AI in FE: opportunity or threat?

In this episode, we're talking about Artificial Intelligence in Further Education and asking if it's something to be feared or celebrated. We're joined by Hull College Principal and CEO and self-confessed digital optimist Debra Gray, MBE.

We're also joined by Paul McKean, Director of Further Education, Skills and Training at Jisc, the UK digital, data and technology agency focused on tertiary education, research and innovation. A not-for-profit organisation, Jisc seeks to improve lives through the digital transformation of education and research.

About Debra Gray MBE
Debra Gray MBE is the current Principal and Chief Executive of Hull College, a position she has held since April 2022. Before joining Hull College, Debra worked in various leadership roles in the further education and skills sector. She is the former Principal and Deputy Chief Executive of TEC Partnership, where in 2017, she and her team secured an 'outstanding' Ofsted inspection, the only college in Lincolnshire and the Humber to do so. Debra was awarded an MBE for services to further education in the Queen's 2020 birthday honours.

About Paul McKean
Paul is Director of Further Education (FE), Skills and Training at Jisc. A key focus of his role is to ensure Jisc meets the needs of providers within the FE and skills sector. He also leads the team that provides Jisc's external training. An adult returner learner himself, Paul is a product of the FE sector. Before joining Jisc, he was a tutor, advanced practitioner, project manager and learning resources and ILT development manager within an FE college, where he held strategic roles for a number of years.

Transcript

Shane Chowen 00:01

Hello and welcome to a special pre-election series of Let's Go Further, the podcast from the Skills and Education Group that challenges the way we think about skills and education. In this series, a collaboration with FE Week, we're shining a spotlight on the FE and skills policy issues that should take centre stage at the upcoming General Election. We'll be asking what we need from the next government and looking at how well our sector is positioned to fight for those resources. I'm Shane Chowen, Editor of FE Week, and I'm delighted to be your host for this series. In this episode, we're looking at the ever-expanding role of Artificial Intelligence or AI in the FE sector. Is it something to be feared or celebrated? Joining me to discuss this are Debra Gray, Principal and CEO of Hull College, and Paul McKean, Director of Further Education, Skills and Training at Jisc. Welcome to you both. So, Paul just at the start of the podcast, it's really important we get the language right on all of this. So, in a nutshell, can you define what we mean by the terms AI and Generative AI?

Paul McKean 01:00

Yeah, absolutely Shane and great to be here. I suppose what we need to focus on initially is the fundamental difference between Artificial Intelligence and Generative AI. So Artificial Intelligence is, I suppose, a broad reference to technologies, which aim to make machines capable of human-like intelligence, while Generative AI is probably a subset of AI, specifically referencing intelligent machines capable of creating novel content. So it's, it's things like ChatGPT, Google Bard, Google Gemini, these types of tools that enable you to engage in more of a conversational type way with the technology. From an AI perspective, you know, you probably use it every day. You probably don't notice the likes of Amazon have used AI and machine learning to analyse your previous shopping habits, to predict your next purchase, whilst, as I've said, things like ChatGPT, Google Gemini and so on, really engage you in conversation, using prompts, start to get better answers from the large language model that is Generative AI.

Shane Chowen 02:09

And so, in education, it's that more generative subset of AI that we're seeing more and more of?

Paul McKean 02:15
Absolutely certainly from an end-user perspective, a practitioner or a learner is using Generative AI more than the sort of analytics behind deeper machine learning and Artificial Intelligence so yes.

Shane Chowen 02:26
Fantastic. Good to get that cleared at the onset. So Debra, as someone that runs a large FE College, is Generative AI something to be feared or celebrated?

Debra Gray MBE 02:36
Well, that's a really interesting question. Fair disclosure - I'm a massive digital optimist. But the answer to that question really isn't that simple. So, there are lots of reasons to celebrate AI. I think it'll bring huge advancements in health care, disease diagnosis, outbreak predictions, personalised medicine, potentially saving millions of lives. It brings huge efficiencies and innovation. Colleagues in colleges like Bishop Burton are doing amazing things with precision agriculture and AI. It promotes accessibility, so, it's a real leveller. For people with disabilities, it helps them integrate into the world of technology. And I think it's got massive potential for economic growth as well. But that's only one side of the story. There are also challenges with AI. Job displacement is potentially an issue for us, or certainly job changes and changes to the labour market. There are ethical and privacy concerns about how data is used. And I think some people as well worry about loss of control with AI systems, if they're integrated into everything, how do we maintain control over our own systems? So, I think ultimately, it really isn't something to be feared or celebrated. It's just a tool, so we can develop it, we can manage it, we can integrate it into our lives. We can integrate it into the economy and integrate it into society as a whole. But while we integrate it, we do need to show responsible stewardship of it.

Shane Chowen 04:10
So can you tell us a little bit more then about how you've integrated AI in your role as a college leader? Before we go into some of the sort of nitty-gritty parts around teaching and learning and the role of teachers, for example, strategically, where and how is AI now fitting into your, you know, discussions around strategy as a College leader?

Debra Gray MBE 04:29
Well as Paul mentioned earlier, I kind of use AI every day and most people do without realising it. So, smartphones, virtual assistants, kind of camera and image enhancements, social media, Google Maps, my online shopping certainly, I'm with Paul on that, gaming because I'm a massive gamer. So we're all using it every day a lot of the time without realising it, but very specifically in my role, I use it for research, task preparation, strategy preparation, image generation, brand ideas if we're considering kind of new brands or new

ways forward or routes to market, creative support, wellness support, suggestions for agendas for meetings, I upload reports to it all the time and say can you just synthesise this for me really quickly? Data analysis. So honestly, the applications are endless. We've also been using it with training our SME businesses locally, small to medium enterprises and micro businesses in Hull and East Riding. So, we're using it really every way we can, I can't imagine a part of my job at the moment where I'm not using it perhaps other than the really interpersonal stuff.

Shane Chowen 05:45
That's really interesting thank you. We at FE Week recently did an investigation into the use of Generative AI by students. And I was really struck by a comment from a sixth form teacher who told us that he just can't trust any work a student has done from home anymore because of the amount of tools that they have access to, the students have access to, around Generative AI and generating content. And he didn't trust the detection tools that he has access to as a teacher. And I was really, really struck by that. So, Paul, I'm just wondering, from your perspective, how can teachers detect whether a student's work is theirs, or has been done through AI?

Paul McKean 06:28
Now, that's a very interesting area for discussion. The first thing I would say is before thinking about the technology and AI, is how do teachers currently assess whether an assignment is an original piece of student work or not? They obviously know the learner. And they can probably compare the piece of work that they've submitted to something that they've done in the past. And that's, you know, a judgement that they should continue to make. I would say we need to be doing this in the first place, we don't need to be attempting to use things like AI detection software, which have been proved to create so many false flags. Because in effect, Generative AI and going back to sort of how it operates, it generates one word at a time, it's trying to write in a very similar way to how we would form language. If you are a natural English speaker, you have the ability to create words and flows because of your, you know, emergence of language in that regard. However, if you are a speaker of a foreign language, as a first language, and therefore English is your second or even third language, then you tend to create your phrases, your sentences, in a very similar way to a Generative AI. So, it's quite possible, and it happens quite regularly, that AI detection software will false flag as AI generated work from people who have English as a second language It's an area of concern for us that you need to really look at the detail of the piece of work rather than how it's written. And the AI detection, if you like, will look at how it's written, rather than what it contains. Quite often, you can easily detect that a learner has copied or used Generative AI to create a piece of work because halfway through it will say 'I'm a large language model, and I can't touch a rock' and clearly the learners simply copied and pasted that information across. So, I

would say use the skills that they already have to attempt to see whether that learner has created that piece of work and ask the question, you know, how have you created this, where's your evidence, what are your reference points and ask in a bit more detail about how they've come to the conclusions that they have. And it will become quite easy to determine whether it is an original piece of the Generative AI but some other means to create that piece of work.

Shane Chowen 08:58
Some good tips there Paul. Debra just before I bring you in, I just wanted to ask you, Paul, from an organisation that has, you know, huge oversight across the technology infrastructure across education and you know, you're really in the weeds when it comes to what colleges and universities are capable of in terms of their technological infrastructure and capacity. From the outside, it looks like if teachers are already saying they're in a position where they can't trust the work that students are producing outside of controlled environments like exams, then isn't the education sector already on the back foot?

Paul McKean 09:35
I don't think it is. It simply suggests to me that we aren't assessing learning in an appropriate way. And I think that's been a question that's been around for a long time. Are we assessing the same as a Victorian practitioner would have assessed learning way back when? I think we do need to reimagine assessment and potentially this sort of paradigm shift in the opportunity available not only from the way that learners create their content, or the way that we set assessment and indeed, assess learning, Generative AI supports that. I think Generative AI tools are already being adopted in the workplace, and therefore there's an expectation that employees will be able to use them. So therefore, we need to provide young people and adults who are upskilling, with their digital skills, the skills that they need around AI literacies. So, as that's what they'll need to utilise in work, we really need to think about how we're assessing, and does that fit with the workplace that young people and indeed, adults are going to move into?

Shane Chowen 10:38
Debra, how does all that sound to you as someone who is, you know, a leader of education, a leader of teachers, to what extent has this crossed your desk at Hull College?

Debra Gray MBE 10:47
We've made a point of having it cross our desk. That's part of the reason I think we don't feel on the backfoot with this, we made a conscious choice to embrace it and work with the tools. So students are using AI in the same way that staff do, you know, in their normal day-to-day lives, often without being aware of it, but also, to research assignments to support assignment structure, consider different viewpoints, create inspiration and

ideas, evaluate the feedback, they're given, simplify ideas they haven't really cottoned on to the first time around and sometimes even spot gaps in their work. I think this is a real inflection point for us in terms of assessment methods. We can't keep using 19th Century assessment methods for the purposes of a 21st Century economy. So, setting students written work, telling them to go home and do it and bring it back. It's been dated for a very long time. And my view on that is the alternative is not just nationally dated exams, which have been failing students from the moment they were created. There are a 100, other different types of assessment methods. And it's time for people like us to get creative. So, I'm with Paul on that.

Shane Chowen 11:58
All of that sounds great. But I guess from a teaching and learning perspective, Debra, how are your teachers, how are your curriculum managers, and how are your governors, really, really sure that students are getting the learning outcomes that they need in this Generative AI world?

Debra Gray MBE 12:12
Well, because we quality assure it and we check it and part of their learning outcomes are about using AI. It may not be on the qualification, but Paul's absolutely right when he says it's an expectation in industry, and it will only become more so. So, if we don't embrace these tools and show them to students, show them the art of the possible, actually, we're letting them down for their future. So, from our point of view, it's how you apply AI, to show them how it could help them in life, in work and for, you know, a 40, 50-year career, which could be sectioned up into six to eight different jobs. So, for us, it's a really powerful tool, which can benefit students. So, I focus much more on the benefits than I do on the moral panic of how this might change assessment methods.

Shane Chowen 13:01
And from your perspective Paul who and what needs to catch up to get ahead of ensuring that sort of everyone's approach is as progressive I guess, as Hull College?

Paul McKean 13:12
I mean, that's a's really good point, it really fits in with Jisc's role as the vital sector, partner for digital data and technology. It's our role really to support colleges to embrace the affordances that Generative AI tools and indeed, other types of tools provide. And to this end, we've recently published alongside the Association of Colleges, technology reference groups, six guiding principles for colleges to follow when using AI. So, this is providing them with the scaffold if you like, and the permissions, the understanding of how they go about utilising these tools, and this is really about ensuring that they adopt it safely. They protect learner data, which is really critical. And just to say something on

that, the free tools that are available that quite a lot of people use are being used to train the live language models. So, you really risk if you are using these tools with learner data, or even staff using them to create content losing staff IP. So, our guiding principles really provide that scaffolding, as I said, in information, but I think one of the things that we really need to encourage is risk-taking, but not risk-taking in a negative way, you know, risk-taking to see what the potential opportunities are. And, you know, Debra and the team at Hull, are really embracing that risk and coming up with some amazing solutions. You know, and I'd urge Debra to talk about some of the examples that they use in Hull because they are amazing, and they're tackling real-world problems. This isn't about technology. It's about the problems that they're trying to solve and technology happens to be the solution to their problems.

Shane Chowen 15:04
Just before we move on from this assessment point, we have a system in FE in this country. And we're going into a general election, which is the context for this podcast, we have a system that's very tightly regulated very controlled from the centre, you know, educationalists and teachers don't have all of the levers at their disposal around assessment, because they're essentially given a bunch of rules to follow from Ofqual or from awarding bodies. So, from what I'm hearing from both of you is that perhaps the next government should maybe be a little bit more trusting or a little bit more innovative when it comes to the regulations around assessment in FE. Debra, does that chime with what you're trying to achieve at Hull?

Debra Gray MBE 15:41
Yes, I think it absolutely does. The notion of nationally dated exams is really problematic for a lot of students. And I think if you have professional educators, they need to be given the freedom to assess in a way that suits the learner, suits the industry and suits them. You see this happen all the time in higher education institutions, particularly where they've got awarding powers. So, they can design, they are trusted to design their own assessments. There's a real question about why FE isn't, and that's a whole political thing that really has very little to do with AI. But as a sector, we should be trusted, we are reliable, we deliver despite the challenges, and we are really the engines of productivity. So, we need that freedom.

Shane Chowen 16:31
I'm going to move on to inclusion and equality of access, because one of the other concerns out there at the moment about the use of GenAI (Generative AI) is that there might be some types of students, students from particular backgrounds, that may be in a better position to benefit from it than others. Paul, I'll come to you first. Is there data on this? Is there research?

Paul McKean 16:50
Not really, that I'm aware of, I think that anecdotally, we're certainly seeing the use of Generative AI tools, supporting levelling up, the ability for somebody to have a personal assistant available to them, that they can challenge and it can support them at will, so to speak, is really supporting the, if you like the less able learners. We often talk about people who have a support network that can help them achieve, they've got a, you know, an uncle or a brother or sister who works in industry that can help them with the particular curriculum that they're currently studying. Whereas there's learners who don't have that support network, don't have anybody necessarily to go and ask. Now we have Generative AI tools that can really support people, they can interrogate the Generative AI to get responses to check whether the work is up to scratch, whether it makes sense, how it can be improved. So, I think the Generative AI is certainly levelling up. But this is an area that I'm particularly interested in, as I'm a member of the All Party Parliamentary Group for Data Poverty. And it's, it's a concern to us that, because of the sort of pervasive access now to Generative AI tools, it could potentially increase that digital divide, if somebody hasn't got access to a device, or data, or indeed can afford to access the premium Generative AI tools that are out there, we are in a position now where we should be encouraging, as Debra has already said, for people to use it, there's going to be an expectation that they use it in the workplace. But then there is that position that a learner who doesn't have access is going to have a if you like a worse learning experience. Now while it can level up, particularly learners with learning difficulties and or disabilities that we've seen some excellent use of Generative AI tools to support them as Debra has already said, a lot of the AI tools that are out there either kind of don't realise that you're using them. The thing we need to consider and certainly any incoming government needs to consider is, how does it ensure that we have fair access for all, you know, how do how does a learner benefit from these technologies via you know, the device and the data access, which is already a particular issue across large areas of the country.

Shane Chowen 19:15
Debra, are there things that you've had to do at Hull to sort of mitigate against some of those risks to make sure everyone has a fair shot.

Debra Gray MBE 19:20
Well, we operate in one of the most economically deprived corners of the UK. So last time I checked, I think Hull was about fifth on the index. So, we deal with this in an intersectional way every day. Our students come to us with all kinds of barriers and it's ultimately our job to help level that playing field for them, and then accelerate that so they can stand head and shoulders above anybody else in the sector, or whatever field they choose to go into. We make sure this is a core part of what they do. If I give you an

example, we recently won the Jisc sponsored beacon award, for the use of technology and we did this via use of Artificial Intelligence in the form of Microsoft Translate and PowerPoint live with our ESOL (English for speakers of other languages) students. So these are students who have English as a second or third language, but often have come to the UK in very traumatic circumstances. And we deal typically with about 1000 of these students every year. And we have no idea what their support needs are, they can't communicate what's happened to them on their journey. And through the use of AI based technologies like Microsoft Translate like PowerPoint Live, we've been able to communicate with them in a much more immediate, much more intimate way, they can tell us some of the things we need to know, so that we can get them the help and support they need. And we can help them adapt culturally, to life in modern Britain, in a much, much faster way than we ever could when we were using kind of much more traditional classroom methods.

Shane Chowen 20:55
That's really fascinating. And sounds like it could be a podcast episode all on its own. I do want to move on to talk about the role of teachers, because there's been clearly loads of advances in the use of AI to reduce teacher workload to support with, you know, routine activities around planning, marking, to develop, you know, really individual personalised learning plans for students. I'm just wondering, Paul, and then I'll come to you, Debra, is there a need to, you know, fundamentally redefine, I guess, the role of teachers in FE?

Paul McKean 21:27
Absolutely, we should be redefining. It's almost similar to the role of assessment, you know, is it appropriate and effective today, as it was many years ago, when it was kind of first introduced? And I think the role of a teacher, we've talked about the sage on the stage, moving to the guide on the side, and I think the use of these tools does definitely support that kind of approach, more of a supportive role than a, you know, a didactic delivery from a teacher. And I talk about the need, you know, in society to have what I call digitally augmented citizens. And I certainly think we need to have digitally augmented practitioners. What effectively I mean by that is for the teacher to be supported by technology when it's appropriate to do so, basically freeing up their time to spend on the personalised support that they're able to offer to the young people and adults that they're supporting. I'm pretty sure the vast majority of teachers didn't come into teaching, to do all the bureaucratic paperwork that is now associated with it. They wanted to teach they wanted to support learners, they wanted to provide that one-to-one support that almost seems lost today in the class sizes that we have. But technology can enable that to happen. And the positive sign is that we have tools. Jisc have done a recent pilot with FE colleges naturally now moving into HE, with TeacherMatic and that's effectively a Generative AI tool that has, if you like, pre-written prompts - they're prompts the way that use questions or engage with a Generative AI or large language model. And it can do

things like create an assessment plans, a scheme of work, it can analyse a resource and create 10 multiple choice questions, the questions can then be exported into a variety of other tools that will then automatically mark. So, there are a lot of tools out there that can actually support the grunt work, if you like the, you know, the more mundane tasks that teachers do on a daily basis. We are moving into the space of automated marking and assessment. But I wouldn't say we're there yet. There is definitely an opportunity for Generative AI tools to, if you like do a first draft of marking, and provide some guidance for a practitioner on suggested feedback that they would provide. But we would always at this stage encourage practitioners themselves to probably read and digest the submissions that learners have provided and give their honest, objective feedback. There's definitely a role for technology and teachers to come together.

Shane Chowen 24:06
Debra, what's it like to be a teacher at Hull? And do you think that there is enough support out there for teachers to really get ahead of this on behalf of their, for their students and also become AI literate?

Debra Gray MBE 24:18
There is support out there. It varies from institution to institution. And we've certainly supported a number of institutions with developing their own capabilities. But I'm with Paul on this, you know, we've deployed TeacherMatic across the board really. We bought 150 licences, so any teacher who wanted a licence could have one. And it although I don't think it helps us redefine the role of a teacher, I think it puts a really powerful tool in the hands of a really good teacher which elevates their practice. You're absolutely right when you say nobody goes into teaching because they love the paperwork. When some of that administrative burden is removed from them, they can get back to why they did come into the job which is to share their passion, ignite a spark, train the skills and build really meaningful relationships with our students.

Shane Chowen 25:05
Debra, thinking about all of that in the round then and this sort of enhanced new role of teachers, do you think there could be in the future a scenario where we actually don't need as many teachers as we currently need in colleges?

Debra Gray MBE 25:18
No, no, I don't think so. We've got really high levels of occupational exposure to AI. But that isn't the same as AI replacing teachers. All of the labour market data points to an increase in the labour market needed in education. Teaching is a really, really complex job. It's not just knowledge transmission. So AI can be great at the really simple stuff, but

nothing will ever compare to a really experienced classroom teacher who can hold a class of disaffected young people in the palm of her hand, while explaining what a mirror weld is, or getting a construction student who's failed GCSE maths three times, finally, over that grade boundary for a four. So no, I don't think this will replace teachers, but it can augment their practice.

Shane Chowen 26:02
Fantastic. Thank you. So my final question to you both, with everything that we've heard in mind, and considering that the next government will oversee more AI all over the economy, not just in education, what would you say to the incoming new Secretary of State for Education about how to take this to the next step, the next level, in FE, Debra come to you first?

Debra Gray MBE 26:21
I would ask them to invest in us. We are worthy of investment, and we give spectacular return on investment. And that investment should really be used to develop AI literacy across students, and staff. It should be used for teacher training and support. It should be used for innovative curriculum development, assessment and resources. But also, because as an FE college, you know, around two thirds of my learners articulate directly to industry, there really needs to be an industry component to this as well. Small businesses in particular, are often so focused on keeping the wolf from the door, they don't have chance to horizon scan. And that's where investment in our sector, that we can then deploy to these SMEs and micro businesses, can really help our local economic infrastructure.

Shane Chowen 27:10
Over to you, Paul.

Paul McKean 27:10
I think we need to ensure the Secretary of State endorses the safe and ethical use of AI and we look to adopt it where it is making a tangible difference to teacher workload and the learner experience. It isn't using it for using its sake. What I think one of the key roles that the DfE in England should have is about sharing good practice. It's about shining a light on the holes of this world, showing people how they can adopt it, the barrier to uptake is very low. AI literacy is effectively the only barrier. So, I think, including AI literacy within New initial teacher training is also a key thing that we need to do to make sure they the upcoming and emerging teaching workforce is able to take advantage where it can.

Shane Chowen 27:58
Great. Thank you, Paul. And that is all we've got time for this episode of Let's Go Further. I want to say a huge thank you to my guests, Debra Gray and Paul McKean and to you for listening. We hope you enjoyed the conversation and that it's got you thinking about what we in the FE sector should be asking of our next government. If you have a question for us or a comment on what you've heard, please join in the conversation on social media and remember to subscribe wherever you receive your podcasts to access earlier and forthcoming episodes of Let's Go Further.