All-Party Parliamentary Group on Artificial Intelligence
Evidence Meeting 2 – Education
Monday, 18 March 2019 | 5:30-7:00 PM - Committee Room 2, House of Lords

Joysy John, Director of Education, NESTA

Biography: Joysy is the Director of Education in the Innovation Lab, bringing together Nesta's work in education across innovation programmes, research and investment. Joysy is the former Chief Industry Officer of Ada, the National College for Digital Skills where she led the College's industry engagement and online learning website. Prior to this, Joysy headed up international strategic development for EF Learning Labs, led business development for Emerge Venture Lab, Europe’s first education technology accelerator and advised Level 39, technology incubator based in Canary Wharf. Joysy is passionate about education, entrepreneurship and women’s empowerment. She helped launch three non-profits focused on education. She founded Founders Fit to help startup leaders find the right cofounders.

SUMMARY OF EVIDENCE

Nesta, a global innovation foundation, has published “Educ-AI-tion rebooted?”. This report explores the future of AI in education and focuses on the questions posed by the APPG on AI.

Question 1: How can AI be used as a ‘tool’ in different learning environments and across diverse subjects?

AI tools in education exist and are already being used by a small number of our schools, colleges and universities in three main categories:

- Learner-facing (eg. adaptive learning platforms)
- Teacher-facing (eg. automated assessment tools)
- System-facing tools (eg. tools to learn about the performance of our school system as a whole).

Our research found many more learner-facing tools than teacher-facing or system-facing tools.
Question 2: What is the effect on the student experience? What is the effect on a teacher?

AI is well placed to help tackle five stubborn challenges in education that affect the experience of students and teachers:

1. Excessive workload.
2. ‘One-size-fits-all’ learning, with inflexible pathways.
4. Difficulty of sharing insights between schools and colleges.
5. Inconsistency of education provision and low social mobility.

AI also presents potential challenges around issues such as bias, transparency and privacy, and teachers need training and support to help them have the skills and confidence to work with AI tools and other educational technologies.

Question 3: How can it impact assessment

Artificial intelligence is changing how we assess, for example, automating complex assessment offers the opportunity for more continuous assessment without additional burden on teachers, which may lead to the end of exams as we know them.

Artificial intelligence tools can also change what we assess by broadening the skills and aptitudes that can be tested across large numbers of students. For example, Edulai, a tool being piloted in the higher education sector, uses AI to assess skills such as critical thinking, problem solving and communication.

As well as assessing students there is also a potential role for AI in assessing the education system as a whole by dramatically broadening the range of what can be assessed at scale. To ensure that this empowers rather than controls assessment data must be treated responsibly and be combined with the insights of humans.

Key recommendations (see report for full recommendations)

- Public funding for AIEd R&D through Innovate UK, prioritising teacher-facing and system-facing tools, and funding to help growth and adoption of the most promising AIEd tools in UK schools.
- Government should help form an EdTech test-bed to enable companies to test AIEd in real settings and support closer collaboration between schools and colleges, AIEd companies and research.
- A clear point of government leadership for AI in education and a publicly declared government ambition to create a system of responsible education data sharing by 2030.
- Public bodies responsible for exams across the UK should launch a challenge prize around the use of AI in assessment.