Contribution: AI in education

Education International

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# Education International

## Question 1

AI is rapidly expanding in the field of education. While it is still early days, the ubiquity of large language models in developed countries has led to a rapid increase in access to Chat GPT and other such models that provide information quickly and in a tailored manner. However, curricular and assessment do not change so fast so the requirements for students remain largely the same as they were pre-Covid. This leads to both a dichotomy of access and use for students around the world. Many systems remain only partially connected to the internet and device access is being steadily more policed in developed countries as concerns over cheating and the submitting of AI generated content have reached the level of a moral panic in some jurisdictions. OECD countries have expressed serious interest in this expanding area but as our report on the [Unintended consequences of AI in Education](https://www.ei-ie.org/en/item/28115:the-unintended-consequences-of-artificial-intelligence-and-education) states there is not much evidence about the efficacy of AI models at this stage.

## Question 2

1. AI has been sold as hugely beneficial to students with special needs and while there is some evidence of the efficacy of particular applications there is also an observable tendency of suggesting that interaction with AI can replace human interaction for these students which we regard as dangerously segregationist.
2. Many researchers have pointed out the inherently biased nature of AI algorithms. They are disproportionately constructed in Silicon Valley which is not representative of America let alone the world and there are serious concerns about a type of neo-colonialism by algorithm. There is little evidence that the use of AI does anything to ease equity concerns, rather it is seen to amplify them with relatively richer students having better access and better understanding of how the models work. Clearly ownership of a device is the first access hurdle along with access to the internet.
3. Most international work on AI has emphasised the human in the loop, from the AI guidelines produce by OECD to our joint work on the [PEEER Principles](https://eiwebsite.blob.core.windows.net/uploads/20210427_101516_EI%20EFFECTIVE%20AND%20EQUITABLE%20EDUCATIONAL%20RECOVERY.pdf?sv=2019-10-10&ss=b&srt=o&sp=rdx&se=2030-05-26T22:00:00Z&st=2020-05-26T14:11:47Z&spr=https,http&sig=fqlBEId9cO6/PzqL9OFD54Ufvt33KDBvH/hM9wsIvLA%3D). However, there is a temptation to think AI can ’do it for us’. This is clearly not the case. Some of the most successful education systems and advanced technological societies such as Japan and South Korea, severely restrict the amount of time a student can spend on a screen.
4. There are serious concerns about data privacy and ownership in a world of AI. Many people have no idea their data is being used and monetised by the applications they use. When you use large scale language models your text also becomes part of the model, so you are in fact providing content as well as sourcing it. While this sleight of hand is understood by the developers the same cannot be said of the users. There are some early forays into regulation, but his area needs tightening up to protect individuals and respect vulnerabilities like being a child. There is no evidence that AI assists critical thinking and in fact if it is used instead of critical thinking it is likely to deskill students. When considering the impact of AI on women, girls, and gender diverse teachers and students, online gender-based violence and harassment must be addressed in education policy, with specific regulations put in place for companies who do not properly moderate content, nor hold perpetrators accountable on their platforms or tools. For example, new data from UNESCO outlined how AI has opened unchartered territory of harassment through deep fakes, especially images. Between 2020 and 2022, there was a 360% increase in ‘self-generated’ sexual imagery of children aged 7 to 10. There have been incidents in Spain and Brazil of deep-fake pornographic images of girl students being circulated to their classmates. Teachers, and particularly women teachers, are also potential victims. A teacher in Texas was targeted by a student who digitally created fake revealing photos of her and shared them online. As a women-dominated profession in most regions, this not only greatly threatens safety and privacy, but the ability to deliver high-quality education globally.
5. AI as it currently operates merely amplifies the stereotypes, biases and inequalities that already exist in our world. In fact, the tendency to whitewash is observable in both language models and image generators. The overrepresentation of men from high-income countries in tech companies, in the teaching of STEM subjects, and in research around AI at universities leads to a reproduction of harmful gender stereotypes. UNESCO’s 2024 Global Education Monitoring Report on Gender revealed:
   1. In the United States, only 16% of all tenure-track university faculty whose primary research focus area is artificial intelligence are women;
   2. in 2022, women held less than 25 per cent of science, engineering and information and communication technology jobs. Today, they represent only 26 per cent of employees in data and artificial intelligence.
6. There is a push towards teacher medial literacy and the critical reading of online material in an era of fake news. This is being picked up by PISA in a module in 2029, but meanwhile many systems are making moves towards this. Along with the development of global competencies and citizenship education this work is vital for the maintenance of healthy democracies.
7. AI is growing at both system level in terms of educational management and as tool for school leaders in terms of learning management systems and related tools. It is as yet unclear how this will enhance the educational experience. While much is said about personalising learning our report [Unintended consequences of AI in Education](https://www.ei-ie.org/en/item/28115:the-unintended-consequences-of-artificial-intelligence-and-education) shows this is largely a misnomer. There have been spectacular examples of where AI has been unequitable when used at the system level such as the algorithm for awarding grades for exit exams during Covid in the UK which disadvantaged poorer students. Spectacular claims should be avoided about the ability of AI to assist with education management and more evidence needs to be presented in this area.

## Question 3

Many of our member organisations are working on guidelines or principles in this area, as we have done. This approach from NASUWT is representative of work in this area. [Artificial Intelligence and Digital technologies](https://www.nasuwt.org.uk/advice/in-the-classroom/artificial-intelligence-and-digital-technologies.html). There are now 12 states in the US who now have guidance on AI and they appear to be clustered geographically so states are learning from their neighbours. There is of course a host of ethical issues at play and scant protections offered thus far. As our report states, the approach to AI by education systems should include *ethics by design*. Human rights concerns are many and varied and must be taken more seriously by governments. Student guidance in this area also needs more development. Clearly it is not a tenable position to ban AI. Students and teachers need to be taught how to use AI in a responsible and creative way that builds critical thinking skills and does not replace the human production of ideas.

## Question 4

Community involvement in AI projects is at a nascent stage. In terms of consultation, we have worked with OECD on their advice around the subject, but many countries are refusing to take this on as they would like to control the narrative around AI. It is clear that approaches that are modelled without the involvement of teacher unions and representative parent and student bodies are bound to fail. In special education developments teachers were more present than in other areas which may be one reason that there is more promise of positive development in this area.

## Question 5

There is a dearth of professional learning and development (PLD) about AI. The recent International Summit of the Teaching Profession (ISTP) co-hosted with OECD made clear that if any benefit is to be gained from the introduction of AI into education it will require large scale fit for purpose and relevant PLD to prepare the teaching profession for this change. There is little evidence this is happening so far.

## Question 6

As above there is a need for more investment in this area. Google classroom and Microsoft co-pilot have a host of video training materials some of which are better than others. However, it is clear that all these were made by developers without the input of teachers and their unions. There is a genuine dilemma between privacy and personalisation with all systems needing data to work. Safety should be the first rule.

## Question 7

The technical meeting at the ILO on [the Future of Work in Education](https://www.ilo.org/meetings-and-events/sectorial/technical-meeting-future-work-education-sector-context-lifelong-learning) looked into this area. It stressed in its conclusions that education is not a commodity but a human right. The conclusions included a request for countries to monitor equity and equality particularly in relation to technology. While there has been talk of equity audits and equity dashboards post covid there is little evidence that countries have progressed on these. Rather there is a growing access and capacity issue to engaging with AI in a creative and active way rather than as passive consumers. Students who are introduced to the production possibilities of AI tools are better prepared for such activities when they come up at school. Access can be provided at school but by then for many it is too late. Efforts to moderate these issues at ECE and Primary can lead to moves away from more physically based play which in turn has negative consequences. This is a complex area of development, but far more research needs to be done on whether AI improves learning in the assumed ways and how it can best be implemented with equity and ethics by design.

## Question 8

Collaboration with teacher unions is critical to successful implementation. At the international level we have seen collaboration between ourselves and OECD over the [Opportunities, Guidelines and Guardrails](https://www.oecd.org/education/ceri/Opportunities,%20guidelines%20and%20guardrails%20for%20effective%20and%20equitable%20use%20of%20AI%20in%20education.pdf) which EI developed with OECD. However, many of our members tell us that there is little consultation with them around digital technologies. In 2020 our members told us in [Teaching with Tech](https://www.ei-ie.org/en/item/25233:teaching-with-tech-the-role-of-education-unions-in-shaping-the-future) that 45 % were not consulted at all on the introduction of new technologies and 29% were only consulted on a few aspects. With this level of consultation, it is no surprise that teachers are struggling to adapt to new technologies. We would also like to point out that the vast majority of AI tools operate in English first which in itself is an access issue for the majority of the world’s population.

## Question 9

The main challenges consist of:

* Algorithmic bias. The fact that most of the algorithms are created and curated by white men under the age of 35 presents some big issues for education unions and for diverse societies.
* It has been further noted that the vast majority of AI models are Anglo Saxon often being translated automatically into other languages which further enhances bias and AI ‘hallucinations’.
* Neo-colonialism is a real risk with the ubiquity of AI systems coming from such a narrow slice of the world community.
* Data privacy and security remains a serious concern with many people being unaware their data is being used by the AI machines they are employing. There are particular concerns for child safety and the principle operates that if young people do not understand how their data is being used then it should not be done.
* The possibilities for surveillance as a result of AI use have been amplified by ethical concerns such as facial recognition cameras that are biased against people of colour. The ethical concerns that have erupted in the Gaza conflict with AI being used to target thousands of low-level Hamas operatives leading to a huge and callous loss of life. The risk of surveillance in the workplace has risen with some countries, such as China, using these models to inform performance pay systems.
* Intellectual property concerns, with teachers’ lesson plans being repurposed for others without the teacher’s permission, and students work being used to shape other answers without permission.
* Plagiarism concerns remain high in many jurisdictions, although banning AI is not a progressive move students need to be taught when and how its use is appropriate.
* For this to happen teachers need better quality PLD on applying and using AI.
* Applying AI to student and teacher wellbeing issues is a blunt instrument. While a chat bot may seem to be an effective solution, not having a human in the loop has driven a massive upsurge in suicide and self-harm issues amongst teenagers since the advent of social media. AI may well accelerate this trend.

## Question 10

The use of AI for special needs students could be a positive development and there is potential in the work on assessment, but as with all the work on AI, it could also create other challenges particularly around equity of access and equity of use. It could be helpful with multi-lingual learners, and with virtual reality challenges, if there remains a human in the loop. The ethical angle needs more work and there should be a logical progression in AI provision in education, not one driven by what has been developed first.