already received feedback from users who say it is helping to provide targeted support for learners, especially those retaking GCSE Maths in Further Education settings.

### **Alpha Plus Online Assessments**

Through one of our subsidiary companies, AlphaPlus, we have also developed and are delivering personalised assessments for 7- to 14-year-olds in Wales.

These are national, online assessments in procedural numeracy, reading and numerical reasoning which help to identify the areas where pupils are doing well, and where they need extra support in the classroom. The questions are tailored to the national curriculum, and the adaptive element means they get easier or more difficult, depending on whether the pupils are getting the answers right or not. The online element of the assessment enables it to be both adaptive for all pupils, and accessible to pupils with additional needs.

While these are national, standardised assessments to allow for benchmarking, they are crucially not used for accountability and performance purposes, meaning they can genuinely be formative and tailored to pupil needs. There is a real opportunity here for the Government in England to consider adopting these types of assessments to scaffold teaching and learning in Key Stage 3.

### **Digital exams**

Digital exams (on-screen assessment) have significant potential to support the wider digital transformation of schools, provided they are introduced in a phased and well-regulated way. On-screen assessment can better reflect the digital nature of modern learning, work and society, helping ensure that qualifications remain relevant and aligned with the skills young people need for future employment. Digital exams can reduce logistical burdens on schools and create opportunities for a more efficient and

resilient assessment system. Digital delivery also reduces some of the structural barriers inherent in paper-based systems, such as physical handling, distribution and scanning.

Digital exams can also make the exam system more accessible. They offer more flexible, user-centred design options that may better support learners with SEND or those who struggle with handwriting. They also offer opportunities for built in functionality such as options to modify font style, font size, screen colour and built in audio descriptions which can widen the accessibility of digital exams not just for those who are eligible for access arrangements/special requirements, but for all learners.

According to AQA's research and the field more widely, there are indications that familiarisation with the digital design for assessments within a platform and the specific device used to take an exam are crucial in any future transition to digital exams. Sitting alongside the introduction will need support to develop typing fluency for open response items which we recommend is led through a coordinated response through the ongoing review of the curriculum and assessment system.

It is our recommendation however that digital exams should be introduced in an evolutionary way, with pen-and-paper options retained to protect fairness and public confidence. There is a clear need for investment in school infrastructure, staff training and robust regulatory frameworks to ensure reliability and comparability.

### **AI Marking the Marker**

In 2024 AQA announced work had begun to explore how AI can be used to provide “quality assurance” to human marking in a trial during the summer exam series.

This has included research into the ways in which AI can strengthen the reliability and resilience of the exam system by acting as an additional layer of quality assurance. Early indications from trials show that AI can match senior examiner marks on shorter, constructive-response questions in up to 80 per cent of cases.

This summer, AQA will test this approach on a small sample of live GCSE questions and A-level data to identify any marking anomalies which may arise “in real time”. Any significant anomalies will be sent to a senior examiner for review.

Crucially, this work is not about replacing human markers but about using AI to “mark the marker”, helping to spot diverging marking patterns, support consistency across large cohorts and address challenges in recruiting expert markers. In the long-term this has the potential to improve marking quality and system reliability whilst also supporting senior examiners in the process. In the context of rising concerns about AI enabled cheating elsewhere in education, this research highlights a major opportunity: AI can be used not to undermine exams, but to strengthen the fairness, accuracy and public confidence of high stakes assessment.

### **Challenges and risks relating to AI and EdTech**

While the opportunities are significant, there are also important risks that require careful management.

#### **Quality assurance**

The approach to evaluating AI systems in education is inconsistent and often lacks transparency. Many AI companies rely on non-standard benchmarks developed by non-specialists, with limited or opaque quality assurance. Others repurpose tests designed for humans and use selective evidence to claim that their systems have achieved “mastery” in particular domains. These approaches are misleading and do not provide a reliable indication of how an AI tool will perform in real educational settings. To ensure safety, fairness and public confidence, AI-enabled EdTech should be assessed using transparent, standardised methods comparable to those used to evaluate human performance. This would provide a consistent basis for comparing tools, verifying claims made by vendors and ensuring that AI systems meet the knowledge, skills and capabilities required for use in schools and colleges. AQA supports the DfE’s proposal, expressed in the Schools White Paper, of building ‘sovereign education benchmarks to assess the safety and pedagogy of AI in education, working together with a taskforce of educational experts’.

Schools must balance students’ independent use of technology with the need to manage the risks associated with digital tools and generative AI. This includes ensuring appropriate internet filtering, so that students can access high-quality educational content while being protected from harmful or inappropriate material. Schools also need to minimise distraction, as poorly managed or poorly designed digital tools can undermine focus and reduce learning time.

Safe use of generative AI requires particular attention. Students need clear guidance on when and how these tools can be used appropriately, and teachers need confidence that AI-enabled tools comply with safeguarding, data and ethical standards. Alongside technical controls, schools must also focus on building trust and responsible digital behaviours, helping students understand the risks, make informed choices and use technology safely and critically.

Together, these elements underline the importance of a coherent approach to safeguarding that aligns technical protections, curriculum expectations and digital literacy education, ensuring that students can benefit from AI and EdTech while remaining safe and supported.

There is currently no well-defined, coherent framework governing the use of AI in education. AQA recommends the following useful 5Es framework:

- Effectiveness – does it work in principle?
- Efficacy – does it work in real world settings?
- Equity – is it inclusive and accessible?
- Ethics – does it comply with legal and human rights standards?
- Environment – is it sustainable?

The education system would benefit from a consistent and transparent definition of “quality” in EdTech, particularly as AI enabled tools are used more widely. The 5Es framework provides a structured way to evaluate products beyond marketing claims, ensuring decisions are grounded in evidence and aligned with educational priorities. Effectiveness considers whether a tool could work in principle and whether its design is scalable across different learning contexts. Efficacy focuses on whether it does work in real-world settings, based on robust evidence from classroom use rather than selective or vendor defined benchmarks. Equity assesses whether the product is inclusive and accessible for all learners, including those with SEND, those from disadvantaged backgrounds and those in nontraditional settings. Ethics examines compliance with legal, human rights and data protection standards, ensuring that safeguarding and responsible data use are embedded from the outset. Finally, Environment considers

the sustainability of the product, including its energy use, device requirements and broader environmental impact. Together, these dimensions offer a comprehensive, practical framework for assessing the quality of EdTech and AI tools in a way that supports schools, protects learners and strengthens public confidence.

## **Equity and access**

AI and EdTech risk widening existing inequalities if access varies by:

- Geography;
- school type;
- socioeconomic background;
- Linguistic background/EAL status may also be a factor - especially considering the linguistic bias within AI tools.
- SEND status.

As outlined earlier in this submission, AI and EdTech have the potential to improve outcomes for learners who are most at risk of falling behind, including disadvantaged pupils, care-experienced young people, SEND learners and those in non-traditional settings. However, these benefits will only be realised if access is equitable. The submission notes that students' digital fluency varies significantly, with gaps in knowledge limiting their ability to use technology effectively. Teachers' capacity to interpret assessment data and use digital tools also varies, influenced by the technical and contextual expertise available within each school. Learning analytics dashboards can be complex and offer limited guidance, which disproportionately affects settings with fewer specialist staff or weaker digital infrastructure. Without consistent access to devices, connectivity and high-quality digital literacy education, AI and EdTech risk widening existing inequalities linked to geography, school type, socio-economic background and SEND status.

## **Wider educational changes**

### **Curriculum and Assessment Review**

The Government response to the final report on the Curriculum and Assessment Review noted that it would explore the development of a level 3 qualification in data science and AI. It also said it will look to replace the current computer science GCSE with a "broader offer that reflects the entirety of the computing curriculum".

AQA has suggested that if this was to be the case then the long-term future of any AI qualification needs to be considered to ensure that it has longevity needed to equip students for the future.

As the Curriculum and Assessment Review moves to more detail subject content review, we have been having discussions with the DfE on what the new AI/Data Science qualification could look like. As part of those discussions, we've raised the following points:

- **The need to teach students to critique and verify AI-generated outputs, not just use them**

The qualification should emphasise critiquing solutions, assessing errors and understanding fallacies. Embedding AI means training learners to evaluate AI outputs, identify bias, test assumptions, and verify results using computational reasoning - rather than accepting them blindly.

- **Integrate AI into computational problem-solving process**

Students should focus on defining problems, abstracting, modelling, and evaluating solutions as well as learning where AI can and cannot safely be delegated tasks.

- **Include applied machine-learning modelling with strong ethical framing.**

This could include machine-learning purposes, classification, training/testing, and ethical issues.

- **Build future-proof practical skills by teaching students to adapt existing AI models and computational tools**

This could be built in through the assessment objectives highlighting adapting existing models, managing computation, and learning new tools. Including AI means learners could develop skills to work with evolving systems, adjust parameters, integrate pre-built models, and understand model behaviour as technologies advance.

- **Require students to analyse AI-related data issues: bias, sampling, fallacies, and misleading visualisations.**

Inclusion of Data science sections could cover bias sources, sampling, misleading visualisation, and fallacies.

## **Digital literacy**

The final report of the Curriculum and Assessment Review also recommended strengthening digital literacy at each stage of the curriculum. This is something which AQA has been exploring and have recently conducted research with teachers and young people on this topic which we will publish shortly.

Our research found:

- students' digital fluency is uneven, despite growing up with devices;
- teachers often lack the statistical and mathematical literacy needed to interpret assessment data effectively;
- learning analytics dashboards can be complex, poorly designed and difficult to interpret.

These factors constrain the effective use of EdTech and underline the need for targeted, high-quality CPD to build the digital and data-interpretation skills required for AI-enabled tools to have real impact.

Looking to the future, clearly defining the domains that should be included in a digital literacy curriculum is key. These domains may shift over time as digital technology evolves. There should however be sufficient flexibility to cater for the wide range of skills that 'digital literacy' encompasses. Internationally, there has been some variation in how the construct has been defined and how it has been operationalised for assessment.