NASUWT THE TEACHERS' UNION

STATEMENT ON AI-ENABLED TECHNOLOGIES IN EDUCATION

Statement on AI-enabled technologies in education

NASUWT work to support teachers, leaders and NASUWT Representatives

NASUWT has established **principles for the ethical design, development, procurement and application of AI-enabled technologies**. The principles set out NASUWT's policy positions and the range of factors that need to be considered in order to make an informed decision about AI-enabled technologies. They reflect the features of effective practice.

NASUWT's principles for the ethical design, development, procurement and application of AI-enabled technologies underpin the practical advice and guidance we provide to members and representatives. We have produced **practical guidance on negotiating a collective agreement for digital technology and AI**. The guidance considers the school or educational setting's strategy for digital technology and AI, redlines, mechanisms to facilitate participation, consultation and negotiation, arrangements, and other issues that the agreement should seek to cover.

We have also produced advice on **remote teaching and learning;** the **UK GDPR and AI;** and **live streaming data protection and privacy;** together with a **checklist for the use and management of livestreaming.**

NASUWT is involved in discussions with national administrations and governments about the appropriate use of AI-enabled technologies in schools and education settings. We are also members of the TUC's AI working group and a TUC-supported sub-group for education unions.

Internationally, we are supporting Education International (EI) and the European Trade Union Committee for Education (ETUCE) to address issues related to AI-enabled technologies in education. NASUWT also represents the Trade Union Advisory Committee (TUAC) to the Organisation for Economic Cooperation and Development (OECD) on the National Group of Experts for School Resources: Digital Transformation of Education. We are using our role on the group to highlight union issues and concerns around the introduction and implementation of AI and EdTech in schools, and to press for a principled approach to decisions about the use of AI-enabled technologies in schools.

NASUWT's principles for the ethical design, development, procurement and application of AI-enabled technologies are:

1. **Education is a public good and a human right. AI-enabled technologies must support education goals and the values of a democratic society. This means:**
    a. High-quality, inclusive and equitable education for all.
    b. Recruiting developing and retaining a high-quality teaching workforce.
    c. Decisions about whether, when and how AI-enabled technologies are used: if they are based on the needs of learners and the professional judgements of teachers, not on commercial interests.

d. AI-enabled technologies are designed, developed, procured and implemented in ways that respect democratic values such as fairness, justice, transparency, accountability and sustainability.
e. Teachers and leaders are supported to make informed decisions about the ethical use of AI-enabled technologies.

2. AI-enabled technologies are designed, developed and implemented in ways that promote human expertise, human review and human interaction. This means:

a. AI-enabled technologies should empower the teacher to exercise their professional autonomy and agency. They must not replace the professional judgement of the teacher.
b. AI-enabled technologies must not replace direct human interaction between the teacher and learner, as the teacher plays a critical role in supporting the social and emotional dimensions of learning, and in personalising education to meet the diverse needs of learners.
c. Decisions about the design, development, procurement, implementation, review and continued use of AI-enabled technologies are negotiated and agreed with recognised workforce unions, including NASUWT.
d. Those affected by the AI-enabled technology are consulted and their views and needs inform decisions about whether, when and how AI-enabled technology is used.
e. Teachers are empowered to make informed decisions about whether, when and how AI-enabled technologies should be used, including through training, professional development and learning, and through access to ongoing support.

3. Safety and privacy are ensured. This means:

a. AI-enabled technologies must be designed, developed, procured and implemented in ways that uphold rights to data privacy, data protection and safety.
b. Data protection and privacy impact assessments, along with equality impact assessments, are undertaken to identify risks and action taken to secure effective practice, including action to mitigate risks.
c. Risk assessments are conducted before an AI-enabled tool or technology is purchased or leased and, where appropriate, this includes examining how the tool or technology interacts with other school information and management systems.
d. It is clear what happens to personal data (of learners, staff and others), including where the data is stored, and that the data is secure.
e. Companies providing a data management tool or service demonstrate that they implement these rights.

4. AI-enabled technologies are designed, developed, procured and implemented in ways that protect teachers' jobs and secure workers' rights. This means:

a. AI-enabled technologies do not replace or displace teachers, including supply teachers.
b. AI-enabled technologies do not de-professionalise teaching nor remove core professional responsibilities from the role of the teacher.
c. Teachers and leaders have the right to a work/life balance, including the right to switch off. Steps are taken to prevent teachers and leaders feeling under pressure to work outside of hours or to take on additional tasks.
d. AI-enabled technologies do not add to teachers' and leaders' workload. Workload impact assessments are undertaken to identify and mitigate risks. Pre-existing generators of workload must also be addressed. Any new tasks should result in old tasks being removed.

e. AI-enabled technologies are not used for high-stakes punitive purposes such as monitoring or judging a teacher's practice. If AI tools enable monitoring of a teacher's practice, this information is controlled by the teacher and is only used for self-reflection and personal development purposes.

f. Teachers and leaders are supported to make effective use of AI-enabled technologies.

5. **AI-enabled technologies support actions to promote equality, equity, diversity and inclusion. This means:**

   a. AI-enabled technologies support personalisation (rather than standardising education) and are selected as part of an inclusive approach that recognises the diverse backgrounds and needs of learners.

   b. AI-enabled technologies are implemented in ways that reduce and remove inequities. This includes addressing issues related to resources and infrastructure.

   c. Action is taken to remove the risks of bias, discrimination and exclusion, including through the use of equality impact assessments, equality monitoring, reviews and evaluations.

   d. Action is taken to develop the digital literacy of staff and learners so that they can make ethically informed decisions about AI-enabled technologies. This includes making them aware of the risks of bias arising from algorithms and datasets.

   e. Feedback about the use and equality impact of AI-enabled technologies is sought. The voices of users and disadvantaged and under-represented groups are also sought and influence decisions.

6. **There is a strategic vision for the use of AI-enabled technologies and a participatory approach to their governance. This means:**

   a. School managers are responsible and accountable for the ethical use and effective implementation of AI-enabled tools.

      i. There is an AI strategy (which may be part of a digital strategy). A senior manager is responsible for the strategy.

   b. Governance of AI-enabled technologies is based on the principles of inform, consult, collaborate and empower.

   c. AI-enabled tools are trialled and reviewed before decisions are made to purchase or lease them.

   d. Teachers and other users of AI-enabled technologies receive training and support so that they can provide meaningful feedback about the appropriateness and effectiveness of tools.

   e. Companies are held accountable for the products they provide and manage.

   f. Contracts include clauses relating to ethical development and use, including clauses about privacy, equality and inclusion, and the storage and use of data.

Actions

To give effect to these principles, the National Executive will take forward the following actions:

1. **NASUWT will enable representatives and members to make informed decisions about the opportunities and the risks arising from AI and to engage proactively with employers. This will include:**

   a. raising awareness of NASUWT's principles for the ethical design, development, procurement and implementation of AI and EdTech (i.e. NASUWT's policy positions on AI and digital technologies); and

   b. providing training and practical advice and guidance on the use of AI and EdTech in education.

2. **NASUWT will utilise the expertise of our teacher and leader members who are already using AI. This will include providing opportunities for members to network and to share their experiences and expertise. We will also ensure that members are supported to advocate for the ethical use of AI and education technologies.**

3. **NASUWT will seek feedback from teachers and leaders about their experiences of using AI and EdTech tools, and the issues and benefits arising from its use in their schools, colleges and settings.**

4. **NASUWT will use the evidence from members to review and refine its existing advice and guidance to members, and to establish what further advice, guidance and support is needed.**

5. **NASUWT will continue to contribute to TUC work on AI, including through the TUC's unions and education unions working groups, to secure policy and legislative reforms that protect teachers' and workers' rights, and ensure that AI and digital technologies operate for the public good.**

6. **NASUWT will continue to contribute to international work on AI in education, including EI, the ETUCE and the OECD's TUAC, to secure ethical practices regionally and globally.**

What is Artificial Intelligence (AI)?

There is no single definition of AI, but the following definitions are helpful in explaining AI and its use in education:

The OECD defines AI as: *'a machine-based system that, for explicit or implicit objectives, infers from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments. Different AI systems vary in their levels of autonomy and adaptiveness after deployment.'*

The Council of Europe describes AI as: *'a set of sciences, theories and techniques whose purpose is to reproduce by a machine the cognitive abilities of a human being.'*

The ETUCE refers to AI-enabled technologies and sees them as comprising: an artificial component (e.g. a machine, software, algorithm or mathematical technique); a human component (the human is responsible for setting objectives and/or instructions and inputting them into the AI system); and the AI system's action (making predictions, recommendations and decisions in the virtual realm or extended environments). The ETUCE also highlights that AI-enabled technologies may have different levels of automation and that as the level of automation of the technology increases, the degree of control exercised by the human over the technology decreases.

Using AI and AI literacy

It is important to draw a distinction between teaching and learning with AI tools and teaching and learning about AI (AI literacy). AI literacy includes a technological and human dimension. The technological dimension of AI literacy includes learning about how AI works, the techniques and technologies, and how to create AI. The human dimension addresses the ethics of AI and prepares learners for how AI impacts on people's lives. This includes addressing matters such as privacy, AI biases, 'fake news' and the impact of AI on jobs. AI literacy covers the economic, social and human rights dimensions of AI, including matters relating to equality, democracy and the rule of law, which means that it is relevant to teachers of literature, the visual arts and human sciences, as well as teachers of computer science and natural and applied sciences.

This raises questions about what is taught – for instance, the knowledge, skills and competencies that are needed to make critical and informed judgements about the use of AI – and it has implications for pedagogy.

EI identifies three broad categories of AI tools used in education, teaching and learning: student-focused tools; teacher-focused tools; and institution-focused tools. EI finds that there is very little robust research about the effectiveness of any of these tools. Where 'evidence' does exist, it is usually small-scale or has been commissioned by commercial developers for marketing purposes. Very few tools have been developed for teachers. Further, many learner-focused AI tools appear to be designed to replace the teacher or elements of the role of the teacher. Critically, EI highlights that commercial interests are driving development of AI education tools and drawing attention to the lack of teacher involvement in decision-making processes.

Therefore, when considering whether an AI tool is appropriate, it is important to ask:

- Does the AI-enabled tool support the teacher, the learner and the school?
- Why is AI being used?
- How is AI being used?

In turn, it is crucial to consider:

- Who is making the decisions?
- Who has influence?
- Whose interests are being served?

The human should be at the heart of decision-making, with judgements about appropriateness being based on benefits for the learner and the teacher, as well as for teaching and learning.

Who is using AI in education and how is it being used?

A survey conducted in August 2024 found that 57% of teachers had used AI tools to help with school work, and 31% of respondents said that they hadn't used AI at all. In the 2023 survey, 35% of teachers said that they had used AI for school work, and 50% said that they hadn't used AI.

The survey examined similarities and differences by school phase and job role: 56% of primary school staff and 57% of secondary school staff reported using AI for school work. However, just 52% of class teachers (compared to 60% of headteachers and senior leaders) reported using AI for school work. The survey also found that in primary schools, KS2 teachers (64%) were more likely to have used AI than early years and KS1 teachers (46%).

A Scottish Qualifications Authority (SQA) survey of teachers' use of Generative AI looked at frequency of use and the ways in which AI was being used. A quarter of teachers (24%) reported using AI regularly as part of their working life; just over a quarter (26%) reported only using it once or twice; just under a quarter (22%) said that they had experimented with AI but were not using it in their working life; and a further 26% said that they had not used AI but were aware of it.

Focusing on how practitioners were using Generative AI tools, the SQA found that the most common uses were: material/activity design (77%); lesson planning (52%); administrative tasks (47%); designing formative assessments (39%); and instruction/ lesson delivery (35%).

These surveys indicate that while an increasing number of teachers are making use of AI, including Generative AI, a significant proportion of teachers have not used AI or are not using it regularly in their work. They suggest that teachers are at very different starting points regarding their understanding of what AI can do and how it might support them with their work.

AI and workload

The use of AI-enabled technologies is often justified on the grounds that they will reduce workload. For example, Oak Academy was given £2m to develop an AI lesson-planning assistant – with the intention that this would help to reduce teacher workload – and many of the companies providing AI-enabled tools to support teachers with lesson planning claim that they reduce workload. However, there is a need to treat such claims with caution. For example, a recent survey found that only 32% of teachers reported that using AI decreased their workload. Also, EI warns that much of the research about AI-enabled tools is commissioned by the companies for marketing purposes.

Recent research about the use of ChatGPT to support planning of lessons for Years 7 and 8 in maths and science found that the AI software did reduce the time that teachers spent preparing lessons. Teachers were given a guide to help them use ChatGPT, and users reported spending 31% less time than non-users preparing their lessons. While the results show some promise, it is important to note that the trial was limited to teachers of maths and science, and the main focus of the research was on assessing the impact of the guide for using ChatGPT to prepare lessons.

Whether AI-enabled tools reduce workload will depend on many factors ranging from the individual teacher, how they plan and their familiarity with/confidence using the AI-enabled tool to the decisions made by the school, setting or employer about AI-enabled technologies.

Members report that AI-enabled technologies and digital tools often increase their workload. For instance, they may be required to use tools and systems that do not communicate with each other and which require them to duplicate information in multiple applications. Also, teachers need to be given time, training and support to learn how a tool could and should be used. This highlights the importance of the school or setting adopting a strategic approach to AI and digital technology, for issues relating to workload, and time for training and support to be addressed through the strategy.

Professionals working in organisations that have adopted an ethical and strategic approach to the use of AI report that people who do the same job may use AI to different extents and for slightly different purposes. They identify the need for the AI-enabled tool to support the worker and their way of working. Failure to take account of how a teacher plans and prepares lessons, for example, will have implications for their workload.

Commercialisation

AI-enabled technologies provide a means for commercial companies to gain a foothold in education. They may do this by promoting their tools as solutions to issues such as workload, inclusion and administrative burdens. EI raises concerns about AI tools in education-serving commercial interests. They find that AI tools may be designed to replace rather than support the teacher and that teachers are rarely consulted when products are designed and developed. They find that tools are marketed to schools as personalising learning when they actually standardise education, and that the algorithms and machine learning systems used may actually reinforce and exacerbate existing biases and inequities. Further, EI raises concerns about companies exploiting data for commercial purposes and the potential for this to infringe upon learners' and teachers' privacy rights.

This highlights the need for caution when purchasing or leasing AI-enabled technologies. It is vital that those making decisions about whether to purchase an AI tool are not swayed by marketing hype, but they must retain a focus on what is needed to achieve the school or education setting's goals and vision for education. It also highlights the importance of having a digital/AI strategy and for this to inform decision-making.

A school or setting needs evidence about how a company collects and uses data, where data will be stored, and the steps the company takes to ensure privacy and security and avoid bias and discrimination. Testing and trialling AI-enabled tools before purchasing

or leasing them provides an important means for evaluating tools, including ensuring that they support education goals, are safe and secure, support equity and inclusion, and avoid administrative and workload burdens.

Commercial companies may seek to exploit the lack of expertise within a school or education setting and it may be difficult to establish if a company's claims are accurate. A school or setting might look for other ways of securing expertise, e.g. a governor, parent or member of staff (who should be recompensed for taking on any additional responsibilities). Schools or settings that are already using an AI tool may be able to provide useful feedback about a tool's effectiveness and any issues they have encountered with the tool and/or the company.

Effective practice

Schools that have undertaken work to use AI-enabled technologies identify the following as key features of effective practice:

- The need for a vision for education and AI which addresses the question of purpose: why use AI? A 'pedagogy first' approach which places the learner at the heart of every decision and provides clarity about the benefits for learning.
- An AI strategy (which may be part of a digital strategy) that is led and coordinated at senior leadership level, is implemented coherently and is regularly reviewed and evaluated. This might be achieved through, for example, structures that include leads or champions to trial new tech and feedback on what does and doesn't work, and where champions and leads offer support and provide a two-way channel of communication with other staff.
- A principle-based approach which combines inclusion and innovation – focusing on tools that meet the needs of some (e.g. those learners who have special and additional needs) but which benefit all (i.e. inclusion is embedded in planning and decision-making).
- AI-enabled tools are trialled and tested before decisions are made to purchase or lease them.
- Clarity about what happens to data (leaner data, staff data, parents' data, governor data), what the company does with the data (is it stored in the UK?) and knowing that the AI will not compromise data security. For instance:
    - How does the AI interact with other systems such as management information systems (MIS), particularly systems that contain sensitive data?
    - Is this other data secure?
    - Where is the evidence to back up what the company says?
- Teacher agency – teachers should be in control and AI-enabled tools should support rather than replace the teacher. This also means that teachers may use AI in different ways.
- Involving teachers and learners in decision-making – the tools need to meet their needs and be manageable.
- Teacher training and support – teachers need to be aware of AI tools and what they can and cannot do. This includes providing them with time to experiment, e.g. a training and support-based approach which focuses on the teacher identifying a problem that they want to solve and then being supported to use AI and explore whether it can help solve the problem.
- Time and manageability – it may be appropriate to select and use a small number of AI tools. This helps to focus on what is most useful and ensures that the school can support the effective implementation of tools. It underpins a strategic approach where tools are identified, trialled and evaluated before wider rollout.

Some key challenges

There are many challenges relating to the use of AI-enabled technology in education. The Department for Education (DfE) biennial survey of technology in schools in England found that the high cost of some technology (90%) and budgetary constraints (89%) were identified by school leaders as the biggest barriers to increased uptake of technology. Fifty-five per cent of primary school leaders and 45% of secondary school leaders identified Wi-Fi connectivity in school as a barrier to increased uptake of technology in their school, and 49% of primary school leaders and 31% of secondary school leaders identified broadband connectivity as a barrier.

The proportion of teachers identifying Wi-Fi and broadband connectivity as barriers to increased uptake of technology was even higher than for leaders, with 63% of primary teachers and 62% of secondary teachers identifying Wi-Fi connectivity in the school as a barrier, and 57% of primary school leaders and 54% of secondary teachers identifying broadband connectivity in the school as a barrier.

Some schools, authorities and multi-academy trusts have a senior leader who is responsible for AI and digital technology, including an AI (and digital) strategy. However, in many schools, it appears that decisions about whether to use AI tools and when and how to use them are made without strategic oversight and support. It is likely to be easier to adopt and implement a strategic approach to AI across a group of schools, e.g. through an education authority, regional authority or a large multi-academy trust, and much more difficult to achieve at individual school level.

There is a significant risk that AI-enabled technologies will widen inequities between schools, between teachers who are 'tech savvy' and teachers who lack technical skills and support, and between learners from advantaged and disadvantaged backgrounds. It will be important to ensure that any solutions to address this issue do not undermine core principles for the ethical design, development, procurement and application of AI-enabled technologies in education.

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