

Education Committee

Oral evidence: [The use of Artificial Intelligence and EdTech in Education](#), HC 151

Tuesday 20 October 2026

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[Watch the meeting](#)

Members present: Helen Hayes (Chair); Jess Asato; Sureena Brackenridge; Jodie Gosling; Manuela Perteghella; Mark Sowards; Peter Swallow; Caroline Voaden.

Science and Technology Committee member present: Dr Allison Gardner.

Questions 81 - 122

Witnesses

[I](#): Professor Jenny Gibson, Professor of Neurodiversity and Developmental Psychology at University of Cambridge; Neil Leitch OBE, CEO at Early Years Alliance; Richard Waite, Founder and Digital Pedagogy Consultant at Waite.EYTS.

[II](#): Dr Mhairi Aitken, Director and Co-founder at Our AI Collective CIC; Professor Sandra Leaton Gray, Professor of Education Futures at UCL Institute of Education; Meg Moss, Head of Public Affairs & Advocacy at National Counselling and Psychotherapy Society (NCPS); and Professor Sarah-Jayne Blakemore, Professor of Psychology and Cognitive Neuroscience at University of Cambridge.

Examination of witnesses

Witnesses: Professor Jenny Gibson, Neil Leitch, and Richard Waite.

Q81 **Chair:** Good morning and welcome to this oral evidence session of the Education Select Committee. This morning, we are taking evidence on our inquiry into AI and edtech, thinking about the role and the impact of AI and edtech on the early years phase of education.

I thank our witnesses very much to for being here with us this morning. Can I ask each of you to introduce yourselves to the Committee, please, starting with Neil Leitch?

Neil Leitch: I am Neil Leitch, the chief executive of an organisation called the Early Years Alliance. We represent around 18,000 members and supporters, predominantly nursery groups and pre-schools, but some child minders as well.

The one thing that I would say is fairly unique about us as a membership organisation is that we also operate 28 settings exclusively in areas of deprivation, so I would like to think that we witness at first hand some of the wonders and the challenges of early years.

Professor Gibson: Hi everyone, I am Jenny Gibson, Professor of Neurodiversity and Developmental Psychology at the University of Cambridge. My expertise is in early childhood, particularly focusing on early language and communication development and children's social and emotional wellbeing.

Richard Waite: My name is Richard Waite. I am an early years digital pedagogy and digital safeguarding consultant. My background is that I have been NNEB trained since 1986, so I have just under 40 years' experience in early years, and I have gone from working in settings as management to support office for a large nursery group, and now I support nurseries as an adviser.

Q82 **Chair:** Thank you all very much indeed. I am going to begin our questioning this morning. First of all, could you describe the overall impact that AI and educational technology is currently having on the early years sector? Neil, I might start with you if that is okay.

Neil Leitch: From our perspective, particularly post-pandemic, we started to see more and more children arrive in our settings with social and emotional development delays. When you speak to providers and managers, they particularly quote AI and edtech as being one of the problems that they have. What is interesting is that, still to this day, we experience that. To put it bluntly, I wish I had £1 for every manager that has said to me that they had to spend their day pacifying staff who had been kicked, bitten, hair pulled, and so on, by children who are not socially and emotionally developed.

I will be very quick with this, but to put it into a very practical position, from January through to September we have recorded 43 accidents of staff in our 28 nurseries; 19 of those incidents related to children biting, kicking, throwing objects, scratching, pulling hair of staff, and so on. That is not even child on child. That is on adults. I would say that the big concern we have is basically child development, and children's ability to socialise because of AI, edtech and, dare I say, sedentary lifestyles.

Chair: Thank you. Professor Gibson?

Professor Gibson: We have done some research in our research centre recently looking at the impact of AI-enabled toys. This is where there is a generative AI chatbot embedded in something that is cuddly looking, designed for children and marketed to under-fives. We were quite concerned about these kinds of developments, and we did some research that looked at the interactions of these toys with young children, and we sought parents' views and educator views as well.

Particularly for the early years sector, people working as nursery practitioners or others in the sector told us that they were quite concerned about impacts of generative AI. They felt they did not have the

knowledge and skills they needed, and they did not necessarily know where to turn for support or advice. On the educator side, there is a lot of uncertainty and quite a bit of worry.

On the parent and child side of things, we are seeing that it is ubiquitous. There is so much quick development in this area. From what we saw in this very initial study, very little research has been done on the impacts of generative AI on young children's development that sits outside the tech development sector. We lack evidence of what impacts on child development. From the observational work that we have done so far, we did see that generative AI toy interactions were not particularly well calibrated to what we know is good and important for young children's development. We have big social change happening and at the moment we do not necessarily have the evidence to know what exactly the impact is on children.

Chair: Thank you very much. Richard, what are you seeing at the moment?

Richard Waite: At the moment—thinking about day-to-day and boots on the ground—among the staff concerns that Neil has spoken about, it is the struggle with staffing, recruitment and getting the right type of staffing, these kinds of issues. Technology in early years has already been seen as an issue because most early years people, if you say the word "technology", they immediately jump to the conclusion that you are going to talk about screen time.

If I am trying to deliver a workshop on technology, nine out of 10 people will not come to my workshop because they do not realise what I am actually talking about. They will think I am going to talk to them about tablets or whatever, so that is an issue and a big concern because screen time is across the media, social media, parent groups all talking about it.

It puts pressures on nurseries because they are thinking about that and now AI has impacted more. It has added to the mix. You not only have screen time, but you also have AI. Because of recent events in early years—even looking at cyber-security—there is this massive cloud of information that nurseries were just not prepared for. A nursery manager or an educator does not go in having knowledge about AI, cyber-security and screen time. When a manager is coming into a nursery at 7.30 in the morning and they have staff that have called in sick, the chef is not turning up—all these issues coming in—the last thing they are probably going to think about is AI, cyber-security and screen time.

Q83 **Chair:** Thank you very much. You have talked about the influence of AI from outside the setting. What types of educational technology are currently being used in early years settings? Is there any framework for that in terms of decision making and procurement in the early years, or any evidence base that underpins it that you are aware of? Again, I will start with Neil.

Neil Leitch: I am not sure there is a framework. It is very much an "introduce and test later" sort of approach that we are seeing at this point in time.

Within early years settings, I would say that it is used at the moment predominantly for administration, and it is fair to say that many educators value that. The problem that we have is it does not articulate any nuance whatsoever in terms of sensitivity. We are starting to see generated reports for example, that are very clinical. They do not basically take into account the nuance of a child's personal attributes, and so on.

The other thing that we are starting to see is a plethora of AI generated correspondence from parents, whether that be complaints or otherwise. It has just meant a massive overload for early years educators. The response that they give, unlike maybe 10 years ago, which was to sit down and talk with a parent, now becomes a legal document predominantly generated by AI. That is where I would say it is generally being used.

That is not to say that we have not used it particularly within our settings to support speech and language, for example. There are some good products, but there are some awful products as well. I find it really interesting—to give an example—that if you were developing a piece of medical equipment for a hospital, it would be assumed that you would understand the consequences of that machine failing or the clinical steps that need to be taken subsequently. However, when it comes to edtech, for example, nothing. We just take it for granted that it is in the best interests of a child.

There are some very good manufacturers and producers of edtech equipment, so this is not about everybody, but we are also seeing a plethora of poorly constructed equipment being produced with no consideration for a child's social and emotional development. That is a big concern, so what we are seeing is educators reluctant to use kit at this time. To take Richard's point, their support and training is almost non-existent. They are very, very fearful. When you are fearful, you avoid. That is what has happened at this particular point in time.

Chair: Thank you. Professor Gibson?

Professor Gibson: I do not know of any frameworks in place around edtech governance. Obviously, though, we do have a lot of regulation around child protection and child support. I do think that early years' educators know what is good for children in terms of social and emotional development because of the professional training that many early years sector people have.

We perhaps need to do a bit of confidence building that actually you know what is good for children in terms of their social development, the things that you might do with them, and then apply that to technology to say, "Is this supporting the human back and forth interactions that children need to develop and grow?" I think early years educators do have that set of expertise, and I think support for them to translate that into practice with edtech is interesting.

I have seen technology mainly applied for planning sessions and things like that. From my observation, it is more educator facing than child

facing. I have seen things like Alexa being used in nurseries, and I think it is interesting that, because of the ubiquitous nature of these kinds of technologies, it is not always easy to disentangle whether or not this has a generative AI component. I think in some cases, people are using AI unawares.

Richard Waite: I think technology as a whole in the sector because people have become scared of the idea that it is screen time. When I worked in the last chain, I was supporting 310 nurseries and I was looking at integrating technology tools into nursery settings, from coding devices to digital microscopes, all these sorts of things. This is where there is a gap in the understanding that there are non-digital as well as digital tech resources.

The word “edtech” may work in schools, but I think in early years I prefer the term “digital pedagogy” because if you put “pedagogy” in there, sometimes there is more of an interest in, “Okay, digital pedagogy is to help with that”, because then we are making sure the pedagogy is there. “Edtech” does not really tell you that there is learning from such resources.

I support and work with a few companies that produce some very good non-digital plus digital tools, but due to the lack of knowledge and the fear in settings, their choice is, “We just will not bother. We will not get it in because the hassle of having to learn it and just figuring it all out, it is just too much for the sector at the moment,” so most of the time they are staying away.

Digital pedagogy was introduced in the “Birth to 5 Matters: non-statutory guidance for the EYFS”, 2nd edition. I was actually on the working group for that. There was a need to put that in there because, as Neil said earlier, you cannot put the genie back in the bottle. We are in a digital age. Children are exposed to technology every day, from washing machines to microwaves and mobile phones. We cannot put it back, so we have to better prepare them for the future that they are facing.

Q84 **Chair:** Thank you. Finally from me, before I pass on to other members: do you think that the Government have fully grasped the scale of the impacts of this technology on the early years sector, and what further action do you think the Government should take to support the sector in navigating these very significant changes that you have all articulated really well? I will start with Neil.

Neil Leitch: I do not think they have. I find it really interesting that, when we are looking at safeguarding, if there is a physical connection, the Government are always very quick to respond. I understand that, whether that is about safer sleeping practices, eating, and so on. However, there is nothing when it comes to the emotional safeguarding of children that is in place.

I come back to the point, Chair, that our staff are greatly concerned that there is no support whatsoever. They don’t know how to deal with AI. They don’t know how to deal with the consequences when things go wrong. For example, I am amazed and appalled—this is not necessarily

just in early years, but it moves into maybe further education—at the number of educators who don't understand the pressures that children are being placed under from external influences. Their response, predominantly in the school environment, has been to exclude whatever it happens to be rather than understand. They are almost ignorant of what has led to this.

I am appalled by people who constantly say our children are less resilient; they are living in a different world. The Government need to ensure that educators are supported in not just understanding IT, but understanding children who are on the end of it, because that is not the case as it stands.

Professor Gibson: My view is that there could be more understanding and integration across sectors. The distinction between health and education in the early years is somewhat arbitrary. Services that support children and babies from a very young age, including social services, health visiting and so on, are part of that early education landscape because children are learning, and the home learning environment is very important and that might sit outside traditional educational settings.

It is important to encourage joint working and thinking, and I guess cross-sector responsibility as well. Top-down government regulation is not going to solve this. It is about taking some ownership as well as being part of those professions, and parents and families have all got a part to play.

Thinking about government regulation, I do think psychological safety should be an important part of product safety standards. I think there needs to be more exploration of that, particularly thinking about toys that are coming in with generative AI capabilities. One of the biggest risks there is the friendship-affirming nature of interactions that generative AI has, which might be acting at a time when children are particularly developmentally vulnerable, so I think product regulation with a view to safety is important in this early years picture.

The other thing I want to say is that I am glad we are here talking about the early years. It is often missing from these conversations, so I think keeping this sector part of conversations about educational technology is really important too.

Richard Waite: I want to share a survey Tapestry that did this year, which found that 46% of workplaces are using AI, 31% have AI guidance, but only 21% of settings have training. Training and CPD is the big thing for me; it has been a big thing for a long time. I have been in and out of nurseries for over three decades. I see the lack of support in terms of training and development for educators: we have apprentices coming in who are supposedly going to be our future educators who have had no training in their apprenticeship on AI, edtech or digital pedagogy, or cyber-security. So where do they get it from?

If they are doing their level twos, level threes or their apprenticeships and none of those three things is being discussed, they are being thrown into the lion's den, basically, of all this with information overload. Where

is the support? A 30-minute webinar or a staff meeting at the end of the day, when you are absolutely drained from running around after however many hundreds of children? I think they need some space; something needs to be done to allow educators to get proper support and training, and for the leaders as well. Managers and owners also need training.

Chair: Thank you very much. I am going to go to Peter Swallow next.

- Q85 **Peter Swallow:** Professor Gibson, in your earlier answers, you identified your concerns about young people and young children's learning and development. Could you set out in a little bit more detail what specifically you are concerned about? Is it their communication and language skills, their social and emotional development? What specific risks are there to young children's development from AI and edtech?

Professor Gibson: Thanks for the question. One of the things that parents seemed excited about in our research is that, unlike some perceptions of screen time as being quite passive edtech, generative AI gives this possibility of a back-and-forth conversation. We have done a lot of work over the years in developmental psychology showing that those back-and-forth interactions are really the essence of young children's development. Those early social relationships and bonds are the basis of later language and cognitive development, so they are absolutely critical.

What is worrying, when you are replacing a human in those interactive relationships, is that you are potentially missing that sensitivity. If you have, let's say, a generative AI toy that will always tell you that you are right or tell you that it is a friend and you can tell it secrets, it is really quite worrying in terms of what the disruption in those reciprocal human relationships could be.

That is not to say that it would be impossible to produce a product that was more positive in terms of those relationships and interactions, but at the moment I think they are not at the heart of this development. What if we had products that supported perhaps bringing the adult into those interactions? We have seen some research—for example, from the University of Sheffield—where digital parenting interventions can really support parents in that back and forth with their child and supports their early language development. If we had AI products that could support that in a sensitive way, I would be really positive about it, but at the moment, we are not seeing products that are well calibrated to the social need that children have.

- Q86 **Peter Swallow:** Without wanting to put words into your mouth, if I can summarise, the advantages that we might see in communication and language development come at a potential cost to social and emotional development; is that essentially what you are saying?

Professor Gibson: I think it would be premature to talk about any advantages yet. I have not seen a product that really convinces me of that, but potentially yes.

- Q87 **Peter Swallow:** Mr Leitch, you mentioned that you were very concerned

about children's emotional development as well. What safeguards would you like to see put in place to make sure that we are protecting very young children from these risks?

Neil Leitch: I think that if we have product development and we have a body that regulates that product development, then exactly the same should apply for edtech and AI. Those organisations should be accountable to a learned body that understands the impact of their product. That would be at least a starting point.

I also think it is really important to understand that our educators are not completely led by AI as well. If I could just give a very quick example—it goes back a couple of years, but please bear with me. We had a mother come into one of our nurseries to collect her child, around 4 pm, and she was inebriated. She told the manager that that morning her partner of many, many years had walked out and told her that he had two children by another woman.

The manager recognised that this was not the normal practice of this particular woman. I took that scenario last night and I typed it into AI and said, "What should the educator do?" It came back with the most insensitive, inhumane process that individuals should follow, including involving the police and other agencies, and so on. What the manager did was she took the child, she took the mother, she went home with them in the evening and she sat there until 6 o'clock in the morning, until the mother came round basically, because she knew it was a one-off incident.

My concern is that if we follow AI and technology to the letter or if educators do, and they lose the human touch. Product development should also understand that element when it is being designed.

Q88 Peter Swallow: Thank you. Mr Waite, you mentioned that you have seen some really concerning uses of edtech and edtech tools and also some really exciting ones. What do you see as the greatest potential for these technologies to support positive development and improve outcomes?

Richard Waite: For early years, I think a bit like screen time, where there is a limit, I think we absolutely have to have a limit on it. To be fair, I do not particularly want to see AI generated toys in nursery settings, because the value of our educators and what they deliver to the children and that personal human contact is the most essential thing. I do not want children in nurseries sitting there talking to a cuddly teddy bear telling them that they are great.

I think the parents at home need a bit of support in terms of understanding if they are buying these things that they need to really check. Do not buy something from an online catalogue, basically, if you have not properly checked it out. There are some good resources out there that I have looked at, but few and far between, so I do not want that.

On technology, I support the forest school approach. I support all types of nurseries. I still believe in the three I's—intent, implementation, and impact. What is the intent? If you are bringing a resource—and it could

be sand, water or Play-Doh—why are you bringing that into a learning experience today? Educators need to think about that first. How are you going to deliver it? Twenty children around a Bee-Bot is not going to happen, is it? With a Bee-Bot only one person can use it at any one time. Therefore, how do you implement it?

Groups of children in an enabling environment—what is the environment to introduce these things? Then the impact is what is left—the observations, the assessment, and the next steps for the child. My view is do not bring edtech into—I do not even like edtech, sorry—but do not bring digital resources into nursery just for the sake of it, just because it looks good on your brochure or whatever. What are you doing with it?

When I deliver learning experiences, I use the STEAM approach: science, technology, engineering, arts, and maths. It makes the educator think about what the resource is. Think about the education first and then how the resource supports it. Technology is a tool, just like sand, water, and Play-Doh, as far as I am concerned. Once it is treated and respected in that way and not seen as something scary, it can have real benefits.

- Q89 **Peter Swallow:** When members of this Committee visited Estonia, and early years settings in Estonia, we saw exactly that. We saw children being introduced to technology through hands-on play-based activities, often without screens, and with practitioners actively guiding the learning, including one-to-one interactions. That seems to me exactly what you are talking about, but it also seems to me that you are suggesting that in many settings in the UK we are very far from that at the moment. Is that fair?

Richard Waite: I think we are really far away from it. We are really far away, because we are still at a phase where people are scared of it. People are worried about bringing it in and about what the consequences might be. They are seeing things on the news. They are seeing things on social media.

The Government have brought out screen time guidance for parents. They have also brought out screen time guidance for settings. Yet last week BBC news was again going on about screens. Sometimes it is almost like parent bashing and when the parents are being bashed, they are coming in and bashing the educators, saying things like, “We don’t want this in here. We have just seen it on the news. It is really bad.” I think this is the issue. We have to change the narrative. The narrative needs to change, and I think we need help from the Government to change that narrative.

- Q90 **Peter Swallow:** Mr Leitch, are your members looking at what is going on in Estonia and elsewhere and learning from how they are applying technology with a pedagogical underpinning in early year settings?

Neil Leitch: I would suggest that they are not. I would suggest, alongside Richard’s comments, that at the moment fear overtakes everything else. Obviously screen time is incredibly prominent, and so on, so they are avoiding learning elsewhere and even the use of technology beyond administration. As I have alluded to previously, it is used within

administration but I think they are incredibly fearful about engagement with children.

One interesting thing came up in speaking to Laurence Taylor, who is the counter terrorism commissioner. We were talking about why it was that early years educators are reluctant. He said it is because there is a plethora of AI and technology that is absolutely awful. He quoted, for example that it is legal in this country for a child to play a game that simulates the shootings in Christchurch. We can do that. I think that speaks volumes about the protection that we have for children at this time. Therefore educators are nervous, nervous, nervous.

- Q91 **Peter Swallow:** Professor Gibson, a final question from me. The reception baseline assessment can involve young children interacting with digital technology shortly after starting school, but, as we have heard, there is this very real fear, including, as Mr Waite alluded to, coming from parents who are concerned about the amount of edtech and technology in the classroom, sometimes seeming to counter all of the very real concerns that we have been talking about this morning. How should the Government balance the educational benefits of using technology in assessment with these concerns about limiting the use of screen time, limiting the exposure to harmful forms of technology?

Professor Gibson: A great question. I do not know of any evidence to support what that balance should be. I think you can think about general principles of what we want children to learn—those skills of critical appraisal, human connection and what has been called 21st century skills—working in teams, collaborating, and of course not being frightened of technology and being able to critically appraise it.

I do think it is important that children are exposed to technologies and they have those conversations about when, how, and how much and does it have a mind and what can it do and what can it not do. It has to be part of a broader approach to pedagogy that involves dialogue and helping children and also educators to build that critical skill.

In international examples, in Hong Kong they have an interesting implementation of AI literacy through games and engagement with these kinds of things associated with pedagogical goals around the technology itself. I think we absolutely do need that tech to be there, but as Richard said it needs to be used in that intentional way.

Peter Swallow: Thank you very much.

- Q92 **Chair:** Can I ask a supplementary question, particularly on the reception baseline test?

I have heard examples in recent weeks of a parent saying to me, "I told my son to say, 'I am not going to do it because we don't do screens in our house'". Another parent said, "My child just does not know how to do anything on a screen because I have kept them away from it." Do you think there is a contradiction at the moment between the Government's purposeful introduction of screen-based baseline testing in reception and the messages that parents and educators in the early years are receiving

about children's interaction with screens?

Professor Gibson: I do not think so. It is important that technology is a part of our processes. Maybe my colleagues might disagree with me on that, but I do not think it is unreasonable. Those data are really important for understanding educational added value and the trajectories of young children going through, and understanding educational achievement in this country. That is really important, so that is the value of that data.

We also have to think about the counterfactual in terms of getting children to perhaps sit pen and paper tests or activities and the feasibility of that, so I would be cautious. The message around screen time is very hard to nuance, because people tend to see it as an all-or-nothing issue, but when it's interactive and used purposefully, certain technologies do have a place in the early years and can play a positive role.

Of course, if there are children who perhaps have not been exposed to technologies, that is a pedagogical question for teachers and local authorities administering those tests. We might want to think about how we support settings and support children to take it, but I certainly would not be throwing it out yet.

Neil Leitch: Despite the fact that I said that, particularly throughout the pandemic, when parents were trying to hold down jobs and also support their children and so on, it should be no surprise that they reached for technology, screens, and so on. What I think has started to happen is that the messaging—not just from the Government but from elsewhere—has started to make the parents feel like they are awful in many instances. They have almost gone from a binary position of, "Yes, you can access," to, "No, you can't," and that is incredibly unhelpful. We should learn to understand the pressures.

I spoke earlier about the pressures on young children living in a different world. That is exactly the same for parents. I was asked by the chief executive of one of our largest supermarkets a little while ago—a few years ago, actually, to be fair—if I would talk to their annual conference on early years, and I said, "What about?" He said, "How we can get more parents, mums predominantly, back into the working environment?" I said that it was odd, but that I would speak to them. I spoke to 42 parents—all mums. Every single one of them said that they were rushed back to work. They felt under pressure. They talked about how they were the ones getting up at 5.30, 6 o'clock in the morning, making the packed lunches for the children or whatever it happened to be, doing a full day's job, coming back in the evening and still preparing the meal. They said they would spend an hour, perhaps no more, with their child, predominantly in the bath, and they would buy them more sweets and more toys.

That is a long-winded way of saying that we really have to understand the pressures on parents. As well as supporting children within early years settings, it is probably more important that we support parents at home to understand the benefits and the risks, because it is here. But they are under pressure.

Chair: Thank you. In the interests of time, I am going to move us on to Mark now.

- Q93 **Mark Sowards:** A couple of questions from me about inclusion and closing development gaps with AI and edtech. Understandably, you will know that we focused a lot in our previous inquiries on SEND and improving SEND provision. Obviously, it is a big focus for the DFE as well. There is very limited evidence out there that states that AI and edtech can be used to close these development gaps, but what written evidence we have been able to find is quite optimistic about it. How optimistic should we be that we can use AI and edtech to close development gaps, particularly for children with SEND or additional learning needs? What sort of opportunities should we be looking for to make sure we take advantage of this? I am happy to start with anyone, but I was drawn to Professor Gibson.

Professor Gibson: I think there is a lot of hype out there, to be honest, and I think the evidence is yet to catch up with it. At some point I started to get quite frustrated. I would go to conferences and they would say, "Oh, we are really worried about AI, except for autistic children," based on nothing more than an intuition quite often that this might be helpful. Personally, I would want to see a lot more in terms of well-constructed trials of products that are devised in collaboration with children and families affected by SEND.

What I am optimistic about—if we fantasise a bit more—is profiling and developments if we are perhaps having conversations around the case that provision should be needs led and not diagnosis led. However, it is quite hard to get a nuanced perspective on individual needs, particularly with waiting times being what they are and the complexity of integrating information from different sources for children with additional needs.

I think that AI tools can help with profiling and understanding children's needs, so I am quite optimistic from that point of view, but I would stress that collaborative bit with members of the community, particularly parents and children, being consulted and integrated into part of this development. I think we are a long way off from off-the-shelf products that will be helpful.

- Q94 **Mark Sowards:** Mr Leitch, is there any cause to be optimistic that we can improve inclusion in early years?

Neil Leitch: I need to be hanging on to hope. I feel we should because it is an unknown position at the moment that perhaps there is hope. I would say this. I do not think it is AI and edtech that is driving SEND inclusion. It is, frankly, policy; it is the Government's prioritising of SEND that is driving it, as well as Ofsted looking at it from an inspection position. It is much more of a defensive position for why there is inclusion rather than edtech driving that.

I was in China with the Department for Business and Trade just a few weeks ago, and I saw some really good edtech products that, if used correctly, if monitored, would be supportive of children who have additional needs.

Q95 **Mark Swards:** Any that come to mind right now? Any that we should be aware of?

Neil Leitch: They didn't brand them. It was all very secretive to say the least, but they impressed me. Children with an educator would go through a routine and, effectively, it would identify, "You are pushing this child way beyond what they are capable of at this moment in time." Or alternatively, "Why are you wasting this child's time having to go through routines when actually they want to get on to the next bit? They are curious, they are adventurous," and so on. I suppose that is where I would hold the hope.

Q96 **Mark Swards:** Thank you very much. Mr Waite, is there anything in your working experience that would show some optimism?

Richard Waite: The term "assistive technology" has been around for a long time and there are companies and resources around. I am thinking about large push buttons for children who cannot use a keyboard, a special mouse, a trackball mouse on that side of helping certain children with special educational needs.

My experience is of a child in my nursery who had profound difficulties. When we spoke to the physios and all the people who supported him at a TAC—team around the child—meeting, it was said that he would get good support if he had a tablet in the nursery setting. When I went to the IT department and said, "Can I have a tablet for this child?" they went, "What?" and went straight to the CEO saying, "Mr Waite is requesting a tablet in the nursery setting". I had to explain to the early years department that the reason the professional had requested that he have it was that would support his needs in the nursery setting.

Once I pushed my case forward, we did actually get some funding from the local authority to purchase it, and it was a huge benefit to this particular child. It allowed him to engage with the other children, and allowed him to feel part of the nursery setting. It was important. This is where we have to look at the positives of such things as screen time. Children with various neurodivergences can also benefit.

I have the experience of a child who sometimes cannot handle the nursery classroom. He gets really frustrated, puts his hands over his ears. We take him out. We have an interactive screen. There is a bubble popping game that he likes. He just taps it and the bubble pops, and he laughs and he kind of regulates his behaviour and then we can ask, "Are you ready to go back into the room?" He says, "Absolutely," and he is fine. Therefore, that is how we use it in the right way. We can use it, but I think early years settings do not know how to use edtech or digital right now. This is where the CPD and the support is severely needed.

Mark Swards: Thank you. In the interests of time, I will leave it there.

Chair: Thank you very much, Mark. Manuela.

Q97 **Manuela Perteghella:** We know that developmental and educational attainment gaps emerge before many children even start primary school, and we heard at the beginning of the meeting about school readiness and

the lack of being ready for school. In your opinion, what role, if any, could AI and educational technology play in narrowing these gaps during the early years, or is there a risk that they will have an adverse and harmful effect? I am going to start with Mr Leitch, please.

Neil Leitch: I would say avoid it. I think the most important part of a child's development is their social and emotional development. All the evidence points to the fact that children who are not socially and emotionally developed will struggle to learn. For me, that would be the foundation. Social and emotional development is very much about hands-on attachment, engagement, physical engagement, confidence, and so on. I am not sure that I would want a robot or an AI bot to do something similar. I think to get it right further down the line, secure children right at the beginning, and that is about, dare I say it, the avoidance of AI and edtech.

Professor Gibson: I have a less pessimistic view. There is a role in supporting parents for technologies here. We do not always have to have technologies are child facing in early years. For parents, child minders, others who are engaging with children, having recommendations for activities based on your child's preferences and your families' priorities can be really helpful. It is about knowing what is good for children, which is, of course, those important relationships that we need to nurture, but I think well-designed technology can support that.

Richard Waite: One of the concerns I have is that everyone has some generalisation that technology is replacing play and there are lots of people having face-offs, play versus technology. I have a big concern about that because technology isn't replacing play. It can be used to enhance it. In terms of school readiness, as you know there are concerns about that name anyway. What I am thinking is that if we use the STEAM approach—I do not say STEM because I believe that art has a real place to play in early years. I know the universities might not agree. They prefer STEM. I think you can do coding and other things, critical thinking, learning experiences at nursery level using—there are other devices—a Bee-Bot or something like that to programme. There is a wireless microscope where children can go into the garden and film a plant and what the deeper details of a plant look like. That is exploration and investigation. Who does not want children to have good exploration and investigation and critical thinking? We do not need to wait for them to go into schools to be taught critical thinking, exploration and investigation. It is about the intent.

If the technology is used in the right way and it is the right technology, it absolutely does have a place, and it can be seen by children as play. I am not saying for one minute that we are trying to replace edtech with standard play resources, right? As I said, Play-Doh, Lego, Bricks, whatever, you name it, these are all tools and we use tools to help children learn and develop, and technology is just one of those. We are just not using it properly. As I say, a poor workman blames his tools. We are blaming technology for failings in how it is used in nurseries. It is not the fault of technology; it is the actual lack of training and development.

Neil Leitch: I want to be absolutely clear that I was not suggesting that throughout the entire early years from nought to five that we avoid edtech. I am suggesting that the earliest point of a child's life, where they are developing attachment, social emotional development, is the point where it is critical to touch, and so on. I find it interesting that, even in the DFE's own research, when parents were asked, "What is the most important thing that you find that you want from early years settings?" Number one priority is staff quality. That is people. Number two, kind, friendly and supportive staff, and so on. They are the things that parents want: kind, gentle, thoughtful educators.

If I had a child growing up at this time, and I was putting him into an early years setting, that is the quality I would want right at the beginning, rather than wanting my child to be the brightest spark in the world.

Q98 **Manuela Perteghella:** Thank you. That takes me to my next question because, as you said, early years encompasses children from birth to the age of five. Are there particular ages or stages of development where the use of AI, an attack is more appropriate or where the risks are greater to the child? I am thinking, for example, in the development of fine motor skills, where children learn through using pencils, drawing with certain tools rather than swiping on a screen. Do you have a view on that, Professor Gibson?

Professor Gibson: It is all about having a balanced play diet for young children in the early years. They need to get out. They need to get dirty. They need to be picking up sticks, so they are learning that pencil grip without even knowing it, drawing in the sand, and squishing the Play-Doh. All of that is incredibly important.

Appropriate tech materials can work really well for younger children if they are in balance. That is the nuance that we really need to get. I am not talking about watching short form videos on YouTube, for example. I definitely would not recommend that. It is about finding the things that children can learn, explore and engage with, and bringing in the parents or caregivers as well.

That said, I think we do need to be careful of that very early period in babyhood, in those first critical months of life where that parent-child bonding is particularly important. If anything is disruptive in that period, I would be very, very wary of it. I don't know of any tech product that I would recommend at the moment for a child that age. I would definitely say let's protect early childhood until we absolutely know what might be helpful or harmful. I do think it is a matter of understanding what is good for children, providing a variety of experiences in their earliest years.

Manuela Perteghella: Thank you. Any other comments?

Richard Waite: I agree. Obviously, at the youngest age, I have already said I don't really want AI in settings with children at the moment. The main one at present is smart speakers. When you think of what technology is, it basically is cause and effect. Like a pair of scissors is a form of technology. It is scissors that help you cut paper. In its simplest

form, for babies, we have had Fisher-Price. Other brands are available, but we have had Fisher-Price cause-and-effect toys in nursery settings for a long time. There has been a drive to remove these and we have gone through a phase of nurseries not wanting plastic fantastic. They want all wooden and natural looking things. But cause-and-effect toys have been around for quite a long time. They are just getting a bit more advanced.

I think in pre-school probably I would not expect toddlers to be doing coding, although they can do very basic coding with the right resource; I have done it. If we are getting them ready, as you said, in terms of moving to the next level, when they are going into primary, certain things like coding and certain toys will do that, and maths. When I say the STEAM approach, if you have science, technology, engineering, arts and maths in your thinking when you are doing learning experiences, you can pretty much cover quite a few bases off without thinking, "Oh, we need technology," or "We need this." It is part of the bigger framework, which is why I like STEAM.

Chair: I will go to Jodie. Thank you.

Q99 **Jodie Gosling:** We have covered a range of applications of AI from emotional regulation, potentially improving communication, profiling and of course admin, but what choices do early years providers actually have about whether or how they adopt AI and educational technology?

Neil Leitch: Unfortunately, you addressed that to me first of all.

Jodie Gosling: You reacted first.

Neil Leitch: Okay. I think they have limited choices. In terms of administration, it is fairly straightforward. For example, we train all of our staff on the use of Copilot. We use software, management software that integrates AI in terms of producing development reports, and so on. But we focus predominantly, I suppose, on ensuring that those reports are appropriate, so we don't just take them as read. They are monitored, vetted, and so on.

When it comes to products, I come back to the point that we feel that we are incredibly limited in knowledge of what is good, bad, and indifferent. I am afraid we tend to avoid it at this point in time.

Professor Gibson: To support that, I would recommend, if it were possible, that we would have some sort of product labelling regulation that would help educators to make choices. Failing that, guidelines, and principles about what to look out for in terms of privacy policies, features, and guidance on how to appraise possible risks and benefits.

Richard Waite: So in my experience, I developed what I called a brilliant basics list. The brilliant basics list was a set of resources for the nursery group that I was with that I would recommend that supported various children's development, particularly under the EYFS. I would have the resource, the intention that supports, where it can be supplied and then a small example of how that resource can be used. That is the thing, because you can put a certain toy in front of educators and they have no

idea where to start because they need training. They need to know what that resource does. They need time to play.

When I say to educators, "Play with it," they look at me like, "What do you mean?" They have to play with it, understand it, so that they are able to come up with the right intention and how they are going to implement it. I think that is important. There are companies out there that do—as Neil said before—really good resources, but the nurseries don't really know how to get access to that, where to track it.

Unfortunately, nurseries will go on to online catalogues, and they will buy resources because they are cheap, because we have to factor in budgets and infrastructure. There is not a lot of money in early years to get these things in sometimes. The cost of them can be quite high. That is another setback. So there is the hesitancy around technology as a whole in the sector and then obviously the hesitancy because actually there is a cost implication, and when the budgets are so tight people wonder, "Can I get that?" and the answer is, "Not really. If I get that, what happens to provisions or something else?" So there is a budget implication and then there is training. Budget, hesitancy and training are the three concerns that make it difficult.

Q100 Jodie Gosling: You have covered most of the second part of my question as well, but do you perceive that there are safety risks without the training, the guidance, and the support?

Professor Gibson: Yes, there are definitely safety risks. A few were picked up. We have things that can profile children. There are privacy risks. There are confidentiality risks. I mentioned earlier the example of a child confiding something to a toy. Perhaps they are experiencing some maltreatment at home or something like that. If that is confided to a toy, what does that mean for our safeguarding practices? I think there certainly are risks and we need to be able to appraise them properly.

Neil Leitch: We tend to minimise that risk in our own settings by using restricted brands. So where we do use edtech, we will use well-known brands. We will also look to whether that organisation has intelligent, informed individuals who understand child development, very young children's development, and so on. That does not secure the position because we are still fairly ignorant, but it just gives us a little bit of confidence that at least we are not dealing with a completely unknown quantity. But that is not the best way to do things, I would suggest.

Richard Waite: Yes, safeguarding is always a big thing. With AI definitely, there are safeguarding concerns because there is a lack of awareness in the sector around it. When something is not statutory, when it is not something that is required, nurseries generally will opt out of it because it seems like a "good to have". It might be in the "Birth to Five". It might be in something else. It might be in a really good book, but it is good to have because they are focusing on what Ofsted is going to come and look at, what someone else is going to come and look at, and whether they are going to be judged on that?

There does not seem to be any need to be concentrating on AI or cyber-security. Right now, for me, cyber-security in early years is massive because there is no awareness of it. As I said, with AI having smart speakers in a nursery is a massive safeguarding issue. It is a listening device. We know it is. But nurseries will happily go and purchase them online and put them in the nursery without putting the right policies and things in place to safeguard themselves.

- Q101 **Caroline Voaden:** Just a little bit more on safeguarding. Mr Leitch, you said at the beginning that the Government are all over physical safeguarding, but there is no support for emotional safeguarding. What specific risks do you think the increasing use of AI and edtech presents for young children rather than for the staff? Do you think the current arrangements are adequate to manage this risk?

Neil Leitch: The biggest risks are not within early years settings, actually; they are within homes. As I have alluded to, we see the end result of that where basically there is a misuse of AI and technology. I come back to the point that alongside training and guidance for educators, a lot of the things that we do in an early years setting we share with parents, whether that be good nutrition, sleep practice—whatever it happens to be. What I do not see at this point in time is any support being given by educators to parents who are struggling, basically, with AI and edtech.

The first point is that this should be part of an educator's formal training. They should understand the risks associated with AI and the benefits associated with AI and edtech. At the moment, it is completely absent. I would integrate it into the formal training programmes and expectations of early years educators. That would be a starting point. Perhaps then we could do what we do with parents who are struggling to have their children eat vegetables or whatever: we share that good practice. At the moment, our educators are not really in a position to do that, other than saying avoid screen time.

Caroline Voaden: It is a big ask for early years educators to be—

Neil Leitch: It is, but do you know what? That is why we are grossly underfunded, dare I say. I am not going to take the opportunity of making that case, but the reality is they are one of the most trusted people in a family's life. They are not just their child's educator. They are their nutritionist, their health visitor, their benefits guidance. They are even, dare I say, their relationship counsellors, and so on. Because of the new entitlements, more and more children are coming into early years settings. They are in a wonderful place to support parents. That is why they need better status, better recognition, and more money.

- Q102 **Caroline Voaden:** Thank you. Mr Waite, just this week it has come up in my office about schools moving to faceless marketing, so taking all their children's faces off all their marketing materials, because they are worried about the use of AI and those children being visible online. I wonder if you could talk a little bit about how you think parents can be given confidence that information collected about their children, and

perhaps also images, is used appropriately. Do you think there is a reason for concern around that?

Richard Waite: Yes. I think the main thing is parent partnership, and the relationship between nursery and parent is essential. We are talking about photographs and safeguarding and things like that. Online safety again is something that not only do our educators need to be aware of, but as settings we need to make parents more aware of it. We all know in September that just went all the parents took a picture of the children in a new school uniform outside the front door, with a door number, car registration plate and everything like that. It is making them more aware of what they do. Some nurseries are now really conscious about blocking out faces because of AI fake applications that can do horrible things. There are really not nice people out there who will do horrible things with it. For me, that is a real shame because when you are maybe looking at a photograph of your child on a learning journal or something, you would have liked to have seen their face or heard their voice or just get a real sense of it. Unfortunately, because of the world we are in, all that has been taken away a little bit.

Q103 **Caroline Voaden:** Those pictures can still be shared with parents privately, can't they? There can be private access to images that are not out there.

Richard Waite: Yes. If you are using learning journal platforms and they are pretty secure, parents can get those photographs. I think it is where nurseries want to share good practice or advertise what they do. They might put a learning experience on Instagram—a forest school might want to show you what they did in the forest—and sometimes just seeing the child's hand is allowed. I am hearing people saying, "We are just going to show hands," or, "We are just going to show this," and for me that is the state we are in. That is quite sad. We have to come up with a system where we can still do some of those old things but just make it safer. That is a tough one because it is so easy to manipulate things.

Q104 **Caroline Voaden:** Professor Gibson, do you have anything more you would like to add on safeguarding?

Professor Gibson: I think there are risks around poorly trained or poorly guardrailed generative AI models. There have been some quite high-profile cases of toys that have a generative AI component marketed to children and then being found to be able to talk about things that children should not be talking about. In my experience, you have to work quite hard to get that conversation out. The risk might not be as much as it has been blown up to be in some outlets, but it is definitely real; it is definitely there. In particular, if we do not have any regulation around what those guardrails should be, I think the risk could get bigger as we see products coming in from all over the world.

Chair: Thank you. I think in the interests of time I am going to bring this session to a close. Thank you very much. It has been a fascinating session for us this morning and lots of food for thought for the Committee. If we can change over the panels as quickly as we can, that would be appreciated. Thank you very much for being with us this

morning.

Examination of Witnesses

Witnesses: Dr Mhairi Aitken, Professor Sarah-Jayne Blakemore, Professor Sandra Leaton Gray and Meg Moss.

[This evidence was taken by video conference]

Q105 **Chair:** Welcome back for our second panel in our evidence session on AI and edtech, where we are considering AI and edtech in the early years. Can I invite our second panel of witnesses to introduce themselves to us, please, starting with Professor Leaton Gray? Thank you.

Professor Leaton Gray: I am Professor of Education Futures at UCL. I carry out research into social and ethical implications of technology and AI, going as far as biometrics and 6G and quantum infrastructural settings. I am very interested in the long-term consequences of AI development and related standards setting. I did an Office for AI secondment from UCL in 2022 to 2023. I am a member of the College of Experts for DCMS and BIST, and I am the author of two books on digital childhoods.

Meg Moss: I am Meg Moss, head of public affairs and advocacy at the National Counselling and Psychotherapy Society. I have been working for a number of years across a few different strands of AI, especially from a therapeutic perspective, the impact that it is having therapeutically on practitioners as well as young people and adults. I have also been working around regulation for a number of years. I am interested in a variety of AI issues, so things around liability and harms, safeguarding, and what is happening in the broader landscape as well.

Dr Aitken: Good morning. I am Mhairi Aitken. I am a co-founder and director at Our AI Collective. Our AI Collective is a community interest company that is focused on putting public voices and public interests at the heart of AI. For the last six years my research has focused particularly on children's relationships with AI and, more broadly, digital technologies. In particular, it has involved child-centred approaches, which engage with children and young people to understand what their real experiences with digital technologies are. Previously, I led the children and AI programme at the Alan Turing Institute, which is the national institute for AI and data science. I also held the children's AI summit in 2025. I am very interested in children and young people's experiences and relationships with digital technologies, particularly AI.

Professor Blakemore: I am Sarah-Jayne Blakemore, Professor of Psychology and Cognitive Neuroscience at Cambridge. I am sorry I cannot be there in person, but I have meetings here either side of this. I have run a lab for the last 22 years—initially at UCL, now in Cambridge—

on the development of the adolescent brain, adolescent mind and adolescent mental health, with a particular focus on social brain development. I have an interest in things like the effects of social media on adolescent development and now AI.

Q106 **Chair:** Thank you all for being with us this morning. I will begin our questioning. How would you describe the overall impact that AI and educational technology is currently having on children and young people's learning? I will start with you, Professor Leaton Gray.

Professor Leaton Gray: I think it is hard for us to know exactly what the impact is. It is a very underfunded area. We are spending about—this is back of an envelope figures that would not pass the Treasury sniff test—£3.50 a head on rolling out tech solutions, usually to improve things like teacher workload efficiency and so on, in comparison with spending about 72p per head on evaluating the impact of what we are doing. There is an element of the reverse order to what we might have wanted to do, but events have overtaken us.

To give it some broader context, globally companies are spending about \$26 million per hour for all kinds of AI development and so on. We know about the rapid pace of those developments. It is leaving us really exposed. What we are seeing is very small-scale studies, often testbed type studies, that are looking at one product with a limited sample of people and so on. That is better than nothing, but of course versions change very quickly and methodologies change very quickly in this field. It is just trying to plug the dam with a finger, really, and hoping that what has been described as the tsunami of AI is not going to overtake us even more rapidly than we fear.

Professor Blakemore: I completely agree that we do not really know how AI affects learning. The problem is that, as you have probably heard many times before from researchers, good quality research takes months or years, whereas AI advances far, far quicker than that. There is an inherent problem at the moment in trying to understand how current forms of AI are influencing learning. By the time we know that, the AI will have moved on to some other form that is impossible to predict at the moment.

I think about this a lot, and in the context of social media. I think what we need to do is turn to research where we know something that might be relevant, even indirectly relevant, for AI. For example, and I can talk about this in more detail later if you are interested, but just to summarise, we know quite a lot about how the human brain develops in childhood and adolescence. We know that the brain is highly plastic during childhood and adolescence, which means that it is particularly good at incorporating environmental input into the way it develops. It is particularly sensitive to the environment and environmental experience, in childhood and adolescence. Of course, the environment includes many things, including digital interactions, AI and social media, so we can assume that social media and AI are influencing the way the brain develops if a child uses those things. We know quite a lot about that and quite a lot about how that might occur. We know quite a lot about how

children and adolescents learn and what is necessary for learning. This relates back to the neuroplasticity. We know about their developmental needs, like what kinds of environmental input are important at different ages and stages of development.

That brings me to my last point, which is on social development. Like I mentioned, our main focus in my lab is on the development of the social brain and social cognition and social behaviour, particularly in adolescents, although social interaction is hugely important in childhood as well. We know that it is important for children and young people to engage in social interactions with real life people. We do not know what happens to development if those real life people are replaced by digital forms like AI bots.

Meg Moss: I do not have too much to add to that, but there is some tangential research that I am aware of around AI assistance reducing persistence and hurting independent performance, and we can extrapolate from that the impact that that would have. That was Carnegie Mellon University and Oxford University, along with MIT and UCLA. Persistence is foundational to skill acquisition. We see that it is perhaps improving performance in the short term, but the negative effects are emerging after just 10 minutes of use, according to that study. That is maybe not directly speaking to what is actually happening to young people, but we can see that people are looking at what is actually happening to persistence and learning and the things that make knowledge sticky, that effort that we have to put into learning things.

There was a really interesting piece of work on the impact of AI on creativity in young people. For Safer Internet Day research in February this year, they spoke to eight to 17-year-olds, and 49% of them said that AI was making young people their age less creative. That is foundational to learning. Creativity is such an important part of young people's brain development. I have nothing more to add to that, but yes, there is some interesting research going on.

Dr Aitken: I have a few points to add to what everybody has already said. I will try not to repeat.

I guess the first thing to say is it is important to remember that children and young people are an incredibly diverse group. It could not possibly be a more diverse group. It includes so many different experiences, identities and needs within that group, and experiences of digital technologies and experiences of AI are very different depending on children's backgrounds, their identities, whether they have additional support needs, and whether they have access to digital technologies. There are so many different factors that shape or change the ways that they experience the technologies and what the impacts of those technologies are. I think that it is important to remember that we do not think of children and young people as a homogenous group.

When we think about the impacts of AI within education, it is also important to recognise that children and young people are interacting or experiencing AI in many parts of their lives, so the impacts within education cannot neatly be separated from the ways they are also

experiencing or interacting with digital technologies and AI outside of formal education settings. That includes exposure to AI-generated content, misinformation, disinformation, and the challenge that that presents for critical thinking, for having the ability to reliably identify what is real and what is potentially AI generated.

As others have already said, there is a lot of research and an established evidence base around what works well in education and what we already know about children's cognitive development, emotional development, and social development. I think it is really important not to be swept up by the hype around AI and edtech. A lot of the discourse around edtech and AI is really driven by the hype around these technologies, not necessarily grounded in a sound understanding of what is needed within an educational context. It is important that we start from that perspective and focus squarely on children's wellbeing, children's needs, and what we already know about education and children's development.

Chair: Thank you very much. I am going to go to Mark Sowards next.

Q107 **Mark Sowards:** We have heard quite a bit from you so far about the lack of evidence. We have discovered that there is just no evidence about the long-term impact of AI on children's cognitive development. My question is all about what the Government should do. Should the Government adopt a more precautionary approach so that we can actually understand what the long-term impacts are? If you think that, what should the safeguards actually be? I might start with Professor Leaton Gray.

Professor Leaton Gray: Clearly, from my vantage point as a member of the College of Experts for DCMS and BIST, and having also been in the Office for AI previously, some of what is going wrong seems to be partially rooted in the machinery of government change. You have had the responsibility for AI moving in a relatively short time period, and education AI is never really a priority. There is a disconnect between those two Departments and the Department for Education—a serious communication disconnect. You have things like, for example, upskilling projects, which I worked on at DCMS, completely separate from the school version of that. There is not the connection with the business end and the operational end either. Unless that communication problem is solved, we will get nowhere. That is priority one and we really have to commit to that. It has to have a proper seat at the table.

Then, on the back end of that, we need properly commissioned longitudinal research with input from DCMS, BIST, DFE and beyond. This is an intergenerational change. Childhood is changing. We need generational research to assess the impact and we have to look at a long period of time. This needs to be a new, very serious longitudinal study that complements the ones that the country already runs. We need to be looking at things like retained learning—not whether they retain it in minutes or hours or days but over decades—the impact on judgment, relationships, emotional development, and so on. It needs to be quite sophisticated and we need to report results by things like age and disadvantage. We have to move away from seeing how people do in tests via an input-output model, and we have to take a much longer view.

Then, on the back end of that, we need to develop proper procurement standards, because at the moment there is no evidence base for most of them. There is a lot of very hard commercial pressure put on schools. We have local management of schools in this country; we have had that since 1988. Our schools have wonderful control over budgets, which does a lot of good, but it also means they are extremely exposed to sales pitches and commercial pressures. There needs to be proper training and standards for procurement in a way that we have shied away from previously. That needs to be taken much more seriously. Adoption in British schools needs to be conditional on having the right evidence with proper underpinning research about the uncertainty that is involved in the use, while preserving children's access to the human side of things, which brings me to my final point.

We need to safeguard children's access to any systems that offer emotional or therapeutic support. Most of those are modelled on adult experiments. They do not really translate very usefully to child situations. We need to make sure that the access to human beings is not differential depending on how privileged your background is. That is a very serious concern.

Q108 Mark Sowards: While I have you, Professor Leaton Gray, I was going to ask you a follow-up about what research is required. You have already basically answered that. How long will this research take to produce?

Professor Leaton Gray: You are going to need to start looking at what happens through a child's primary cycle and then secondary cycle. Then you need to be looking across a cycle. We are already at seven and 14 years. Then you are looking at generational effects, 20 years. What we are funding at the moment is what happens in three months, what happens in six months. EEF is very good at saying they might have made two months' extra progress with this product. That is a medical model of research. There is no way we can assess every or even a typical sample of the products that are out there. If our starting point is somebody might make eight weeks' more progress, what is eight weeks? What is eight weeks in terms of a global conceptualisation of child development or education? That is a very policy-driven model rooted in the present and we are just not thinking ahead.

Mark Sowards: That is incredibly helpful. Thank you. Meg, do you have anything to add?

Meg Moss: I want to say that I wholeheartedly support everything that Professor Leaton Gray has said. I would add that one of the things that I have been calling for for some time is longitudinal research on resilience, agency and relational capacity, which I think would complement some of the longitudinal research that we are looking at directly in schools.

On regulation and what the Government might do around that, we have to be careful about being proportionate, but I think we also need to have risk stratification for the different types of AI that are used. We need to think carefully about the different risks they involve. For example, Professor Leaton Gray talked about therapeutic use. I think that has to be

perhaps one of the most high-risk ways of using that technology because we are talking about people's personal lives. We are talking about people's psyches, their psychology. There are so many different hidden harms that can sit within relational therapeutic AI tools that we just do not have visibility of. For young people who do not have the same context of the world that adults might have, they will not be aware of any harms that might be coming to them, because they do not have the benefit of our years of understanding of what feels right and what feels wrong.

The Government have a safeguarding duty especially for children and young people, but I would extend that to everybody around the use of AI and how that is implemented. I don't think that regulation is necessarily always the answer. We need to be investing in educating people around this. We need to consider public awareness of what AI can do, what its risks are, and what its limitations are. We need to consider what our goals are for education and for mental health of young people—where do we want to be in 10 or 15 years' time—and work back from there as to what we will allow the technology to do.

We are in such an odd position with this technology because, unlike a lot of the technologies—for example, the invention of writing—we are constantly thinking about what more we could do with it. We now have to think about how we can put boundaries in place with this, what less we can do, how we can put this in a box and limit it, which I think is a very unique challenge for us as a society. It is going to be impossible to completely regulate because this is a global problem; this is not just a British problem. How do we also raise awareness of that? I think there could be a role for Government in that as well.

Mark Swards: Thank you very much. Professor Blakemore, do you have anything to add to what has already been said?

Professor Blakemore: Not very much, other than just a bit more of a focus on social development. We know that from birth onwards children and adolescents require social interaction in order for their social brains to develop and to develop an understanding of other people and an ability to interact with others. We do not really know how the use of AI affects social development, but we need to leave space for social development and oracy, the ability to articulate ideas without the use of AI in real time, the ability to make an argument, to listen to other people, to incorporate others' ideas into your views, and to work with peers. These are all important tasks that we need to develop. Given that the child and adolescent brain is incredibly plastic, this is a critical period of development in which we need to be exposed to social interaction in order to develop those skills. We do not really understand how replacing real life people with AI will affect the development of those skills, but we can assume that it will affect it somehow because of the neuroplasticity and the way the brain is developing and incorporating environmental input.

To go back to the point I made very briefly earlier about AI bots, that is one thing that I am interested in because of our natural propensity to

attribute mental states to other people and other things, in fact. We do this all the time. We attribute things like emotions and intentions and beliefs to other people, but we also attribute those things to cartoon characters, book characters and even inanimate objects if they look animate or if they have a face or that kind of thing. We readily attribute mental states. We also can assume that we will attribute mental states to AI bots, and this ability to attribute mental states develops throughout childhood and adolescence and is not fully formed until early adulthood. We need to think about how children are interacting with AI bots, what relationships they are forming, and how much they are attributing humanlike characteristics to AI.

Q109 **Mark Swards:** Dr Aitken, we are very short on time. Is there anything you think the Government should do that has not already been covered?

Dr Aitken: To pick up on the point about needing to take a cautious approach to the roll-out or adoption of AI technologies within education settings and picking up on Professor Leaton Gray's point about the significant commercial pressures that many schools are facing, we see this across a wide range of industries and policy areas. There is such a lot of hype around AI that in many cases we are seeing AI deployed for the sake of deploying an AI system. There are lots of industries that are pushing the idea that AI is going to lead to significant efficiency gains or significant benefits within particular industries.

Often what we see in education is these claims being made around AI-enabled edtech offerings. Within education settings there are significant resource constraints. Teachers are under enormous pressure in terms of their time and the resources available. Within that context claims are being made around the ways that AI technologies are going to address those challenges. Often these technologies that are being pushed are general purpose AI technologies, AI systems that are being developed to do lots of different things and are now being marketed as something that is going to solve problems within education.

I think it is really important that we avoid being swept up in some of that hype around AI and instead always start from the perspective of identifying what the challenges are that we are seeking to address, what the challenges are that are being faced, and what solutions are needed. Very often, perhaps most often, AI will not be the appropriate solution to address those challenges. We need to start from that perspective of identifying and addressing clear challenges and problems and finding the appropriate solutions, rather than necessarily being swept up in this idea that AI provides solutions to everything or the commercial interests that are driving this investment in AI, which are often not developed with the particular expertise in education or children's development or children's wellbeing that are needed for these tools to be safe and appropriate within those contexts.

Mark Swards: Thank you very much, everybody.

Chair: Thank you. I will go to Peter Swallow next.

Q110 **Peter Swallow:** We have talked a lot this morning about where we do

not have evidence or enough evidence, but one data point that we do have, helpfully, are the latest PISA results, which suggest that higher performing pupils tend to be those who are not using AI and teenagers are losing the skills that matter the most, such as critical evaluation of information. I want to invite everyone to think about how the current school curriculum might be adapted to ensure that pupils continue to develop independent thinking and other essential skills to navigate and thrive in a future with AI. Professor Blakemore, I will start with you since you have helpfully already mentioned the word of the week, which is oracy. I wonder if you want to expand a little bit more.

Professor Blakemore: Yes. When I was listening to you I thought that that is exactly right. By the way, this is slightly speculative because I have not done research in this precise area. AI might be very useful for providing certain information and even learning about that information, but does it enable children and adolescents to develop their critical thinking skills, their reasoning, their creativity and their oracy, which are just such important skills? That is combined with the fact that we have to think about the future of the workplace and what skills will be important for humans to have in workplaces that are full of AI. Although AI is pretty good at those things already, those skills are the only skills left, in a way, that humans will be able to excel at. How can they excel at that if they are not practising it during the sensitive or critical period of development in childhood and adolescence?

Even if schools adopt AI—and I totally agree with Dr Aitken and other comments that have been made about the pressures on schools to adopt AI very rapidly—a lot of time and resources should be put towards the development of social interaction, teamwork, oracy, being articulate, and making articulate arguments. It could be aided by AI but it really needs to be done with other humans, including teachers. I suppose the role of teachers is changing rapidly as well, but they are still important for children to develop those skills.

Dr Aitken: Certainly, we know that more and more children and young people are using AI tools as a source of information. There is a growing evidence base around that. It is not just children and young people; adults as well are increasingly using AI tools as a source of information, as an alternative to search engines. There is increasing evidence that many people are using ChatGPT, for example, as an alternative to a search engine. Even when children and young people are searching for information on a search engine, there are AI summaries that are providing the quick summary at the beginning. There are real risks that these are attractive shortcuts to accessing information, but they are shortcuts that are prone to providing inaccurate or misleading information, in some cases including misinformation and disinformation. I think it is a critical challenge within education that we are equipping children and young people with skills and critical thinking, with an understanding of what good evidence looks like, and how to identify reliable and trustworthy sources. This is fundamental.

When we talk to children and young people and when we teach children and young people about AI, it is important that we are focusing on critical

AI literacy. It is not just teaching children and young people what AI is or how they could potentially use it or what it does or how it is developed, it is helping them to understand the limitations, the risks of AI models, and the importance of thinking critically about these tools. That is fundamental. I suppose the risk is that these are shortcuts but those shortcuts have significant impacts on critical thinking and the ability to reliably identify accurate information.

Yes, I think it is fundamental. There is growing evidence in this area and clearly more research needed, though.

Q111 **Peter Swallow:** If I can briefly extrapolate from both of those answers, it is both the skills in things that AI cannot do and the skills to use AI safely. Professor Leaton Gray, I will come to you, and maybe you could touch a little bit on how PISA rankings are changing in future years and how that might also, as a feedback loop, help to shape the future of education.

Professor Leaton Gray: I am not a PISA expert, but I know that it is periodically changed in each iteration so that it tries to be relevant. I know that there is a worldwide decline in reading skills and this is of significant concern because that is seen as a central plank not only of education but also democracy. There is obviously great concern there. I know that at the moment PISA results have been rebounding. It is not that the world is making rapid progress necessarily, but it is rebounding. Of course, covid is the shock in the middle that contributed to problems. We have rebounded a little bit better than many other comparator countries, but there is still work to do.

I think what we are seeing is a step change in probably how we should conceive the role of education in a democracy and society. There are early indications that if young people are trained carefully in how to use AI tools dialogically and with a critical awareness of the parameters and guardrails that they need to put there for themselves a lot of the time, it might be a very useful tool for expanding people's view of the world and other societies and things like that, and to help construct knowledge and new forms of knowledge so that you are not just limited to what is on your doorstep or available in your school or what you have experienced before. As I was saying to some postgraduates I was training yesterday, it is a little bit like putting a toddler on a Harley Davidson motorbike. You have to be a little bit careful and work up to that wonderful moment. There is a lot of backfilling that needs to be done to our curriculum so that we can encourage that interaction.

We also need to do that so that we keep the models fresh. At the moment, there is a risk of a negative cycle in that less and less human input is put into a model and you end up with a technological model collapse. That can happen in seven or eight cycles. You need the freshness of human thought and innovation and interaction to keep them relevant. Otherwise they serve no purpose whatsoever.

The final point comes back to the commercial involvement there. We are almost in a golden era of AI before a lot of these tools are driven by advertising, as we saw with the early days of the internet. When that

comes in, you are getting a bias to the information and so on well in excess of what we are seeing now from existing training models. That is where regulation of certain products for certain categories of society can be quite useful so that some are more neutral than others. At the same time, they are only able to see usually what is free. They cannot get behind paywalls. You get this paradoxical information issue where they often cannot access the excellent stuff or the most up-to-date stuff because that is a paid for service or subscription model. That needs some resolution as well so that what is out there can be high quality and not just the leftovers when corporate models have asset stripped the knowledge.

Q112 **Peter Swallow:** Very briefly, because I do not want to take up too much of the Committee's time, you have set out there how AI models need to change to fit education but you have only teased us a little bit, I think, with how education needs to change to fit to an AI world. You mentioned there the importance of reading to democracy, for example. I wonder if you could just very briefly set out a bit more about how you think education needs to change rather than AI.

Professor Leaton Gray: I come back to the word dialogic. This is where oracy has been quite an interesting development, because that went away for a bit and it is coming back now. It is the idea that you have a sophisticated ability to interact either with humans or devices. There are different network theories that apply here where you see the computer as another thing in the network but it is actually quite heavily populated by humans. That is a way that we might start to think about the curriculum. You might want to develop systems so that you are not just confined to the expertise in your particular school and your thinking patterns are tracked in the medium to long term by very sophisticated AI-based systems.

For example, we are starting a study at UCL. We have a corpus of knowledge where children have written about their understandings of the Holocaust. We are trying to tease out from that how their thinking develops over years, really, in understanding large themes as they become more mature as people and as they go through adolescence, and what the impact is of that on their learning. By tracking that, we can start to intervene. If you have skilled teachers able to take an overview of large datasets of children doing this, then you can tweak what you are offering in the classroom and tweak what you are offering for particular year groups or even classes of children to try to promote the better aspects of that through the use of these sensitive dialogic type tools. Then you have an answer about a positive future.

Chair: We are running super tight on time at this point.

Peter Swallow: Meg Moss, very briefly, is there anything you wanted to add?

Meg Moss: I will try to keep it brief. I would like to see some introduction of greater relational skills within the curriculum, as we see social offloading happening a lot for young people, putting their relational

issues into ChatGPT or any AI and dealing with social issues that way. The "Good Childhood Report" came out this week and it talked about how important belonging is for wellbeing and how important cohesive community is. It strikes me that those relational skills are going to be so vital to develop in our young people. That is one thing that is getting lost in young people's use of AI at the moment. I can leave it there; that is fine.

Peter Swallow: Thank you.

Chair: We will go to Mark.

Q113 **Mark Swards:** I will combine my two questions and then invite responses if you feel you have something to say on it. How important are perseverance, learning from mistakes and delayed gratification in education? I can imagine the answer to that. Is there a risk that AI and edtech tools are going to impact and undermine those aspects of the learning process? We have heard, and I know for a fact, that more durable learning comes from learners who have to struggle with a problem before they then eventually resolve it. I saw it as a maths teacher in the classroom. I went through it when I was training to be a maths teacher. Is there a risk that AI and edtech is going to undermine this entire process? That is opened up to whoever wants it.

Professor Leaton Gray: I think you are talking about different types of delayed gratification. One of the things that I think we are a little bit too good at is rewarding conscientiousness. That is people who can sit there and plod through something. There is a different delayed gratification learning where you set your own task and you disappear down a rabbit hole and you come out with something profoundly different at the end of it. With the right guardrails and the right technologies in place, we can encourage new forms of that so that you can work with children who are struggling to understand certain parts of the curriculum and just let them explore aspects of learning with support that a tireless AI can give you. Or, at the other end of the scale, they can progress much more rapidly because they are not having to wait for teachers to set tasks or ferret about in a library for something or a limited education platform. You have a vast resource there.

This autodidactic element can compensate for conscientiousness problems that are often holding back children's learning because they are having to leap through assessment hoops and so on. We can unlock and liberate learning if we choose to do so, but it just needs to be highly individualised in that sense.

Mark Swards: With a tireless AI as well?

Professor Leaton Gray: Tireless.

Mark Swards: Tireless. You can just keep asking questions?

Professor Leaton Gray: I mean it is there and you can go back the next day and carry on the chat. You can have it there as a digital helpmate, if you want. Where it has been used really well by students at UCL, they

are telling it the kind of bot they want it to be and they are telling it what their problem is—"I am stuck on this. I feel a little bit of imposter syndrome about this," or, "I don't quite understand this aspect of my maths," or whatever. They train the AI to be the thing they need it to be and then work with it over a longer period of time and much more intensively than even with a peer study group or even one to one supervisions with staff. It is beautifully complementary so the more clued-up students are getting profoundly enhanced benefits from this. The problem is how we make that more universal rather than just leave it to a wild west of who happens to be savvy enough to make the tool do this.

Q114 **Mark Sowards:** Exactly right. Are there any further contributions on this point?

Meg Moss: I will speak about the relational elements as well. Obviously, in a therapeutic context, we have a concept of rupture and repair, which means that when two people face a difficult situation together, perhaps they have a disagreement, perhaps there is betrayal or hurt on one part, those two people take steps together to repair that relationship. That is effort, that is work, but that negotiation within that relationship is the thing that makes it develop and makes those two people as humans grow. I would say from that relational side of things as well for young people, it is really important that we focus on how vital friction and effort and perseverance are from a relational perspective.

Mark Sowards: Thank you very much. I will hand back to the Chair unless there are any further comments.

Chair: Thank you. We will go to Jess next.

Q115 **Jess Asato:** The Government have announced plans to expand AI tutoring tools to deliver personalised one-to-one support. How might the growing use of AI and edtech, including these tutoring tools, affect the nature of the teacher-pupil relationship? I am quite interested also in how teachers cope when so much work is now being produced with AI. They will not necessarily always know whether it is original work or not.

Professor Leaton Gray: It is a dilemma for teachers. Coursework is routinely produced with AI, and there is not a lot that the education sector seems to be able to do about that right at the moment.

In terms of the personalised coaching and so on, I think the secret here is to make sure that there is a proper democratic engagement in the building of any curriculum that is then supported by personalised tutoring. If you have parents, pupils, teachers and so on all involved in the creation of what the AI tutoring system is built around and what it can offer, it is likely to be much more relevant to particular circumstances than a generic, bought-in model. They are often quite US-centric for a start and a little bit less tailored to what is happening in particular schools and situations. I think that is the missing link in a lot of our curriculum work in the past. There is a concept called policy tourism. You see that there is something good happening over there and you bring it back to

Britain instead of having these home-grown, home-developed solutions with this deep grassroots involvement.

Meg Moss: My thoughts around that are that I worry about the safeguarding risks of introducing AI tutors. We know that through the disinhibition effect young people are more likely to disclose an issue to someone who is not in a position of authority to do something about that. Anonymity really drives disclosures. It also could be something that might not be a reportable event in and of itself. They could say something that to an AI tutor would not flag any safeguarding risks but for an adult who is in that young person's life it may raise flags. My concern is how we make sure that those AI tutors can do that job in a very bounded way that does not encourage young people to offload some of those slightly more emotional aspects of their lives. Again, that is a question as to how that software is developed, but I think that is a pressing risk that we need to thoroughly consider.

Q116 **Jess Asato:** Is there a risk that if the sycophancy of AI becomes attractive to young people they may prefer their one to one AI tutor to their teacher, who may give them too much challenge? Is there a concern about how a teacher might negotiate that situation or scenario? I do not know whether Dr Aitken might want to answer that.

Dr Aitken: Yes. I think this is an important aspect. There is perhaps a distinction between whether a child or young person is engaging with a bespoke virtual tutor that has been designed for a limited purpose around tutoring in a particular educational purpose, or whether they are engaging with a more general AI chatbot or AI companion. We know that many young people are using chatbots or AI companions as a source of educational support. The sycophancy is definitely a very real risk. These AI companions are designed to have unconditional positive regard, to always affirm the user's perspective, the user's feelings, to always back them up. That can lead to very unhelpful relationships. It can lead to them giving harmful advice. It can lead to them reinforcing harmful ideas. There is a very real set of risks there.

In the case of virtual tutors, there are also wider risks around equity and access to education and one to one support. There are a lot of claims made that AI virtual tutors are going to lead to greater equity in access to education and access to personalised tutoring. We know that personalised tutoring brings enormous benefits in terms of educational attainment, but many of these virtual tutors are AI systems that are used to collect vast amounts of data, which bring significant privacy risks and are often commercial models that are collecting data for marketing or advertising purposes or for training for future AI models. They may at times provide inaccurate responses. Although it is personalised, it is based on data and metrics rather than an understanding of the individual learner or the individual student and what motivates them and what they need to support them best in education. That highlights the importance of relationships between tutors and learners or between teachers and learners.

I think there is a very real risk here that if virtual tutors are seen as a way of cutting costs in the provision of tutoring—and there have been suggestions that this is a way of enabling the roll-out of virtual tutors to reach significantly larger numbers of students but potentially providing tutors that are not as capable of doing that as well as a real human tutor—it reinforces existing inequity or creates new inequities, where those who can afford to have a real human tutor still can. That is a tutor who can have empathy, who can understand the student, who can motivate them more, and who can share experiences, including reflections on how to handle exam stress or what motivates them, what excites them about the subjects they are studying, the real human dimensions that can much better motivate an individual student or provide that connection and support. Whereas virtual tutors present risks for privacy. They present risks for safety, as has already been mentioned, and may lead to a less valuable or beneficial tutoring experience. There is a lot to consider here in terms of equity as well as young people's safety.

Chair: I am very sorry. I am going to have to ask that answers are much more concise going forward or we are not going to get through the important topics that we want to cover before we get to the end of the session. We have very little time left. There will obviously be an opportunity for you to write to us with anything that we cannot cover in the session, but if I can make a plea for brevity, that would be really appreciated. Thank you. Back to you, Jess.

Q117 **Jess Asato:** I have a quick question about the actual information that AI might be giving to children and young people, given that there are now lots of studies that show that it can often be biased, particularly in terms of sexism and racism and other discriminatory forms. LLMs are obviously based on human nature. Do you worry that if children are relying on this as the source of truth when they are asking questions this might have an impact on their cultural context? We know that often what happens is a homogenised version of ethics or morals, which may not reflect the lived experience of young people in their particular setting. What impact might AI companions also have on young people's expectations of intimacy and romantic relationships?

Professor Leaton Gray: There is a differentiation. If they are using cheap, free products, it is going to be more difficult for them to be rendered useful than if they are using a sophisticated product that is specifically designed for, for example, a schooling, education or developmental context. It depends on what is being bought into and what they are being offered. Yes, there are the same dangers with looking at cheap or free products that are very generalist as with anything else on the internet or, indeed, in society. That is an issue.

In terms of romantic relationships, we just do not know what is going to happen. I think we are all quite worried that if they are constantly interacting with tools that are endlessly available, endlessly biddable, endlessly aiming to please, there are some real issues there about the expectations of any interaction or relationship because human beings are a lot more messy. As Dr Moss said, it is an issue to do with learning

about the friction in a high-quality human relationship that leads to that mature view as an adult. That is particularly problematic, particularly if data is being sucked up at the same time by corporate entities for enlarging their business model.

Q118 Jess Asato: In terms of applications like Claude, Meg, there was a report recently that found that a researcher who was acting under age could ask Claude about rope bondage. Obviously, in this country we are now introducing a ban on strangulation in pornography. How can we depend on these tools to reflect the relationships and the legal realities of what we are facing in our country when they are made in other countries with different laws and rules?

Meg Moss: Yes, it is a global problem. We are not facing this problem alone. I think we could be working internationally to tackle some of that. To bring it home, there is a lot of conversation at the moment about spaces for young people and bringing back young people's hubs, youth clubs, places where they can connect with peers and other trusted adults. We could inject some of that relationality—and I think that is where the Government are moving towards—back into young people's lives so they have those positive role models.

At the same time, absolutely, we have to be working globally to tackle what is a threat. We cannot face that alone. There are organisations. I can only speak from a mental health perspective, but the American Psychological Association, in conjunction with Orca, which is a UK-based organisation, have a badging scheme for mental health applications, where they review the quality of those applications and provide a badging service. There is an element of how you engender trust within those badges. Again, it needs to be a collective movement, but there could be something like that that we could work on. That is for bigger minds than mine.

Chair: Professor Blakemore, I wondered if you had anything to add on those questions.

Professor Blakemore: Yes. I just wanted to say that forming relationships with other young people is really important for adolescents. In fact, friendships are the primary source of resilience in adolescents. Friendships are protective against adolescents developing mental health problems. I am talking about real life friendships with humans. Now that AI bots will give young people advice and reassurance and be there for them whenever they like, young people who struggle with real life relationships might find it easier to turn to an AI bot and in a way form a friendship with an AI bot. We don't know how that affects their resilience. We would probably hypothesise that it will not provide them with the same level of resilience as a real life friendship, but we do not actually know that. Yes, that is an area that is of concern, and it needs more research.

Chair: Thank you very much. We will go to Jodie.

Q119 Jodie Gosling: We have talked a little bit about personalised learning, but to what extent can AI and edtech actually deliver personalised

learning? Where is the role in professional judgment and scrutiny overviews? Can we go to Dr Aitken, please?

Dr Aitken: I think what is important here is that these are seen as tools that support teachers and facilitate relationships between teachers and students rather than have a negative impact on or reduce the authority or the influence of the teacher to make decisions about a child's learning. There is a risk here that personalised learning tools that are based on tracking data and metrics about learning make decisions or inform decisions about a child's learning that are based purely on data and metrics rather than an understanding of that child's circumstances, their needs and the relationships that impact it. What is important is that these are tools that, if used well, support teachers in those roles but do not diminish the teacher's ability to make those decisions or to facilitate relationships. These decisions need to be based on relationships and understanding of individual children's needs. I think that that is key.

Jodie Gosling: Fantastic. Professor Blakemore?

Professor Blakemore: All I want to say is that this is relevant to another question, personalised learning. Of course it is important, but one thing that AI misses is what teachers can pick up on in the classroom, things like non-verbal communication, facial expressions and mannerisms. In terms of forming personal learning relationships with pupils and maybe picking up on their wellbeing or other things going on in their lives, human teachers are vital to pick up on those forms of non-verbal communication that currently AI cannot or does not do. I think personalised learning is important. We have been talking about that for many years, but AI personalised learning cannot replace the importance of teachers.

Chair: Is there anything to add?

Meg Moss: I don't have anything to add.

Chair: Sureena, do you want to ask the final question because you did not get a question earlier?

Q120 **Sureena Brackenridge:** Okay. Thank you. What role might AI and edtech play in supporting children with SEND or those who speak English as a second language? I mean that from the point of enhancing good quality support that should be in place in any circumstances. I am happy to open that up to anybody across the panel.

Professor Leaton Gray: It could be profoundly useful as long as it does not set a ceiling on achievement. One of the dangers with these tools is they keep looping back and having children practise the same thing over and over again, not quite understanding when and how to move them on. Judging that is where teacher professionalism can be very important. You cannot take a teacher out of the mix completely.

In terms of presenting information in different ways, or helping pupils to understand the environment around them, or compensating for auditory impairments or visual impairments and things like that, it can be

incredibly useful. However, like anything else, it has to be sophisticated and very well tailored.

- Q121 **Sureena Brackenridge:** Could I add an additional point to that? What are the risks of reinforcing biases that are entwined within the systems and how can you mitigate those risks?

Professor Leaton Gray: It can be the biases we already see; for example, assuming if you have some special educational need or disability that you are cognitively impaired at the same time, or if you speak English as a second or other language that you are going to have difficulty accessing different curriculum areas other than that. Of course, they don't go hand in hand. It needs to be a very bespoke provision and it needs to be very sensitive to any individual child's situation.

One of the mistakes that is commonly made in school, for example, at the moment is to say you have ADHD or dyslexia or whatever and you will struggle with a normal timetable so we will give you a visual timetable. However, a lot of children with dyslexia cannot cope with symbols either. It is seen as a binary thing. We have the normal thing and we have the adaptation, and you over there can go and manage with the adaptation. That is an unsophisticated approach. What you would not want to see is, "Well, you lot, you go and work on the tablets with the thing and we will teach the real class." You do not want any normalisation or pathology because you are getting some support there. It needs to be much better embedded and much more sophisticated.

Professor Blakemore: I do not really have much to add to what has been said. I worry about the lack of evidence and the pressure from companies on schools to buy products specialised for children with SEND that have not been fully scrutinised and where there have not been randomised controlled trials, for example. I also worry about, again going back to social interaction, some children and young people with certain needs struggle with social interaction. It is part of the diagnostic criteria for some SENs. Turning more and more to AI concerns me because it does not allow them to practise social interaction with real people in real life and we do not know the consequences of that. It might make their social problems worse.

- Q122 **Chair:** Thank you. Are there any other additional final points?

Professor Leaton Gray: I just wanted to piggyback on to that and say that there is also a corporate trap in that schools can get locked into subscriptions for different services, particularly for SEND, and then it is very difficult to wriggle out and they just get used to one model. We have not evaluated any of them to start with.

Professor Blakemore: Can I just add on to that? It is not just the case that products might not, in fact, help in the way they say they do. They might cause harm.

Meg Moss: Very briefly, there is some evidence—and I was just trying to find my reference for it—that AI operates, looking particularly at autism, from a deficit model, which could be very unhelpful when used in a SEND

capacity. I was trying to find the reference, but I can send it along afterwards.

Chair: Thank you very much. I am going to close the session there. Thank you very much. It is fascinating. You all have such a depth of expertise in this area. If there was anything that you were not able to get across to us today in the limited time that we had, please do write to the Committee afterwards and we would very much welcome the opportunity to take account of it. For now, I will draw this session to a close.