TT Series 3
Rose Luckin
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Rose Luckin is an internationally respected academic and influential communicator across multiple stakeholders about the future of education and technology, particularly artificial intelligence. With over 25 years of experience, Rose is a recognised expert on energy, education. And I'm sure many of our Talking Teachers listeners will be absolutely familiar with Rose's work. She served as an advisor to policymakers, governments and industry globally. She's emerita at the University College London and founder and CEO of Educate Ventures Research Ltd, a company that provides training and consultancy to the education sector to help them leverage AI ethically and effectively. Welcome to Talking Teachers. Rose.

ROSE LUCKIN 1:54
Thank you, Jane, and thank you for inviting me. It's lovely to be here.

DON CARTER 1:57
And Rose, yes, it is great to have you here. And welcome and looking at your qualifications that are very, very impressive. You hold a Ph.D. in cognitive and computing sciences and a first class bachelor's degree in AI and computer science, both from the University of Sussex. So tell us, Rose, what sparked your initial interest in computer science and how did that progress into the world of AI?

ROSE LUCKIN 2:23
It's such a good question. It was really almost an accident, to be honest with you.
So I didn't go to university at the traditional time Malala School. I didn't have a traditional education. And so I actually went and worked in a bank to start off with a high street bank and then had children and thought it would be quite nice to have a bit of a career change. And I've done some teaching and enjoyed that in schools and in further education and actually starting by teaching some of the banking subjects that I'd taken because I'd done some qualifications. And then opportunity came up to go to university as a mature student and I was looking through the prospectus because the only university I could really go to geographically, because I had two small children, was University of Sussex.
So I thought, Oh, well, you know, I've done a qualification in banking, I'll apply for economics because that's a related field. And I was looking through the prospectus. I found this subject called Artificial Intelligence and Computer Science, and I started reading about it and I bought some of the recommended books for the course. And I thought, well, that sounds really interesting. I had the right kind of A-level qualifications to be considered for the course. So I thought, well, I'm going to apply for this as well. And the irony is that I got rejected for economics and accepted for computer science and artificial intelligence. And I absolutely loved it.
So it was almost an accident that I went in to that field. But I think what's important about it is that I started right from the word go thinking about computer science and I with an educator's hat on because I'd done some teaching. So I always sort of looked at it from that perspective. And that was true, right from those early days as an undergraduate.

So yes, it was a little bit of an accident, but a very happy accident. So I loved it right from the first moment to starting the course. It was it was brilliant. It was it was fascinating. It was interesting, very interdisciplinary. And so you did a lot of cognitive psychology, cognitive philosophy as well as theoretical computer science. And I it was a really rich course. It was brilliant. Yes, absolutely loved it. That's why I stayed on the day to day.

DON CARTER 4:46
Well, we're very glad you took that path, that's for sure.

ROSE LUCKIN 4:49
So I thank you, Don.

JANE HUNTER 4:51
Indeed we are. And, Rose, I love the skinny that you produce. Thank you, by the way that you produce each fortnight. And we're going to have a link to that in the show notes for this episode. But I wanted to draw your attention to the latest report that I've seen and read a number of parts of that Beyond The Hype, and it actually builds on the work that you released in September last year. So it's a new report that's really a comprehensive self assessment of schools' preparedness and it actually looks at around 256 schools between February and May this year. Now, in that report, there's some gaps that are mentioned in a lot of detail about, you know, institutions lacking formal guidance. And I they very few of those institutions in that whose data is in the report actually have frameworks for implement rotation. There's limited strategic planning and there's also an absence of a structured approach to item selection. Now, I've sort of jumped across, I guess, some of those high-level findings, but why do schools really need to heed what this latest study has found? And you know, what happens if they don't?

ROSE LUCKIN 6:21
It's a very good question, isn't it? I we wanted to produce the report because we wanted to actually try and find out what was really happening.
It was actually really difficult because, of course, the people who respond to this kind of self-assessments, the people who are already engaged. So even though the report we did quite well in terms of geographical spread within England, it's still obviously quite small numbers more when we combine it with the other two reports that we encompassed, one done by just one done by HMC Schools Group. But of course it's still reflecting in a sense, a community who are engaging with AI. So I think it's important to see it with that respect.
But what we can see from that is that for organisations who are engaged with putting in place policies, putting in place training programmes, they are far better equipped to support students and staff, to engage with AI ethically, effectively and practically.
Because one of the key things that came out from the report is the fact that a lot of the people who responded both to our self-evaluation and the other two surveys actually feel quite engaged with AI. Obviously, these are the self-selecting group, as I've said already, but there's a real gap between the general understanding and engagement with concepts around AI and their enthusiasm and their actual practical ability to apply it in the classroom.
And that's where it's really important that there's an organised, structured approach within an institution to try and help bridge that gap between having an interest in a theoretical understanding.

And actually then, you know, what do I actually do about that? And I think, you know, one of the key things is this having a policy in place. I mean, 30% of the institutions who responded to a self-evaluation had a policy in place.
But those that did have a policy in place, you know, there was evidence they were much better set up. They were more likely to have clearly identified the educational goals that they wanted to achieve through using AI more likely to have a clear approach to identifying which tools to pilot and more likely to be aware of ways in which I might, you know, be risky and show bias.
So there's this evidence to show that, you know, having that policy in place is really important. And the final point I'd make on that is that I think the policy is the piece that sets the parameters so that everybody in an organisation knows where they stand. They know what is it okay for me to do with this technology.
I do know within Australia, Jane, and don't, but certainly here there's still quite a punitive rhetoric around students using AI. It's very easy for people to slip into that. Oh, it's about cheating kind of conversation.
Well, you know, if you want to mitigate that, put a clear policy in place so that people know exactly where they stand and also says that staff them exactly where they stand. Because the last thing you want in an organisation is for people to be using these tools and for, you know, leaders not to know about it.
So getting that policy in place is the sort of starting point that builds those parameters so everybody knows where they stand. And then of course it is, as you've highlighted, Jane, it is about what does a practical application mean?
How do we pick the right tools, what are the educational goals? We want these tools to address? Because, of course, the temptation is to get a bit hung up on the tech. And of course the technology companies are very keen to push you down that route because they've obviously want to buy, you know, particular products or services that they're selling. So I think if education wants to have agency when it comes to AI being structured, getting those policies in place, looking at how you upskill the workforce are really important.

JANE HUNTER 10:37
So do you think the schools and they were self-selected, are they going in the right direction in the schools in the report?

ROSE LUCKIN 10:47
Yes. I mean, I do think they are. There's a big difference. And again, it would be interesting to know your reflection on the situation in Australia.
Clearly, we have a challenge. I've already identified the one around the difference between enthusiasm, sort of theoretical knowledge and actual ability to practically applaud. But one of the other challenges is that we can see a real gap between independent schools and state schools. Not surprising.
We know, of course, all of us that there are in equities within the education system, but actually that is quite a challenge because we know students are embracing the technologies at home. And so there are students out there using the technologies. And if only some of the schools are really able to support them, then I think we risk further problems down the line, both in terms of safeguarding but also in terms of equity.

So, yes, the schools are doing the right thing, but some of them are doing more of it than others. And I think, again, it is that piece of, you know, only 30 per cent had policies in place. So that would be the piece I would say where it would be great to see some catch up. I would encourage all schools to get that policy in place because that's the starting point from which you can then move forward.

DON CARTER 12:12
Rose, can I ask if we stay with the Beyond the Hype report makes a statement about AI policies must ensure that every student deserves a safe, well-structured approach to air education. Do you have a handle on what countries are getting it right?

ROSE LUCKIN 12:30
Oh, that's such a good question. Obviously, there are cultural differences that play into how different countries approach this.
So yes, we can see if we look internationally, for example, you can see that in the U.S. they face very similar challenges due to the nature of the education system, uneven implementation across states and districts.
So they face some of the same challenges like the US of course. If you then take a very contrasting nation like Singapore, much smaller, very systemic approach as a national strategy that explicitly focuses on education, has an integrated platform already in use across all their schools through which they can introduce a high. There's a smaller sort of awareness implementation gap in a country like that. They're very different culturally.
Estonia, again, interesting country. It's got a very integrated approach to digital competence, including AI literacy. It's got a national curriculum that actually is really engaged digitally.
So again, an interesting example, but what works that may not necessarily directly imported into another country, we can certainly learn from it. And then thinking very differently in terms of the equity piece, if you look at Scandinavian countries like Finland, obviously they have a different approach to education, which where there's potentially greater equity in the first place. So they may have less disparities to deal with.
So it's very contextual, but certainly I think you can look at countries that are doing interesting things, as I say, you know, like Estonia, like Singapore. Think about, well, what could we learn from that? I mean, for a country like England, we can't just suddenly create an integrated platform that's used across all schools. But we can certainly look at the way that a country like Singapore is going about educating its teachers, going about evaluating the impact of any aid that it's using, because that's another key piece of the puzzle.
And I think the countries who do well will be those that get to grips with building an evidence base. You know, when I talk to a lot of educators, a key question they want an answer to is how do I know if this use of AI is going to be effective and of course, we don't have a huge evidence base at the moment.
Yes, there's a research literature from decades of research done in academia around artificial intelligence, in education, most of it pre generative AI. We see some reports and project quotes coming out now using generative AI, but it's not extensive, so we don't really have that clear evidence base.
So my instinct is that the countries who do well will be those who really focus down on how you evaluate the impact of the way air is being used and then how you use that evaluation to build that

evidence base so that educators can very quickly look to see what kinds of application areas for AI are likely to be productive for them, for their students. Well, that's really fascinating.

JANE HUNTER 15:46
I want to come back to schools in a moment, but I just want to talk about universities now, because universities, I guess there seems to be a flurry of activity. And I know when we most recently spoke, that was part of our conversation. And I'm just wondering, you know, have universities really taken up that challenge and how can as academics, for example, can we be better supported to work with AI and ensure that our assessment, for example, that we're using with students?
Because it goes to that point that you mentioned before about the conversation, quickly slips into cheating. And even as recently as assignments that I'm looking at within my own subject, I can detect there's actually a genre shift in the responses that students are giving to the questions that they're being asked to respond to. If I look at say, because it's a unit that's being taught about the assessment, I decided it's only being offered for the last time. So I kept the assessment the same as it was in 2023. And I'm seeing very different kinds of responses that I'm actually not certain well, I am certain that it's a lot of it is being generated through AI. So could you just take us through perhaps where you see perhaps universities are with this challenge at the moment?

ROSE LUCKIN 17:27
It's such an interesting question, Jane, isn't it? And I think it's quite varied.
There is still this punitive rhetoric on occasions, but what I would say is that the majority of higher education institutions in the UK have produced guidance for staff and students. I think it's around 75 per cent. And if they haven't, they're in the process of planning to do it in the main, but less so have set up actual staff development.
So that's where I think the gap that the gap is when it comes to higher education, perhaps, obviously there's a huge emphasis on it. But what's interesting is this definitely the most active area is looking at academic policies, obviously, to make sure the academic integrity policies are in place. But as I say, less so in terms of actually setting up programmes of development for staff.
So I think there's a real gap there when within higher education, I think there's a much greater engagement in higher education because students are demanding that they engage with AI, because they realise that that's going to be part of their future work.
But I think in terms of actual practice, call upskilling the staff to know how better to deal with students using AI that is lagging behind. So it's interesting hearing what you're saying, Jane, about you detecting, you know, greater use of AI. And I'm just wondering to what extent do you think those students are fully aware of the guidelines that their institution is providing in terms of what they should be doing? What kind of support are they getting? Do you see in your experience having an interest?

JANE HUNTER 19:21
Yeah, look, we certainly have a lot of policies and, you know, each unit has links to policies. And I did talk to them about that. If they want to look at generating responses partly through that, then they need to acknowledge that. But it's interesting, they haven't done that. And some of the referencing is so old that it's quite left field, and so it's a shame really, because they're just completely different responses to what say to what I had this time last year. So it's an interesting development.

But I was just wondering, Rose, your 2018 book, *Machine Learning and Human Intelligence*, you talked about this idea, about the idea of human intelligence absolutely prevailing in the age of AI, and if we don't, then we'll be certainly impoverished. And because of the AI tools that are available, we're at great risk of dumbing down rather than yet seeing the most valuable resource in the world, which is, of course, ourselves. And so do you think that's actually already happened and is knowledge becoming redundant?

ROSE LUCKIN 20:38
It's a worry, isn't it? You know, Jane, I, I think it's a really important question. Yes, I have, you know, talked a lot about and always stress the importance of using the AI to make us more intelligent. But I think it's quite a tricky situation at the moment because this is without doubt in my mind, a key moment in the history of us as people. You know, as humans. It's the moment when we all either recognise that we've actually got to work a lot harder cognitively, meta-cognitively, intellectually, because we've built these tools that should make us smarter. And yet being honest, the consumerisation of AI brings a rhetoric that pulls us in completely the opposite direction.
If we look at things like Apple Intelligence, it's going to make our life effortless. Well, when did you last learn something effortlessly? We don't, do we? You know, if you really want to learn, it is strenuous mental effort.
So we've now got this tension, I think, between what people like myself believe is needed, which is a recognition that actually now we need to work harder. And yet the draw of the technology is one that suggests that actually we don't. And I think understandably, people see that as attractive. Oh, you know, I can use these tools and will make my life easier. You know, how much do we hear even within education, about workload and workload reduction? You know, these tools can make you more productive. It's an interesting tension, isn't it? And I think it's one that's going to be very hard for us as educators to get right, because obviously we need to find ways of making that extra mental effort attractive because, you know, maybe it's not at the moment, you know, personally and I wrote this in that book when I was doing the section on 'Who Moved My Cheese'. Intelligence tastes good. You know, being intelligence good that, you know, trying to kind of to sort of motivate people to want to use these tools to be more intelligent.
I think that's going to be the challenge for us as educators, because, as I say, we're going to be people are going to be pulled in the outside reaction of, oh, no, we can by five easy a few. And of course, naturally we are lazy.
You know, that's the nature of of us as humans. So I do think it's a huge challenge. And the secret will be to find the right ways to motivate people, to actually find it attractive, to say, okay, actually now I could do so much more. Now I have these tools, I could do so much more, I can think more sophisticatedly, I can understand a lot more. So yeah, I think it is it is a really, really big challenge and I'm going to be very interested to see how it unfolds.

DON CARTER 23:47
Rose You may be aware that the Australian Government is wanting to ban social media for under 16.

ROSE LUCKIN 23:54
Yes, I saw that.

DON CARTER 23:55

Yes. And in fact, while we've been talking Education Review is sent through an article on that about the social the ban. What's your view on that? Is it a good idea.

ROSE LUCKIN 24:08
I can understand it. You know, I think social media has done a huge amount of damage. When we speak to young people, I find it upsetting that many of them feel that they don't know how to manage their social media presence. They find it stressful. They know there's a challenge, but they don't know how to do it.
Sadly, many of them think is somehow going to solve that problem for them, which I, I don't believe it is. I think we do need to be very careful when it comes to AI to think about where we went wrong with social media, because let's face it, we have got it wrong with social media.
Yes, of course there are benefits to social media. I'm not saying there is anything good about it, but it has caused many challenges for young people. And I think, you know, a key question I ask myself, and I'm afraid I don't have a good answer to it, something I'm trying to grapple with at the moment is how do we known what we know now about how social media would play out?
What could we have done, say, ten years ago to prevent it getting to a place where you might need to have that ban in place? How could we have made it a more positive journey? But then for me to kind of translate that to, Okay, so now looking at I what are the things we should be doing now when it comes to AI to stop us getting into that same place that we've got to with social media in terms of the damage.
And of course, I think one of the big challenges with social media, it is connected to AI because of course one of the advantages of the generative AI tools that a couple of years ago really sort of sparked the latest interest is the fact that they are obviously you look into something like ChatGPT or Gemini or whichever one you're using and you know, you're using AI. It's not hidden, it's there.
You might not know exactly how it works, but you know, you're using AI. I think one of the big challenges with social media is the fact that people are were and are manipulated by algorithms. But they don't over they know they're using AI or being used by AI.
So there is a you know, there's a connection to AI both in social media story and, you know, thinking about the future of the way AI on votes for young people.
So I think we do need to learn from what's happened with social media and try very hard to put in place the kinds of regulation for sure, but also the kinds of education that can help people be better equipped to deal with the situation.
I worry, if I'm honest at the moment, that decision makers, politicians, regulators are perhaps, in my view, slightly too keen on the innovation agenda over the safety and regulation agenda. That probably a very unpopular thing to say. But I personally would rather that we were more safety first, even if that risks slowing down a bit on the innovation. But for me it's more important to get the safety measures in place and then you can reap the innovation more safely. So yeah, I do do worry about it. So in answer to your question, I can understand that ban, and I think it's probably a sensible way forward.

DON CARTER 27:44
Thanks, Rose And maybe that's a nice segway into the 30-Second Rant where Jane and I give you a whole 30 seconds to talk about something that might make your blood boil or you know, you feel passionate about. So over to you. Rose.

ROSE LUCKIN 28:00
Well, I think probably my blood boiling will be around the area of inequity. So I worked in the area of AI and education for about 30 years. And for 28 of those years, I believed with passion that I could be a wonderful force for bringing about greater equality.
You know, I can see the way in which AI tools can have profound positive impact on students with special educational needs, specific learning difficulties, neurodiversity, The way in which AI technologies can be adaptive can be super helpful.
The way that we can create novel interfaces for people with physical disabilities. There's just so much opportunity for helping a really broad range of learners of all ages through the use of AI.
And then I find myself deeply frustrated by the fact that actually we look to be heading in precisely the opposite direction because obviously what we're seeing play out is people who understandably have better resources can afford better AI tools. They're getting better education about aid by AI tools and the gap between the disadvantaged and the more advantage just grows and we have less attention to specifically trying to make sure that we use these tools to really bridge that gap. It needs a specific target, says decision, to say, okay, we are going to invest in AI to bring about greater equality. We recognise the risk that inequality might prevail and we as a country, wherever we are, we as an organisation are going to invest in mitigating that risk. That's my rant.

DON CARTER 30:02
Thanks, Rose. Good stuff. Over to you, Jane.

EXTRA TRANSCRIPT (NOT INCLUDED IN AUDIO):

JANE HUNTER
That was a great rant. I love it. Now, Rose, as you know that Don and I are involved in the preparation of new teachers for the profession. And you wrote that wonderful book a couple of years ago now for schoolteachers. Now, if you had your sort of top five for us in teacher education that you would like now graduate teachers to walk out with in terms of how they prepared for the use of AI, especially to use it in pedagogically meaningful ways. What would those top four or five things be? Rose?

ROSE LUCKIN
Oh, that's such a good question. Well, I think the first thing I'd say is I would broaden it beyond just AI and say digital and AI, because I think there's a risk if we partition out AI from digital more generally.
So I think it needs to be part of a digital and AI piece. So that's my first one.
I think the second is it's a bit boring for you, Jane, is data.
I think one of the clear challenges that I see playing out as people engage with different types of AI technology is that all too often the data that they're the data infrastructure within which they operate and their own data literacy is to pool for them to really be able to leverage those effectively. So I would also put in a plea for something about data literacy and understanding the role that data plays with a tool like AI.
And then that sort of also feeds into the third point, which relates to data in a slightly different way, which is about evidence. So one of the things that I encourage organisations to think about when they're thinking about engaging with AI is yes, of course, get that policy in place. So you've got the

parameters. But then think about each instance of voting out, say, a pilot of an AI as an opportunity to collect evidence about what's happening. So for educators, it would be great if they came to the task of thinking, and this is true for, say, educational technology more generally, not just AI, you know, a very simple sort of template. What are the benefits that this technology is going to bring? What are the challenges it might bring? What the resources that I need to have in place in order for me to use it. What kind of evidence can I collect when I'm using it?
You know, I'm not suggesting a randomised controlled trial or something fancy, you know, but what kind of evidence can I collect so that each time, whenever I'm using this, I know whether it's actually making a positive or negative difference.
So that's my kind of third one and I think there's a the fourth one. Is this a mindset one? And I think it is about what you said about pedagogy. Jane I think I would love to see a really good, pedagogically driven approach to AI adoption in that, you know, to have a way in which uses of AI could be organized around different pedagogical approaches rather than the technologies.
But I think there's a challenge there in terms of mindset, and I know you'll recognize this, Jane, from conversations we've had before, because in a sense, you know, innovation around technologies also related to innovation, around pedagogy.
So how do we get that mindset where, yes, it's about having a pedagogically frame and approach to digital and AI, but a pedagogical approach that is evolving and recognizes that the existence of the technologies themselves can bring about an evolution in pedagogical thinking. Do you see what I mean? So it's a sort of a mindset thing.
And then the first one is good old-fashioned change management. I still believe that that if we really want educators to feel confidence in using technologies of all sorts, we really have to help them with that change management process, with feeling able to move on from from where they currently are in a way that gives them agency and that would be very powerful because it would then link to those other four areas that I've mentioned. So sorry, that's quite a big top five. It's not simple.

JANE HUNTER
No, none of that is simple. But look, that's so helpful. And I'm sure many of our colleagues will be interested in what you pulled out there around mindset and really trying to sort of take up the change management. Part of that I think is central. But thank you. I just think we should finish now. Rose And we're going to be able to use a lot of what you've talked about today only in in conversations with colleagues, but also in the in the preparation of all pre-service teachers.

So thank you so much for your time. Robert Rose I really enjoyed the conversation. Thank you.

ROSE LUCKIN
I love the conversation. It was great. Yes, always happy to talk. And if anybody wants to follow up on anything, please just reach out to me.

DON CARTER
Thank you, Rose, for a fascinating interview. You've given us a lot to think and talk about.

ROSE LUCKIN
My pleasure. Thank you for inviting me.

DON CARTER
All right, Rose, don't go away. I applaud you.

JANE HUNTER
Don. The Beyond The Hype that Rose referred to in the interview just now, I liked the way that she emphasised the necessity to have really clear policies. And what I'm noticing just in a bit of a scan across what's happening here in Australia is that the schools that are really moving down this path have already set up very clear policies, and I think that that's going to be a really easy way for them to think about implementation once they've got the policy settings right. I mean, easier said than done, but I think looking to reports like beyond the hype will be very instructive for schools in Australia.

DON CARTER
I agree, Jane, and I too was very pleased to hear Rose talk about the importance of policies that set out parameters that do so in a way that demystifies Gen AI and sets up procedures and can do so in a way that makes people feel confident in using AI and using it in a very positive and productive way. We covered a of territory with Rose today. She certainly is an expert in the area and brings a lot of knowledge and hopefully our listeners will have gained something from it as well.

JANE HUNTER
Yes. And in the transcript for this episode, there will be some very clear guidelines We may not have a moment to be able to included in the audio, but the transcript will detail how our colleagues in teacher education can really look to sort of five areas in their practice. And when you're checking back with our pre-service teachers, you know, have we, for example, talked about mindset? Have we, for example, talked about change management? And she had some very clear ideas around what needs to be part of, I guess, the graduate teachers repertoire as they embark upon their careers in in schools and in education more broadly. So I'd invite our listeners to have a close look at that, but a great conversation. Don, thank you so much.

DON CARTER
It was a great conversation. Thank you, Jane.