## Pedagogy Matters: Episode 27 Transcript

Hello and welcome to the latest episode of the Pedagogy Matters Podcast. The purpose of this podcast is to bring to the fore some key topics of conversation in relation to learning and teaching, to discuss and breakdown aspects of practice and provide snippets, advice and guidance is to help integrate these into our daily practice. Today I'm delighted to be joined by Kenji Lam, Digital lead here at CDN, where we're discussing AI Kenji. Good afternoon, how are you? I am good. And I haven't come alone. I've brought a I with me. That's one way to whistle. Already from the outset, you've kind of brought a I with us. Well, in that case,

I think what we'll do is hang. Fair enough. For now. What I what I think I'm Keenan doing. I'm sure this is all is to a complete novice. What is a I? What is it? What does it means? There's lots of talk about the minute, but what does it actually mean? Stand for yeah. Over to you. Artificial intelligence AI is when a machine has been designed to mimic human ability in some kind of way, and this has been going on since the 50s. I remember when I started studying computing and people were talking about AI and I had this amazing idea as to what that actually was. At that time it was probably visions of Hal in the Space Odyssey 2001, or in my case de Rymon,

which was a robotic cat. But when I started learning about it, it turned out that AI was really a set of fairly complicated rules, almost like a series of if then statements, and I was slightly disappointed by the whole thing, but they worked really well. There's a famous example, I think back in the 60s called ELISA, which played the role of a computer psychotherapist, which was good because basically you ask a lot of questions and you get the person to talk about themselves. So it was based on this kind of pattern matching framework where you would type something in. It would pick out the keyword and then spit back a predefined response or a question to tease more information out.

So if you said, ah, I'm feeling great today, it would come back with oh why are you feeling great? And it would simulate this kind of conversation. From there, we've moved on quite a bit. Computers use machine learning and deep learning, which allow them to really learn from their own input and experience, and improve the models as they go. Michael Webb from Jsk, who's speaking at our AI and college education event. He really explains how the current systems. Work and operate in a simple way that you know using words that someone like me can understand that's interesting and that and you can you've alluded to a couple of things that I've kind

of made it more prevalent recently.

But yeah,

what I'm keen on pick is, is how has it evolved over the recent years kind of so you've mentioned there's loads of examples. Could you give us kind of one or two examples of as to where it's part of our common place and kind of where it came from and kind of and how we've got to where we are now? So the AI is everywhere, working behind the scenes where we probably don't know it's there. If we're searching for stuff on Google, there's definitely AI that is bringing back or helping to bring back a list of results that are more relevant to what we're probably looking for. And those results have got

better and better over time,

although it's incremental,

so we might not always notice

the effect that it has.

It's in everyday life.

I'm diabetic and I go for annual

screenings for my eyes just to see if

there's any problems being developed.

And typically they take a

couple of pictures of your eyes.

Then a consultant or a specialist

will look to see if there's the

potential of damage or problems that

are coming up that they can address.

And that's, well,

I kind of assumed that it was always just a.

People doing that.

But I was at my last visit,

I was talking to the specialist

and she was saying, ah,

we've been using AI for years.

So we use this program called

Autograder and it basically looks at the scans and it picks out or flags the scans that they think have problems. And then a consultant will come double check it and sign it off. And she was telling me when it was first used, people are really skeptical. It won't be as good as a human threat to my job and all the kind of usual stuff. But they decided, apparently at the time only to use the auto grader. During peak demand, when there was a rush and you just needed to get things done, it was an extra pay device. And she said the strange thing is over the years it's got better with more data and more examples, better training, better software,

it detects a lot more incidences and it's not exactly comparable to a consultant, but getting closer and the thing that's changed the most is attitude, really. Just the way it's become accepted as another tool for me. So I have a background in ESOL. I started out as an ESOL teacher. That's my educational root in before I moved over to technology, so I've always appreciated just the humble spell check. To be fair, I'm an English teacher, but spelling. There are times you know when you're typing fast. I'm telling you, and I used to work, I used to manage a group of teachers, and I swear they used to stare at all of the emails I used to send out and just wait for all the

inevitable slip up that I made.

So spell check has certainly saved my life,

and that's only got better.

You can see it when you're typing

emails in Google or Microsoft.

You can see the way it's suggesting

to complete your sentence.

And more often than not,

I'm just hitting enter and

accepting the suggested phrasing.

Those things just increasingly

I've come to accept,

and it works well in things like

speech to text or voice recognition.

I remember as an English teacher,

I used to teach lessons on pronunciation.

I'd write out a sentence.

And I would get my students to read

it out to the computer through some

dictation exercise so that they could

replicate what was written on the screen.

And in the early days, this is going back a couple of decades, you would find that the speech recognition wasn't that great. So unless you enunciated each word in a particular accent, North American at that time, because I was in Canada. It wouldn't really pick up on what you were saying, and students had to struggle to sort of copy the accent that the computer was expecting. And too much frustration. It was a fun exercise, to be honest, and it really got them to concentrate on the particular pronunciation of particular sounds. So it was good for me, but the technology beat me.

I mean, over time.

Those algorithms processing that natural language AI has meant that now when you speak, even if you mess up on the pronunciation or if you've got a strong accent, increasingly more accents don't really trip up the computer so much. And those exercises are quite difficult to do now. Not always, but they can be still quite difficult, but it just shows how the AI has progressed over time. It appears in things like advertising. This is not very teachery, but it's something that causes me a bit of frustration based on what you're looking for. Searching for, buying, you're always getting presented with.

Oh, why don't you look at this? Wouldn't you be interested in buying one of these? And Amazon is definitely one of the major culprits here. It does it far too well for my leg. And you might want this, you might want that, yeah. So it's funny because especially and again, I've always been a big tech lover, but I've not been immersed in tech like you have across your career. So I guess in my simple world, this has obviously evolved significantly since going to these of tech become a lot more mainstreaming ideas as well as with our teaching lives. Is that fair to say? And fair to assume? Yeah. And and to be fair, the best technology is probably

the tech that's invisible.

That you don't see this just happening and you don't question it that's that's where it makes a real difference. I think we just accept it or we've grown accustomed to it over time. But yes AI is everywhere. So you could have touched upon sorry ChatGPT and obviously which I'm going to say came to prominence to the to the non tech experts kind of really around December last year as. The answer to AI and the solution to Al and look, this came out of nowhere, surprised that it's going to fix your world change or whatever. But it's not quite as simple as that, is it? Because obviously it's been around for years and it's been lots of other AI platforms there as well. So I know when we were talking

about this initially,

you said actually version 3.5.

Is that what you were saying?

Is that correct? Technically, yes.

Yeah.

So tell us a bit around that in particular

and kind of I guess where we are now.

Obviously we've got to chat

some context in terms of where

we are now in terms of AI.

So yes, ChatGPT arrived November last

year and it's made a lot of headlines,

just people fascinated by what it can do.

And the GTP model at the time was

released earlier, people had played

around with it for a year or two.

People knew that it could create.

A song, a poem, write some text on a subject.

But when the general public got access

to it in November and started to

play around with the latest version,

well, at the time, 3.5.

Now it's moved on to four and people were just so impressed by what was being produced. It was to another level, and the speed of the technology moves very quickly. So the first examples were really around those kind of wow. It can write a short essay. It can have a dialogue, something that people overlook. Usually they just ask one question, get one answer and stop there. The real thing about ChatGPT is the chat bit. It's about the fact that you can have a dialogue and continue talking about the same subject, referring back to things that you've said before, and the conversation continues and builds that in. That whole experience was something

close to the sci-fi characters that we'd read about in the past. Now, it's not the only model that's out there. Facebook, Google, others have these and other platforms have been developed, but this is the one that we got direct access to, that we could play around with and. The GPT its model. It powers lots of things, everything from language translation to content creation. These tools have been available through other paid services, where you could get it to write short blog posts on a variety of topics. And I have friends who are writers for the web, and they're continuously. Churning out stuff that makes it sound worse than it is,

but they have a lot of pressure to produce a lot of material for the insatiable appetite that is the web and tools like this, which allow you to produce something that's almost copy ready, just needs a bit of tweaking and they can put it straight up there. It's there, it's being used in industry. The headlines really came about when people started. Asking ChatGPT to answer that test. Basically they took questions from whatever test paper was around, and they got ChatGPT to come back with the response and the response, although it wasn't scoring A's or whatever at the high end, it was good enough and it was much better than people had been expecting. And I think that started

the whole discussion around.

Worries around what it would mean for assessment, education, schools, colleges, universities and that has driven a lot of the attention. But the technology now it can be applied in so many ways. Another popular area is coding. This is available through various services, but again, open Ai's. Copilot, which is available through GitHub and free to students, allows you to either have code explained or generated through the tool, and it's impressive. I mean, you can do the same things through ChatGPT as well, but in copilot it's what they call a pair programmer now acts as a pair programmer. And if you're on your own and starting out. It's pretty impressive that you

can just describe what it is you're looking for something, a piece of code to do, and it will generate a pretty good example of that code. It's not perfect. There are elements where if you think about the cybersecurity or the efficiency of the particular code, or it doesn't quite understand what your needs are, but you can refine it as you go through it offers a brilliant starting point alongside that, the. There are areas such as there's a great example of film production, which is not something you might think that a text generator might be able to do. But there is an example of a studio that produces a short film through ChatGPT. So basically they get GPT to write a script, but then also write director notes to direct the production of the short film. And I'll add a link to show you what they came up with. It's not brilliant, but an interesting adaptation of the technology. And of course, when we're talking about teaching, you can generate useful teaching resources through this. For example, Richard Scott from Ayershire, who's again speaking at our event. He'll go through the process of creating lesson plans. Which is a really popular topic at the moment, and he's been building lesson plans in his own curricular area, but also working with

staff across his college,

looking and exploring about different lesson

plans for different curricular areas.

And what he's generating

is really interesting.

There is creativity there,

like coming up with approaches and ideas

that you might not first thought of yourself,

but giving you that sort of

starting point to build on it.

Yeah,

the possibilities seem to be endless.

I think that's fascinating.

I know kind of from our conversations you've

shared look it's not just chat I always got,

but it's not just ChatGPT.

It's it's immersed everywhere.

You've talked about imagery and it's

we kind of integrate into Bing and

then all sorts of different kind of

avenues now would become part of our

daily work and our daily practice. Back and AI as well as ChatGPT or something else and plus there are many other solutions out there right now that are currently active that can be used as part of our practice. There has been a lot with images and AI and they've been around for a while now. You'll see a lot of applications that can take something that's in your existing image and rub it out as if it wasn't there so. You're taking a picture of a crowd, but one person you might not want to be there. You can almost magically rub your cursor over that person and they disappear and the background that was behind them suddenly, magically appears. It's always impressive when that happens, but that's AI making an

educated guess as to what.

Should be behind that

person and replacing them.

The tools that have come onto the scene,

like mid Journey,

which is a popular one,

Dally II version two now and stable

diffusion are image creators that with

a simple text prompt can produce an

entirely new original piece of art.

Really.

Although when I say simple,

it is possible just to type in text

describing some scene in your head,

but what comes back often needs a

lot of tweaking to get the actual

image that you can use and oh,

last year Dean from.

Fife College had helped us produce well.

He produced a new image,

a new logo for our Scottish

Moodle user group.

Smug.

Literally the best acronym

that we've ever come up with.

But we'd been using this logo for years.

This backdrop every time we use presentations

and record content that we put up.

And Dean had come up with this

new image that looked great.

And he produced it entirely

within mid journey.

That kind of image creation

is going to be useful.

I mean just the ability to produce

something quickly and original

based on any kind of text input.

I mean, you could put anything,

poetry,

anything that just flies into your head.

The computer will produce something

interpreting the language.

To create some really original stuff. Now there is some controversy in that these models have been trained on millions and millions of images in some cases. And the images there's a copyright issue because the authors haven't been consulted when the training took place. And there's a question as to what. Well, what's the legality of that? And that's playing out in the courts just now, although the genie is out at the bottle, so these tools are not going away. And as well as using these tools by students and staff to come up with new images, maybe to spark imagination around a story you're creating or as a kickoff point to get students to write an essay based on some image or idea they have practical.

Uses too.

You can for example you can get, you can get an image creator to develop a website design type in the kind of website that you're looking for the kind of pages and it will spit back like an amazing after a bit tweaking a design that just looks ready made to go up onto the web I mean. You'll have to code behind it, but other tools will produce the code for your website. But that imagery is. It's such a useful starting point. But if you want to see a good examples of how AI is used more broadly, JSC have their National Center for AI and on there there's an explorer part of the site. That takes you through how AI has been used for kind of image capture, image generation.

There is ChatGPT and other tools.

How you can use it creatively

in educational sort of.

It is like when you're writing an essay,

start out with an outline and

then build from there.

There's lots of really interesting

sort of examples to play through,

and some of it requires an institutional.

Login.

But if you're one of the colleges

or universities that, well,

all of them are on the just network,

they'll give you access to a

really good set of examples.

And that's another aspect of these AI tools,

accessibility.

It helps with things like Apple Voiceover

when you've got all of that text to speech,

the tools now.

Will recognize words that

are in our daily view. When we look at signs, the AI will determine when part of a picture includes words, and then read those words out to somebody who has visual difficulty, for example. That kind of optical character recognition, or CR, is being part of the suite of tools that are available to us even now. You'll see the latest ones. When the PC looks at any scene, they can start to pick out and identify the objects in front of it. Recognizing people. You see that when you use your camera on your phone, or any reasonably modern camera now will pick out the face and zoom in and make sure that that's focused upon.

When you take your pictures, it's it's all over the place. I keep saying that, but it's it's so true. One thing I should say is that it's not always reliable and that was the next point that comes. This was kind of a little player not knowing yet the level that you have. You're absolutely right there. You know, for me it allows you to ask some questions and kind of curate some information and kind of gather some information, but. I'm still the belief then you have to kind of interpret that in your own way, put your own stamp on that and kind of reframe that and for how you want to use it. And that's just kind of one example as to how it can be used there as well. But as always mindful of time I think it's

we could talk about for two 3-4 hours. And the good news is we can do kind of in the coming weeks which we'll talk about shortly and you've kind of alluded to a little bit about kind of what the future look likes looks like rather. But I guess we'll be fair to say we don't actually know what the future will look like in the space because. You know, the phrase used a lot is kind of genie out the bottle kind of first with technology and now with AI and kind of how quickly it's evolved, how it's adapted, but also how quickly. I'm going to say mainstream audience has picked it up as well and kind of being keen to explore and kind of look at how it can be adopted in the real world. But I guess at this point in time, now, March 2023,

what's the future look in this space? So there's going to be more choice in AI. Microsoft are already expanding their AI offer into word outlook. All those things are going to come soon. Google are doing the same. They are putting their own AI models into their own services. And there's a lot of commercial companies who are just rushing to market with solutions. And even though AI isn't perfect, may never be, it's getting better all the time. So all these features will just improve. There's a quote going around by a guy called Santiago who says AI is not going to replace you, but someone using AI will. Okay. So that's it makes it sound like a threat, but it's not.

Al is an opportunity,

and it's going to be.

Everywhere.

It's something I suppose,

that we have to embrace,

and we have to show our students

how to get the most from it.

And the best way of doing that is

really just playing around with

it just now to see what it can do,

to see what the possibilities are.

Because people are coming up with

new ideas all the time, I suppose.

It makes sense.

I did say I was bringing AI with me.

So this is not ChatGPT,

but another model called well,

which has a voice interface called Alice,

and it's produced by a company called DID.

Always getting that wrong anyway, right?

So let me ask Alice a question and let

me just turn that on here.

Okay. Hey, Alice. Can you tell me how AI is going to change college education? Sure, Kenji, the future of AI in college education is very exciting. Many experts believe that AI will revolutionize the way students learn and how colleges operate. AI will help personalize education and provide students with a more engaging and interactive learning experience. Al powered tools can help educators to identify areas where students are struggling and provide targeted interventions. Moreover, AI will help colleges to streamline administrative tasks and optimize their operations. Colleges will be able to use Al for tasks such as grading, scheduling,

and course planning.

This will free up time for educators to focus on teaching and research and ultimately improve the quality of education. Yeah, you know, I did think about just getting AI to answer everything you asked me and that's excellent but frightening at the same time, you know. And yeah, and having worked, you know, across education for obviously not for too many years, that's kind of a negative phrase. But kind of 161718, I forget how many years it's the workforce is currently diverse in terms of digital capability, digital awareness. So, yeah, it's incredible, frightening at the same time. And I think that's gonna help us

bring to close this conversation,

not that I want to,

but just mindful of time is you've

alluded to a couple of points

in terms of the final point

for me is gonna where now how,

where do we start, what do we do?

You touch the point.

Yeah, actually go play with it.

Go miss yourself in this space.

Talk to people.

Understand what I can and can't do.

Speak to these students to

establish what I can and can't

do and how they're using it.

Speak to industry again to understand.

And that will be ever changing in

terms of kind of how they currently

is and how they will be using for

the future because they'll be we're

preparing our students for the next step,

which typically is industry.

So yeah,

there's a lot to start there and Ken Jones will go on events on 22nd, is that correct, 22nd of March. 22nd of March and we're drawing speakers from the college community who are already exploring and using this with their students, and so we'll provide some guidance around how you can put together the best prompts if you want to get something from AI. We'll talk at just what the implications are for policy. How colleges might respond to this and encouraging, I would say hopefully encouraging your students and staff to get the best from it and talk around just examples about what the student perspective is,

how it's being used,

and how it could be used in educational ways.

And we'll record everything

and make it available.

Although if you're listening

to this in April or May,

I swear that everything

will have moved on by then.

Just.

Go to YouTube and look it up or or

in fact just ask your smart speaker,

it probably knows no, fantastic.

Thank you Kenji.

And again for information

on an event the 22nd,

please look at CDN website and

kind of get that information.

And really this is just a start of

the conversation because there's a lot

more than there's a lot of potential

benefits around the educational

workload and so on and so forth.

But yeah,

we kind of follow Kenji and follow

ourselves kind of look kind of the

work we're doing in that space.

But Kenji as always fantastic.

Thank you for your time.

Front of all knowledge and yeah,

look forward to seeing all this evolves.

Always a pleasure.