Science Minister outlines the UK's world-leading role in EdTech

Good morning, everyone, and welcome to Bett 2020. It's an honour to be here this morning to open this event, which showcases the very best that the EdTech industry has to offer, at a time when education sectors all over the world are trying to seize the opportunities of a technology revolution. Right here, under this magnificent ExCel roof, you can find all the latest digital tools, software and devices that are transforming classrooms across the world.

There are robots, I understand, that pupils themselves can build, code and instruct. Scanning pens that read books out loud, to help children overcome reading difficulties, and electronic textbooks that follow a pupil's progress over computer, phone and tablet. It's a great opportunity to sample new products, whether you're a teacher, a school leader or an innovator. I hear there's even an escape room, which you can try, if you dare. I haven't had a chance to this morning, but I've challenged my department's Permanent Secretary, Jonathan Slater, to have a crack later this week, so we'll see how he gets on. Hopefully he will be able to escape!

I have the enormous privilege of opening this event at a vastly exciting time—both for the industry, and for the UK as a whole. This country is proud to be a world leader in this sector, with investments in the UK tech industry placing us 4th globally, behind only the U.S., China and India. And as the Secretary of State reiterated at the Education World Forum on Monday, which I'm sure many of you attended, we intend to continue this international leadership when the UK leaves the EU in just over a week's time.

For us, Brexit represents an opportunity: a new era of global collaboration. We'll be looking to forge even closer ties with partners across the world in all areas. But especially in EdTech, so that we can learn from each other and drive innovation forward everywhere.

But first, let me talk a bit about what we're doing in the UK to support both the industry and the education sector.

This time last year, our previous Education Secretary stood on this very stage and outlined the government's overall vision for EdTech. That vision was formalised in the publication of the EdTech Strategy, which the Department published in April.

The vision and indeed the mandate of the EdTech Strategy is as important today as it was a year ago, and our main aims remain the same: to support better use of technology where it helps teachers, school leaders and pupils, and to make sure that technology helps lift the administrative burden on our teachers, vitally not to add to it.

And we made a number of specific pledges as part of the EdTech strategy.

So, a year on, how are we getting on?

We said we'd push ahead with connecting more schools to full-fibre internet connectivity. And we have. Aiming for a target of getting everyone on a gigabit capable connection by the end of 2025, we are working with local authorities, trusts and schools to fund the installation of new full-fibre internet connections in approximately 1,700 schools across the UK—hundreds of which are to some of the most difficult to reach, rural parts of the nation.

We said we'd focus on building the capability and skills of educators. And again, we have. Over the past year, 4,500 education professionals have been able to access free online courses produced by our partner the Chartered College of Teaching. If you're an educator here today, listening, I encourage you to do the same and benefit from this year's next round of free courses.

We said we'd seek out those schools and colleges that are already excelling in EdTech and help spread their knowledge through a demonstrator network. I'm delighted to announce today that we have now appointed a consortium to lead that network, made up of the London Grid for Learning, the Education Foundation and the Sheffield Institute of Education. As a result, the demonstrator programme will now benefit from some of the best EdTech minds in the country, who will help schools and colleges navigate new tech that could help them reduce teacher workload and support teachers and pupils alike.

We said we'd support and nourish innovators—the people who are trying to push the boundaries in EdTech, who come up with new and sometimes unusual, remarkable ideas.

So, in 2019, working in partnership with Nesta, we launched innovation fund competitions for technology that is paving the way when it comes to assessment, essay marking, timetabling and parental engagement, in a drive to improve the workload and effectiveness of these areas of work. Nesta have already announced the winners of the first round, and they include what I believe are some really great products.

Like Pobble, an online platform that allows teachers and pupils to view real examples of other children's handwritten work, to help teach writing at primary school. Pobble are here today, so go take a look at their stall if you have time. First Pass was another winner, developed by Bolton College, which I had the opportunity of visiting just last week, and which uses AI to analyse students' questions and offer real-time feedback when they need it.

I know from my own personal experience as the United Kingdom's Higher Education Minister how technology is transforming the university experience, too. During my regular visits to university campuses, it's been great to see how universities are using the best of British innovation to really grasp the breadth of opportunity of EdTech. Whether that's the use of virtual and augmented reality in teaching, or indeed software that helps better care for their students.

Nottingham Trent university, for example, are already making use of a wellbeing dashboard, which can be used to help spot students who may be

struggling in the new environment, and who may be at risk of dropping out altogether. That kind of technology could make a real difference to a student's future– helping them avoid a decision that could impact negatively on the rest of their lives. If technology like the wellbeing dashboard saves just one student from dropping out when they shouldn't, it will have helped, I believe, demonstrate EdTech's worth.

Again, the government has also begun to invest in a number of similar products. Last year, we supported the launch of two pioneering digital tools that help prospective university students make informed choices as they consider which institution to attend. One, called ThinkUni, is a personalised digital assistant that pulls together data on universities, courses and their financial outcomes. The second is a game called, TheWayUP!, which simulates different real-life graduate paths for students according to the choices they make in its virtual world.

Those are just some of the EdTech products that are transforming British classrooms and British lecture halls, and they show the great progress we're making here in the UK.

However, I also believe that the challenges we are trying to tackle with EdTech in this country aren't unique to us. They are the same challenges that teachers and students face in classrooms, and staffrooms, and lecture halls worldwide. Challenges like workload, or challenges like cheating.

So I'd like to talk a bit about what we're doing on the global EdTech scene, and how we intend to strengthen our international partnerships so that we can all tackle these challenges together.

Those efforts form part of the UK's broader International Education Strategy, which was also published last spring, and which sets out our ambition to increase international activity across all our education sectors–by increasing the value of our education exports and promoting the UK's reputation for excellence in education.

I believe that EdTech can play a fundamental role in increasing the profile of UK education abroad, and that's why some of the EdTech goals feature so prominently as part of our International Education Strategy, and will continue to do so as we look to refresh the strategy for the future.

So what are we doing to tackle EdTech's global challenges?

Well, I talked about cheating earlier. Take the use of essay mills, which have the potential to undermine the integrity of Higher Education across the world.

We have started to play a role in tackling this threat. I'm pleased to report that our universities are now forming partnerships with international software developers like Turnitin to develop and trial new plagiarism detection software that will help beat the cheats worldwide.

In other areas, UK innovators aren't simply partners; they themselves are the world leaders. Take University College London's EDUCATE programme, which I'm

sure many people here will already be familiar with. EDUCATE has worked tirelessly over the past three years to support the development of 270 EdTech companies in the UK. And now they've decided to go global. Over the next 12 months UCL EDUCATE will begin franchising their mentoring and consultancy programme to a number of international universities, like CY Cergy Paris University. As they do so, they themselves will be building an impressive new digital EdTech support community that I believe will benefit everyone involved.

Likewise, the government's EdTech testbed programme, developed in partnership with Nesta, is attracting worldwide attention. The first wave of the testbed, launched with Durham University, will match schools and colleges with leading EdTech products created to tackle specific educational challenges, like homework marking, or parental engagement.

The testbed will not only help schools and colleges understand what technology works within its given context, but will also support EdTech companies to better design their products in ways that meet the needs of teachers and students—so that it works both ways and has that positive feedback mechanism built into it. We've already had questions from countries as far and wide as Qatar and Italy about the project.

However, we think that our testbeds can and should go even further. That's why I'm pleased to announce today that in 2020 we intend to achieve a world-first, and develop a new Assistive Technology testbed aimed at transforming learning for pupils with special educational needs and disability. The testbed will help identify technologies that can help remove barriers for these pupils, allowing them to access the curriculum in ways that simply weren't previously possible.

Harnessing the power of modern technology can help us change and transform lives and unlock the potential of every child.

With technological advances happening at increasingly breakneck speed, it is only right that we ride the wave so pupils in our classrooms with special educational needs are given all the support they need and deserve.

We're sure that the Assistive Technology testbed is likely to generate just as much global interest as the first wave, and we look forward to working with other countries to help all students access a world-class education, no matter what obstacles they face.

Which brings me on to the great promise of modern technology, which is above all its capacity to tear down boundaries and bring us all, no matter which country we come from, closer together, regardless of who we are or where we're from. Those boundaries can be within the UK. But they can also be further afield.

That's why the UK government is collaborating internationally to use technology to boost education in some of the most marginalised communities in the world.

My colleagues in the Department for International Development have themselves been pioneering the use of EdTech to help improve the core numeracy and literacy skills of young people in some of those communities—like in northern Nigeria, for example, where our Teacher Development Programme gives schools access to a mobile phone app that offers advice, support and free classroom materials.

We want to make sure we're helping these communities in the best way we can, which is why in June this government announced £20 million of funding over eight years to form a global "what works" EdTech Hub. And we've joined forces with the World Bank, British universities, researchers and global education experts to create this hub, which forms the largest ever EdTech research and innovation project. Today I am also delighted to announce that the Gates Foundation will be joining the leadership of this exciting global initiative. And we will look to launch this later this year.

The team has a stand in the cross-government section, so again, go and have a chat with them if you'd like to find out more about this amazing project.

So, as you can see, the UK is doing a number of things on a variety of different levels to lead on the world stage—and to forge ever closer ties with other countries so that we can make the most of the technological revolution together.

What about the future, though? The UK intends to keep its place at the top table of EdTech, and to do that, we plan to focus on two key areas of investment in the coming years. First, we are investing significantly to fund the next generation of digital innovators in this country—starting at the very beginning in our classrooms.

At the school level, we've put more than £80 million to create the National Centre for Computing Education, to improve the quality of computing teaching across England and to encourage more girls to take the subject. In fact, no government has ever put more money into a single national computing programme, and we're aiming for no less than to make computer science the fastest growing subject in England.

And on the college level, we've established the National College of Digital Skills, better known as Ada. Ada is named, as I'm sure you're aware, after Ada Lovelace, the mathematics and computing trailblazer, and will provide young people with the skills they need—and, crucially, the skills that employers actually want—in the future, for a wide range of digital careers.

We have also started to open the first 12 Institutes of Technology (IoTs), backed by £170m of government funding, to offer higher technical education in key sectors including digital. The South Central IoT in Milton Keynes, for example, will focus specifically on cyber security, fintech, digital and ICT. We're also tackling the higher level digital skills gap through our Institute of Coding, a consortium made up of more than 60 universities, businesses and industry experts.

Together, those measures should help create an army of new digital innovators

and entrepreneurs.

But what about the cutting-edge businesses and start-ups who have already made the UK's digital tech sector the strongest in Europe? There are countless such businesses here today, flying the British flag, and our second focus of investment must be on them.

This country's tech sector is already in a very healthy place. But we want the UK to be an undisputed global science and research superpower. So we have pledged to massively boost public research and development investment, with a commitment to reach 2.4 percent of GDP, both public and private, spent on R&D by 2027. We're also going to double Government investment in R&D. We'll use some of that money to invest strategically in cutting-edge science and fund high-risk, high-reward research, and we'll also look to reduce bureaucracy for our best scientists, innovators and entrepreneurs.

We continue to support start-ups and other innovative tech-led businesses through a range of grants, innovation loans and business development support provided through InnovateUK. And we're ensuring these businesses can access the finance they need to grow, through our investment in the British Business Bank.

All in all, this increased investment and support should ensure the UK remains one of the best places to start and grow all types of digital tech businesses—including, of course, leading EdTech businesses. So if you're a budding innovator with dreams of creating VR software that can transform a history classroom into a medieval castle or even an Egyptian tomb, you have a welcome home here. Or, if you're an entrepreneur who's had a eureka moment about EdTech, and how it can be used to reduce teacher workload, you have the environment to put that idea into practice, right here in the UK.

The future looks bright, then, both for the UK and the EdTech industry as a whole. And, as I have outlined, it will be even brighter if we can work together in partnership to serve the teachers, the school leaders, but above all to serve students, who must be at the heart of our schools. Some of those teachers and school leaders will be in this audience, so let me call on you too to share your own learning and experiences, both here at Bett and over the coming years, so that we can realise technology's full potential.

Thank you very much.