OFFICIAL RESPONSE
to the call for evidence

Generative artificial intelligence in education

August 2023

About Community Union

Formerly PAT/PANN and latterly Voice, the **Education and Early Years** section of **Community Union** is a general trade union representing workers across the economy, including thousands of serving teachers and support staff, headteachers, lecturers, nursery and early years workers, nannies and other education professionals in schools and academies, nurseries and early years settings, colleges and universities across the whole of the UK.

We provide legal and casework support to our members and regularly engage with them in determining our response to policy proposals.

Community Union is affiliated to the Trades Union Congress (TUC), Scottish TUC and Welsh TUC as well as the General Federation of Trades Union (GFTU).

This Official Response has been prepared on behalf of members of the Education and Early Years section of Community Union by:

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As such this is a public document which will be published on our website following the consultation close.

The information shared within this response may be used and quoted as appropriate for the purposes it was gathered, and **Community Union** should be acknowledged as a contributor. We would be happy to discuss the comments in this response with the DfE or a research body acting on its behalf using the contact details supplied.

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About this call for evidence

The public, including the education sector, have recently gained access to generative artificial intelligence (AI) tools. Generative AI technology uses foundation models trained on large volumes of data. It can be used to produce artificially generated content such as text, audio, code, images, and videos.

Examples of generative AI tools include ChatGPT, Google Bard, Claude and Midjourney. This technology is also being integrated into other tools. Although generative AI is not new, recent advances and public access to the technology mean that the public can now use it more easily. This poses opportunities and challenges for the education sector.

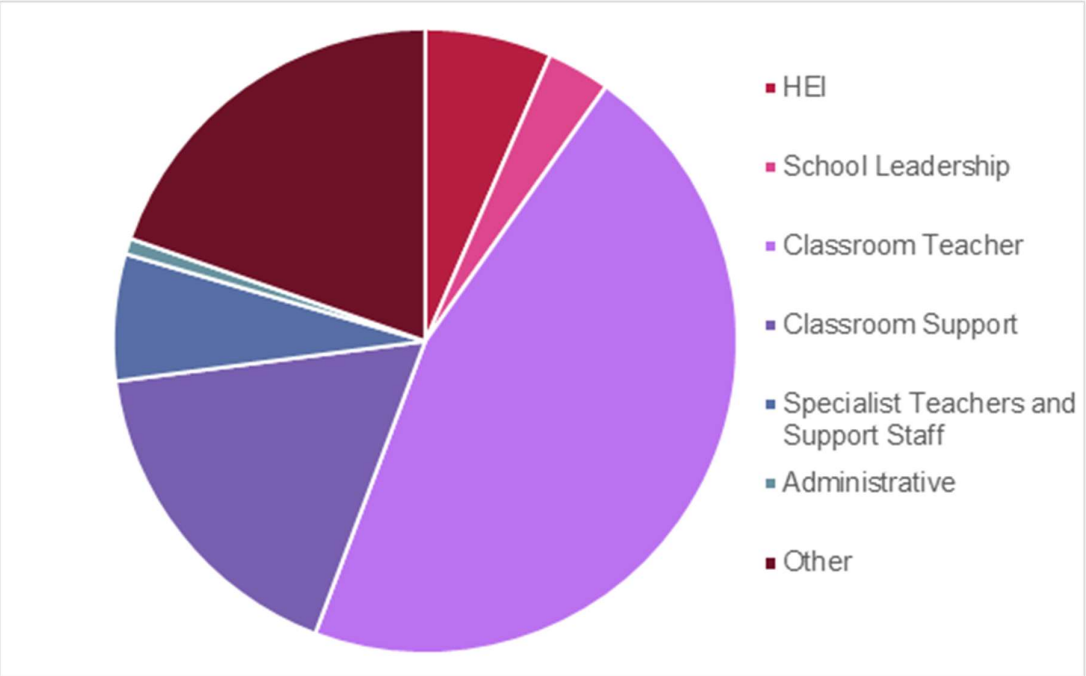
The department published a position on generative AI in education on 29 March 2023. We are keen to explore the opportunities this technology presents for education, as well as understand the concerns of educators and experts in education.

We would like to understand experiences of using this technology from education settings in England. We would also like to hear your views on where using it could benefit education, and about the risks and challenges of using it.

This response was submitted by email
GenerativeAI.consultation@education.gov.uk

Deadline
The call for evidence closes on 23 August 2023

Community surveyed its education members during August 2023 on the issue of generative Artificial Intelligence in education settings. We received over 120 responses from across England covering a wide range of employers, jobs and responsibilities.



1. **Experience with generative AI:**
    - **Have you or your institution used generative AI tools in an education setting? If so, could you briefly describe the ways it was used and the specific tools used.**
    - **What were the main challenges you faced in using generative AI and how did you address these?**
    - **What was the result of your use of these tools, including any impacts?**

63% of education staff respondents indicated they are familiar with ChatGPT and the capabilities of generative AI tools like it, mostly from news articles and conversation rather than through personal experience or professional use.

A smaller amount, around 35%, of our surveyed membership reported they have actively explored different AI tools and applications to see how they may be applied to their areas of work – with ChatGPT, Grammarly, and Bard being the most cited. Those who had not done so referenced a lack of understanding or lack of available time to allow them to explore.

A fifth of our members reported they had already started conversations with students about generative AI tools and whether or not they could be useful or not for their learning experience.

Most respondents who had explored AI, however, had done so out of personal interest and curiosity and not through any formal roll out or encouragement by their institution. Indeed, less than 10% and 6% respectively were aware of any AI tools/systems being used at their institution to support teaching and learning work or to aide wider non-teaching/administrative work at all.

Interestingly users do report finding these tools useful for certain aspects of teaching work and helpful in reducing the time and capacity requirements for certain non-teaching tasks.

Our membership consultation found that the vast majority, (74%) of those who have explored utilising AI applications and online tools, find them useful in reducing the amount of time and capacity required for administrative work, marking and assessment, or other non-teaching tasks. Our members also found AI tools and applications had been useful to assist with some teaching work tasks; mentioning the use of AI tools to assist with SEN lesson planning, ChatGPT to assist with letter writing to parents, GCSE Pod and Kahoot for online quizzes and mini assessments, and TT Rockstars and Star Assessment being commonly used in primary settings.

Members noted:

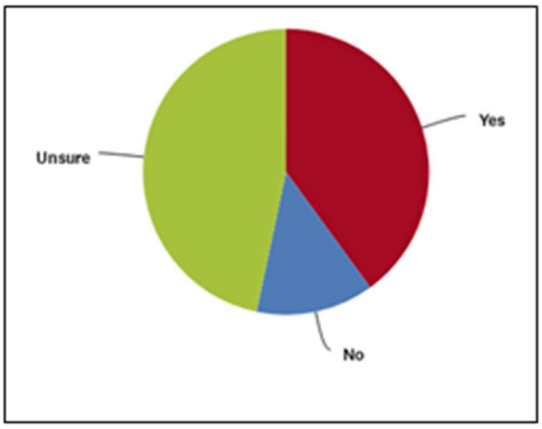
“Mega Seating Plan is very good. But too many apps eventually make it less efficient: too many interfaces, logins, etc”

“Used for creating letters to parents, worksheets, slide presentations, lesson plans, timelines. It saves me lots of time and gives me a basis to build upon.”

“GCSE Pod excellent precursor for a lesson online quizzes and mini assessment and VLE all aid in collaboration and data and make usually a more engaging resource”.

“Systems for checking text submitted by students is very useful in detecting plagiarism and is quicker than searching through texts manually.”

2. **Opportunities and benefits:**
    - **How do you think generative AI could be used to improve education?**
    - **What subjects or areas of education do you believe could benefit most from generative AI tools?**



40% of respondents felt that generative AI and similar technologies can be utilised to improve educational and teaching experiences and outcomes. A Similar proportion were unsure, but all agreed that it must be implemented in the right manner.

Members appreciated that the use of AI to directly support teaching and learning may currently be better suited to certain subject disciplines – like computing, maths and physics for example – but remained unsure as to how AI tools would be best utilised for subjects such as PE and the arts.

> *"Computing and Physics … are relatively structured and so lend themselves to using generative AI tools".*

Implemented in an integrated manner, the use of AI has the potential to improve educational journeys and outcomes – allowing teachers more time to teach, by reducing capacity requirements of non-teaching tasks, and also by analysing data on scale to provide insights into the learning journeys of students and the efficacy of teaching approaches by teachers.

> *"[Ai is useful to] write reports, letters and email. Automating workflow and processes to reduce form filling e.g. organising trips, SEND doc, routine processes".*

> *"Generative AI could be used to analyse data on pupil performance and suggest interventions…"*

> "*[In teacher training and development, AI could be used to] provide feedback and suggestions to teachers, creating a bank of advice based on expert pedagogy. Refreshing training based on cv, previous training and new developments."*

The utilisation of AI tools can also be of assistance for students with additional learning requirements, as some of the feedback from our members highlights:

> *“Could support less confident writers who were able to generate ideas verbally but struggle to write by turning them into written content. Could free up teacher time enabling teacher to give more direct 1:1 support in the classroom.”*

> *“EAL support … Voice recognition software is great for those with impaired motor function.”*

> *“Some students may be less embarrassed to ask generative AI for support than to ask a member of staff.”*

However it is implemented, establishing rules around the technology will be important.

> *“Students [and staff] will - at the very least - need to be taught what it is, how it works, and its strengths and weaknesses, even if it is not used for anything else.”*

3. **Concerns and risks:**
    - **What are your main concerns about using generative AI in educational settings?**
    - **If at all, have these concerns impacted your use of generative AI? Please explain how.**
    - **Are there specific subjects or areas of education where you believe generative AI should not be used? Why?**

86% of our members surveyed stated they think education staff, pupils, and parents all need comprehensive support and guidance in order to best to benefit from generative AI tools. Before any significant changes or recommendations can be introduced properly in this area, it is essential that teaching staff and wider stakeholders feel comfortable and have access to support and guidance on how best to implement and utilise AI technology in their setting.

> *"Both myself and students are concerned about several things. Firstly how do we ensure that students work is fairly marked if we are not sure what tools have been used and from a student's point of view, is there a level playing field for students? Secondly students are very concerned about what the response will be to AI by exam boards and how this will affect the controls on writing coursework, i.e. Coursework becoming even more time restricted and controlled so that it may as well be an exam."*

Members were clear that the frustrating state of school financing had to be addressed to ensure that there was a level playing field in terms of access to any IT resource that is required. Too many students cannot access even basic technologies due to a lack of equipment and robust broadband connectivity both in their school and at home.

> *"For any of this to be useful the whole approach to IT needs to be examined including every child having their own individual access to a computer or tablet both in school and at home."*

Research consistently shows that one-on-one or small-group tuition produces better learning outcomes, especially for children from disadvantaged backgrounds; and adaptive learning platforms, which help differentiate instruction based on students' previous performance, are also more effective for students from disadvantaged backgrounds. Implemented well, AI can be utilised to support teaching work and enable greater levels of individualised support and small group tutoring. However, if funding and access disparities are not addressed as part of this approach, the risk is that we further exacerbate these inequalities and widen the attainment gap that exists.

Some members were also concerned about the rising use of ChatGPT to write assignments and answer questions.

> *"We are already seeing examples of students using AI to write their assignments."*

> *"We have already had issues with A Level Geography pupils using AI - not cited - to help with writing essay answers for past questions."*

Some members noted that it is much easier to ask questions of generative AI than it is to search the internet or reference books themselves. Certainly, there is a need to teach children much more specifically about critical thinking and they *"need to be taught how to assess accuracy of their findings".*

> *"It seems very likely that students will get information online using AI tools, because the output from these tools is much easier to understand that the result of search engines.*

> *"Children still need to learn research skills using books and the internet to get a wider experience and develop lifelong skills."*

> *"I am cautious, however, because there will definitely be consequences that can't be predicted. The need for people to push boundaries of knowledge means from an early age the ability to draw their own conclusions from their own research is critical."*

> *"Generative AI produces more work for teachers, not less, so it cannot be used as a reason to cut staff. Rather, staff need more training, and also time to get to grips with it to recognise how and when it's used and how they want to make use of it."*

There are limits on how effective generative AI is currently able to improve learning. For example, it is good within dedicated apps such as TT Rockstars and Duolingo at repeating learning until it is embedded. However, members noted that it was less able to identify strengths and weaknesses in written text and make suggestions on how it might be improved.

> *"Preliminary tests suggest that AI can be useful for checking for understanding (CFU) * It seems very likely that generative AI can be used to provide individual feedback based on mark scheme although this would need further work/testing * The fact that current large language model (LMMs) cannot explain *why* they know what they know is a potential problem for checking the validity of generated material."*

Members did express some concern about the ease with which the technology can be applied:

> *“AI tools can be used for literature search and speed up synthesis of research articles etc. These tools exist (elicit is one). However, there can be significant drawbacks with use of these tools taking the "work" and therefore "learning" out of the processes.”*

> *“Published literature states that when asked 60% of students state that they have used generative AI (of some form) when generating work for assessments. I don't have data for my own students, but I suspect AI is being used. It can be hard to detect. With a shift to online exams in HE during Covid and some remaining still, this is a significant issue.”*

In Early Years education members raised concern about the necessary balance between technology and physical human interaction.

> *“While it is important that they have an understanding of technology and understand how it can be used, they still need to have human contact and conversations in order to develop their communication and social skills.”*

There is an understandable wariness around unexplored and unknown technological advances. Members espoused the full range of concerns but also explored some specific issues.

> *“I’m not sure how these would be applied to early years education.”*

> *“Homework needs to change, especially in secondary school. There is no point setting tasks to be completed outside the classroom that can be generated by AI”*

> *“I am very concerned about AI and the negative impacts it could have on education and human society in general.”*

> *“As a primary teacher we teach children to think and write for themselves. This is imperative. I am concerned that AI capabilities could be negative.”*

Members were clear that generative AI should not be used in EYFS/KS1:

> *“While being aware of this type of technology is useful for the future, this age group needs to be out in the environment and away from too many technological devices as their brains develop. Young children who have a lot of ‘screen time’ at home or school, for example, do find it harder to communicate effectively and develop appropriate social interactions.”*

And there was general concern at the speed with which this technology is developing with many staff feeling left behind and not understanding it well enough.

Overall, there is recognition that it is not so much which areas AI is best utilised in, but it is about how AI tools are integrated and utilised in the most appropriate manner for different subjects and areas of learning. Furthermore, many members acknowledged that they themselves did not understand the technology well enough to be able to dictate limitations.

4. **Ethical and legal considerations:**
    - **If any, what are your views regarding ethics, data privacy and security when using generative AI in education?**

Our members had real concern about the security of data and also about protecting themselves and their students from online harm. The majority of respondents believe a Digital ID for every student, which securely holds data about them and their educational progress as they move through the education system, could be a useful resource for learners and teachers to improve educational outcomes. Safely and securely storing learning and attainment data for all students will be a necessary precursor to any effective widespread use of AI tools in an educational setting – allowing analysis and insights to be drawn from anonymised data sets, in real-time, without compromising a student's or a teacher's privacy or online security.

In this regard, members also noted that the UK needs to *"formalise age checking and access. For instance, in theory ChatGPT is 13+, but there are few if any real checks on this."*

On the broader, ethical considerations for students and learners our members highlighted the need to teach good practice – as with any tool or resource – and to guide students on the best way to utilise this technology in an appropriate manner.

> *"I don't think that staff or parents of primary age children generally have any knowledge or experience at all and we will soon get to a point where children are experimenting with and more experienced with the tech than the people who should be guiding and protecting them - this frequently happens with mobile phones and social media in primary. My teenage children are teaching me."*
>
> *"I think if it can be of use it is better to teach students about the benefits and ethics of it rather than outlaw it which will only encourage use. Theory shows that showing students what academic integrity is has better results than showing them what impropriety is (better to show them right way not to avoid wrong way)."*
>
> *"The good aspects of technology should always be able to help us but usually, unfortunately, some people find out how to use clever tech for negative or 'cheating' purposes. There are ethical questions to be considered and I think clear guidelines to be put in place before using in an educational setting. However, again, as with most tech, these have to be reviewed and modified regularly as things can change very quickly and people discover all sorts of negative ways to use new tech."*

“I am concerned about the unchecked and unregulated intrusion of AI into our society. If we are able to resist blindly falling into the use of AI, to properly explore its implications and beneficial uses, then I would feel more positive about AI.”

“As a society we need really deep reflection on the ethics and anthropology of it all. It's moving far too fast. We risk destroying social trust if no one can know whether information is authentic or generated.”

5. **Future predictions and enabling use:**
    - **How do you see the role of generative AI in education evolving in the future?**
    - **What support do education staff, pupils, parents or other stakeholders need to be able to benefit from this technology?**
    - **What activities would you like to see the Department for Education undertaking to support generative AI tools being used safely and effectively in education?**
    - **Is there anything else you would like to add on the topic of generative AI in education?**

Members were clear that AI in all its many forms, has the potential to change the world in the way the internet did some 25 years ago. Therefore, *"there needs to be a clear message and clear training that is frequent and up to date."* If this is to be implemented there needs to be *"FREE, good quality CPD opportunities so teachers can be taught about AI"* with *"training on what it is, how it can be used and how to support children as they develop their use of the technology."* And perhaps most importantly this must be supported with funding to ensure it is widely available to all.

> *"Could be useful but presently there is a lack of computers for staff and students, and our internet access is so bad to make this impossible."*

There was some interest in the possibility that AI could help to reduce the workload burden on staff.

> *"I think they need to send people into schools to spend time with staff seeing where workload is unmanageable and how AI can help reduce that. Find me an effective teacher who doesn't work in their holidays."*
>
> *"Three different programmes – 1) General overview of what AI is and how it can be used. 2) Use of AI in teaching and learning 3) How AI can be used to reduce teacher workload and improve outcomes for learners.*
>
> *"We spend a lot of time looking at student data to identify children who are struggling but shouldn't be. Not sure how much Pupil Asst does this for us already but if there were algorithms to flag likely dyslexics for example, or an unknown issue which leads us to ask the right questions this could help."*
>
> *"I think that systems capable of sorting and pooling student information already exist. The problem … needs a nationwide agreed system for dealing with data."*

“Augmented reality to teach skills e.g. walk through diagrams, responsive exercises to target student weaknesses.”

“Homework needs to change, especially in secondary school. There is no point setting tasks to be completed outside the classroom that can be generated by AI, they need to be completed under supervision in school and specific guidance set. Reducing homework outside of the school day (even if it means increasing the day by adding a study period) also might decrease student and teacher workload and increase student engagement.”