

Teaching Connections Podcast

Episode 16

Title: Experiences of Applying AI in Teaching: A Panel Discussion

This episode focuses on the application of artificial intelligence (AI) in teaching and learning. We are pleased to have a panel comprising NUS colleagues who have been active in their exploration, use and interrogation of generative AI and AI tools in their respective teaching contexts:

- Assoc Prof CHEN Zhi Xiong, Physiology/YLLSoM (**CZX**)
- Dr LEK Hsiang Hui, Information Systems & Analytics/SOC (**LHH**)
- Assoc Prof LIU Qizhang, NUS Business School (**LQZ**)
- Dr Lynette TAN Yuen Ling, Residential College 4 (**LT**)

In this conversation, our guests share how they are currently applying generative AI/AI tools in their respective teaching practice. They also discuss issues and challenges educators might face when using AI, and what educators need to know to address them.

This episode is chaired by Assoc Prof SOO Yuen Jien, Director of the Centre for Development of Teaching and Learning (CDTL).

0 **Intro Music & Voiceover**

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1 **Welcome/ Intro (00:25):**

Soo Yuen Jien (SYJ): Hello, everyone. I'm Yuen Jien, director of CDTL. In this episode, we shine the spotlight on the application of artificial intelligence (AI) in teaching and learning. Our guests today comprise[sic] of colleagues from across NUS who have been active in the exploration of generative AI and AI tools in their respective teaching contexts.

We are very happy and pleased to have them join us, and without further ado, I will let them introduce themselves.

Panelists' Introduction

(00:54)

Chen Zhi Xiong (CZX): Hi, everyone. Thanks Yuen Jien, for the nice introduction. I'm Zhi Xiong from NUS Medicine, as well as NUS Lighthouse. Well, uh, I guess we are working with a US group to incorporate generative AI into a platform that we are developing to train and evaluate clinical reasoning. And of course, like everyone else, we are also experimenting [with] ChatGPT in some of our teaching and learning activities.

Lek Hsiang Hui (LHH): Hi, I'm Hsiang Hui, from the School of Computing. Um, so probably unlike my fellow panelists, right, I might not be somebody [who has] been using like AI on a very regular basis, but I'm still exploring what AI can do. But I think in [the] School of Computing, AI has been become a very important aspect...it's going to disrupt how we do like things like software engineering; it's going to disrupt how we look at education.

Liu Qi Zhang (LQZ): Hi, everyone. I'm Qizhang from [NUS] Business School. I'm currently teaching two courses. One “Descriptive Analytics with R” for undergraduate students; and another one is “Big Data in Marketing” for master programme. I'm quite open to use artificial intelligence, in particular ChatGPT in my courses, and I strongly

encourage my students to explore the potential of using [generative][*sic*] AI to help their programming. Uh, so [I'm] very glad that I have [this] opportunity to share with everyone the experience and lessons learned from this journey.

Lynette Tan (LT): Hi everyone, I'm Lynette. I teach at Residential College 4, and like Zhi Xiong, I'm also from NUS Lighthouse. And um, I have always had a deep interest in technology in education, and I used ChatGPT as a tool for my students last semester. I teach an interdisciplinary course that combines film studies, systems thinking, and gender studies.

2 **Question #1**

SYJ: Thank you, everyone. I guess everyone here are already quite excited to hear [that] there's a rich experience here that we can tap into.

Maybe we can start off [with][*sic*] a simple question, right? So would you like to share an observation or challenge related to using generative AI in your context?

(03:29)

LT: Okay, perhaps I can start, since I used it last semester. I used ChatGPT as a research assistant for my students, and one of the challenges that I had was that some of my students didn't know about ChatGPT or how to use it. And I think we must never assume that because our students have grown up with technology, that they have a good grasp of it.

So we need to teach them how to use it, not only ethically, but also effectively; we need to show them how we want them to use it in our courses, and also give them the rationale for why. We must never use technology for its own sake.

SYJ: Yeah, so I guess that's one important aspect, right, that we tend to focus on the teacher part, but we forget that the students are also new to this, right, and although they are the so called digital native, they may not actually have the time or the inclination to actually explore this. All right, so may I ask others to [also][*sic*] share?

(04:33)

LQZ: Okay, so my course is basically using programming tools like R to do business analytics in the School [of] Business. So the experience of using ChatGPT so far is excellent because in the past, a student from [the] Business School, they lack

[programming] background, and they always feel that learning programming is very painful. But now, with ChatGPT, we could outsource the part of...the majority of the programming work to ChatGPT, whereby the student could concentrate on analytics part.

Um, the lesson learned from this process is that we...not just us, but students must also learn how to [strike] a balance between their own thinking versus the outsourcing work to ChatGPT. While they should, uh, outsource those fundamental programming work to ChatGPT, they should still keep their own thinking. They should have their own ideas in order to deploy the methodologies, the analytics methodology, that we cover in the course to analyse a business case properly. So if they over rely on ChatGPT, that would be a disaster as well. So I think that is something we have to be very careful.

SYJ: Alright, thank you. So I guess there's actually a follow up question that we probably can pursue further. But maybe I invite Zhi Xiong and Hsiang Hui to share before we dive deeper.

(06:11)

LHH: Yeah, so for me, um, I actually kind of got exposed to this whole idea about applying [ChatGPT] in the school...in the classroom context. So when I was going through my class, some of my students in different classes...different lectures actually, they actually say that, oh, take a look at the results from ChatGPT. And I think [at][sic] first glance, right, you will see that, oh, it's actually quite fantastic, such a tool that can come to this level where you did not actually train it in this particular topic, but it can actually produce results that seemingly seems correct. But on closer look, you realise that it's actually not exactly correct.

Yeah, so that comes to a point where as instructors, right, I think we are a bit more well-versed in this area. We know what is right and what's wrong, but for students who are learning this for the very first time, right, and they look at this result, right, and it's not like it's producing bad results a lot of times. I think majority of the results from, let's say ChatGPT, they tend to be good...but then there's one of this kind of situation where it doesn't really produce the correct result. And then that's when students can't really understand or can't really perceive what is right and wrong, and potentially that could be this worry that they might be learning the wrong things.

Yeah, so I think as we look at ChatGPT, there is from a education standpoint, there's that kind of challenge with regards to like, how should we then leave, or how should

we teach in this current age, where there's such useful tools out there, But then there's also the challenge of students maybe learning the wrong things in the event where it's not producing totally correct results.

Yeah, so I think I don't really have an answer to that, but I think that's something that I think students need to be aware of.

(08:15)

CZX: Yeah, so that's very on point, Hsiang Hui. I'd like to break it down into two challenges that I see for educators, and one challenge for [the] learner.

Um, so completely agree with Hsiang Hui. In fact, one of my [colleagues], um, conducted a study evaluating ChatGPT's output on our tutorial assessment questions and then getting the faculty to rate the answers. And in fact, I think we face quite a bit of challenge, um you know, teasing out which output [was] by students or [by] ChatGPT. Um, but we always joke among ourselves that the one that writes English that's too good to be true, right, is probably from ChatGPT. But of course, we know our students, you know, if they wanted to, they are very capable of excellent English as well.

Um, the second challenge for [educators] it's the, I would say the many different personas that generative AI, specifically ChatGPT, can take on. Because, you know, as what Hsiang Hui alluded to, in one moment it may be this very imperfect classmate that our students might have so that we could continuously critique on its work. The good thing is that it doesn't get hurt, right, or we don't have to worry about, you know, criticising it or being harsh.

At the same time, it could also evolve where it becomes a peer or even become better than [those][sic] right at the top of the cohort, where it now straddles between the top student of the class and a potential teaching assistant (TA), right, to the faculty or eventually becoming as good as the professor or even beyond as we know it.

I think the challenge for the educator is that: is our professional identity as an educator adaptable and nimble enough...are we prepared to evolve to go into this new future, right? How would it challenge the way we see ourselves as an educator, and with this sort of unpredictability.

And the last point, the challenge to the learner is, um, especially what Lynette alluded to. You know, I see ChatGPT as nothing more than an air fryer, right? The air fryer is

fantastic; you can cook almost any dish with the air fryer. So you know, the person who is always going to be that Michelin star chef, nothing will stop [him or her] becoming one, not the air fryer, right? But the person who is complacent and you know, just kind of sit back and say, "Okay, since the air fryer can do everything, I don't need to do anything." You know, they will not reach that sort of greatness.

So my worry is that it's not so much about ChatGPT itself, but it's about the inherent wisdom among our learners. And whether a tool such as ChatGPT would be like the air fryer or would be like the calculator, uh, essentially it's widening the wisdom inequality gap among our learners, and what we can do to address or mitigate that.

Question #2

SYJ: Thanks Zhi Xiong for the very good summary [of] the entire spectrum of the possibility in a sense.

All right, so to pick up from Zhi Xiong's point and Qizhang's point earlier on, you can see that ChatGPT can actually help the student at different stages, right? In a sense, on the higher end, it can even like operate almost like a teaching assistant or even a lecturer in some sense, but on the other end, it may actually give us incorrect information, and so on and so forth.

So, shall we actually move on to focus on, uh, do you have any concerns about student at different stages and whether the use of, ChatGPT or generative AI actually harm their learning, right, instead of helping them, right? So what's your opinion on this, right, whether students need to be guarded against generative AI at certain stages?

[00:12:19]

LT: I had a nice conversation with a student on the way here on the NUS Bus. She's an architect actually, Jen, Zhi Xiong knows her as well. And I was asking her, "Oh, you use Midjourney." And she says, "Yeah, I've heard about it, I just use it for fun. But I'm a bit concerned about using it." And I said, "Why?" She says, "I'm afraid it might have a bad impact on my creativity."

So we're talking about whether it's going to harm our students. And so she's aware about that, right? And because, uh, of course, GenAI will always pull up the dominant ideologies, discourses, and patterns and images when it comes to Midjourney. And actually it's very similar, I was telling her, to when we give sample papers or sample

model answers to our students, and they know that that is basically what they need to produce. But they know that if they follow that model answer, then it's going to be the same as nearly everybody else, so they know that they need to differentiate.

So I say that ChatGPT and other GenAI tools like Midjourney can actually help them to see what's dominant, what's popular. And then they can be creative, and then it can be a platform for them to get better.

SYJ: So in a sense, a platform for exploration, right, or ideas and inspiration in a sense, right? How about others? Like, any opinion on...

(13:46)

LHH: Yeah, so there was actually a Reddit post some time back, shared by one of the visitors to our School. I can't remember the exact screenshot that was captured, but it goes something like, "sometimes I would stop or turn off ChatGPT, or stop using ChatGPT to...give my brain a chance."

Yeah, meaning that actually, a lot of times ChatGPT does produce very good results. But sometimes, if we rely on it too much, right, you realise that you are totally dependent on it. And then that's the situation where if you're going through education, whether be it this being a tertiary education or any other kind of education in general, right, you realise that...I think it's not so much about getting knowledge. Because a lot of times now you can go to YouTube, you can get all these things, you can get all knowledge that you need.

But I think it's also this tertiary...university education is teaching you the ability to be [an] independent problem solver so that when you reach the outside world, when you are encountering certain problems that you have not seen before, you'll be able to have the ability to actually derive your solution to that. And I think that there's this, um, I mean, in one sense, on one hand, we might think that ChatGPT is actually trying to prevent us from doing that. There's a bit of like, barrier to this kind of thinking. But I think on the other hand, I think we also need to learn how to embrace it. Yeah, because similar to the example of the calculator, I don't think because of the introduction of calculator, we don't have impressive mathematicians.

Yeah, so I think, um, conversely, I think we have...we think about what is important and what is not so important. Things that can be done, achieved by tools, we now rely on [those] tools. Yeah, so if we look at ChairGPT as yet another one of those tools

among the many tools out there—Google, for example—then I think as a whole, both instructors and students can progress in this way.

(16:01)

CZX: I think if we go back to our school days, right, for all of us, which I hope isn't too long ago, you know, we are continuous learners, right? ChairGPT is just this super brilliant classmate that doesn't mind doing everything in the project, right?

So, we have a choice: we can either, you know, have this classmate to help us become better, right? Or we can say, “Let's let this classmate tank all the project work, and then, you know, as long as I get a GPA (grade point average) of 5, you know, I get my Dean's List, like, who cares?

So I think a lot, you know, how [the] learner will decide on the first course of action or the second course of action will not just inherently hinge on their own beliefs about themselves of what they should be. I think it will...a lot of it will hinge on the responsibility of the institution in crafting and designing assessment. Whether assessment are solely focused on outcomes, or assessments are also going to focus on the humans behind the outcome and the process.

(17:23)

LQZ: Okay, in my classes, normally [during] the very first lesson, I ask student[sic], “based on your understanding of AI, what do you think our humans still have advantage over AI?” There are basically two common answers. One is emotion: humans still have emotion, rather whereby AI is still just a machine. Secondly is creativity: humans still be more creative than [the] machine or than AI. But you'll be surprised; very often, AI can be very creative, right? So when I teach students, I always tell students, right, on one hand, we use AI as a good assistant. But on the other hand, we must be very careful how to use it properly.

So suppose you are giving AI a very open-ended question. You will be surprised that how creative the AI may give you answers. But “creative” here means that...also means that very often, the answer could be ridiculous or don't even make sense. So first of all, student must have the capability to tell what is right, what is wrong. If [they] completely surrender to the power of AI, I think we as a [human race][sic] of a humanity will be in big crisis.

On the other hand also...being too open, being too creative in real work [context], it may not be [a] good thing. For example, your boss give you a task [for you to do], [and] you just throw [it] to generative AI to gain [ideas]. You don't even bother to validate it, to think the feasibility of it, and you go ahead to execute it; it might be a disaster, right? Sometimes it could be miracle, but more often it could be a disaster.

So uh, students do need to have their own thoughts; [when] given a problem, [they need to] understand what clearly is the objective of the business case, and how to break down this problem into smaller problems or smaller steps. Then give ChatGPT or generative AI more concrete, more specific guidance. Then very often, it will give you pretty good results...and more controlled results.

[00:20:06] **LT:** So I just wanted to really resonate with what Zhi Xiong was talking about, [of AI being] the super brilliant classmate and uh, you know, how to have a perspective on AI...I think AI can be a wonderful assistant and servant, but it will be, as Qi Zhang has said, a terrible master, right? It will lead to disaster if you totally depend on AI.

Question #3

(20:30)

SYJ: So I can see that there's a common thread, right, emerging in a sense, that we need to teach our [student][sic], right, [the] ability or skill set that are beyond, right, what this AI tool can do. Especially in the sense that [our] students should be equipped with the ability to at least evaluate, right, and gauge whether the output actually makes sense.

And I guess that's also a very good [safeguard] against the hallucination that we all heard about, right, that the AI output sometimes just simply doesn't make sense. And this skill, I think, would be helpful, right, to help our [student][sic] to first of all, right, still get a job in future, but also as a way to tap into this powerful tool, [in order] to actually leverage on it.

So I would like to bring the discussion back on the other end, right? So we are now actually talking about students who are, in a sense to me...it sounds like they are more advanced in their study...who already have some kind of understanding that [they] can do this evaluation and so on.

But how about those that [are] just starting out? I take, maybe Qi Zhang's example or even Lynette's example of [the] architecture student. What if they are just starting to learn the subject? How do you think we should get the student [to engage with AI] in the sense? Should we allow them to use ChatGPT? [In] the programming sense, right, should we allow the first-year student just to use ChatGPT to generate the answer? What's your take on this?

(21:54)

LQZ: Yeah, in my course, because I'm teaching programming, a basic R programming [language] and [student][sic] use it to do analytics. I always focus on two skills. One is very low level—programming literacy—and another is high order thinking skills. So when it comes to low level uh, [programming] literacy, basically is that I request [student][sic], just like you, when you learn a language, you must at least know the ABCs [of the language]. At least you'll be able to read, be able to understand...be able to interpret what others say or something like that. You may not be able to write beautiful points, or you may not be able to write a nice chapter, but at least you must be able to read and be able to understand [the programming language].

So normally in the first few lessons, when I cover the [fundamental][sic] of the programming [language], I will have certain [part][sic] of my classes that I don't allow student to use computer even, right? I just use [the] whiteboard and question [student][sic] about the basic logics, [the] basic syntax of the programming language], that they at least must master this part without using any [tech-related] help, out of their own knowledge, [their] own memory. Then, when they have the good foundation of the basic literacy [of the programming language], I then open the door for them to use ChatGPT or other [GenAI] tools more openly, more freely. That is something I [can] control in my class.

SYJ: Yeah, thank you. Anyone else?

(23:43)

LHH: Yeah, so I don't know about how subjects such as math is being taught nowadays. During my [student] days, we were not allowed to use [the] calculator for at least for some of the earlier[sic] level, elementary level. So then later on, when you transit[sic] to secondary school or high school, that's when I think they will slowly introduced it, that we can use it for doing calculation, that kind of thing.

So I think this: if we bring that relevance[sic], that ChatGPT is like a tool similar to the calculator, right, I think we need to admit to some extent that it might not be appropriate in all circumstances. Yeah, definitely [it] is a good tool... like I tell my students that, um, actually this is a very good introduction [to GenAI]...ChatGPT together with other tools out there, like for example, in the software engineering world, we have GitHub Copilot, where it can help us do code generation.

So these are very good tools, where because we have gone through the learning [process] ourselves, so it becomes a very good productivity tool. But for students, right, they might think of it as like a tool to seek answers for what they are looking out for. And becomes more like, "Oh, there's this genius down there, and then when I have a question, they will produce the answers that I'm looking for." It becomes like they are overly reliant on the tool.

So I think over here, again, I don't really have answers to that [question], but I do feel that we need to be a bit wise in terms of, like, maybe the lower level modules, how do we go about incorporating a [tool like] ChatGPT, or do we want to even like say that um, the class policy is such that you are not supposed to use it, yeah. Of course, what the students do we can't control, but at least in terms of policy, I think there needs to

be some sort of stance in that, um, maybe this aspect, you might want to consider not using it because if you were to use it, it will harm you more in the long run.

Yeah, but I think at some point in time, we need to recognise that it's a tool...it's going to be very stupid for us not to use it. So, if for higher level modules or higher-level courses, right, if we are enforcing that [to not use GenAI], or we are worried about plagiarism, then I think we are not moving forward, we are not embracing this technology.

(26:15)

CZX: Yeah, that's a very good point because, you know, your question is a very stimulating one because it brought me back to my earlier analogy about ChatGPT being that super brilliant, super, um, "willing to do everything" classmate, where you can actually learn from it.

But there's a caveat, right? There's a caveat when the learner, for example, the human learner is at a Primary One level, and the machine learner is perhaps, say, at a Year Six level, right? So what that can do when these two learners...sort of [are] undifferentiated in the same setting, even though they are clearly at different knowledge and levels.

What I can do is that the impact on the human learner, you know, in terms of how it changes their learning behaviour whereby what Hsiang Hui alluded to, where they become over-reliant, you know, just let them do everything, you know, or it could even demoralise them...or it could even cause them to question their own abilities.

It could also change, right, their morality or their ethical dimensions of how they see the whole process of learning and doing. But having said that...in the context of higher education, our freshmen, even at 19 year[sic] old, they're not Primary Ones, right? So whatever we think about them, I do personally feel that I have some confidence in our 19 year old[sic] and young adult learners, that the sense of morality or the sense of the learning behaviour, it's not completely formed. But it's not...definitely not at the Primary One level, right, where they will be able to sort of say, you know, like what Lynette already mentioned very nicely that, you know, "I'm concerned how this is impacting me in my development as a human being", as what Qi Zhang also nicely mentioned.

So what the professor and the faculty probably here need to do. besides closing that wisdom inequality gap [is] by imparting, focusing on higher order thinking is also to,

you know, continue to safeguard and build on that moral intelligence, right? That our learners see the ethical aspects, because we definitely want humans to use generative AI to serve other humans. We do not want a scenario where generative AI is using humans to serve other humans. I hope we can see the distinction between the two.

(28:51)

LT: Yeah, so this is a really exciting discussion for me. I actually have been thinking about this and you know, I see the potential. I see the problem because we want students to grasp those fundamental concepts, and if they don't grasp them, they cannot move on to the deeper knowledge, right, the more profound knowledge in what we're teaching.

So I think actually, AI tools will transform the way we teach...we will become a lot more efficient. We will not...we will be able to farm off the concepts that they kind of need to grasp to some extent...early on when we were having the breakfast kindly provided by CDTL, I was talking about threshold concepts and you know, so we will focus on those particular concepts that students need to move on to that deep knowledge, to break through, you know, the bottlenecks and, I read somewhere, [in] some universities, I think it probably was America, they are shortening the degree programmes, yeah, and so GenAI tools may actually help us to shorten the length of...how long students stay at university and release them into the working environment sooner because it makes us more efficient as teachers.

Question #4

(30:13)

SYJ: Okay, so that's a really interesting idea, but I guess if we dive into that, that probably is the second episode; it will become a series [for] the podcast, right?

So if I may summarise the discussion, I'll "steal" the analogy from Hsiang Hui [of] the calculator, uh, Hsiang Hui left school for[sic] quite some time already. So they still do that, right, in the sense that maybe P1 (Primary One), they will have a section to say, this part you cannot...use [the] calculator. You train your basic arithmetic skill. But then after that, you actually move on to harder problem[sic], but then now this section is clearly laid out that you're expected to use [the] calculator. It's not that you're allowed to, but you're expected to use, right? And for those section, you can see that they move on from the basic arithmetic but then do something more interesting, right?

So I guess that's actually our consensus here in a sense that it's a spectrum, and then, the educator is actually the one that has a responsibility to communicate and really think through this, right, and let the student know, why certain tools are not useful, right? Or could be even harmful, right, in[sic] this stage, and how they actually move on. I think this communication sometimes is more important, so that student know why you're actually doing certain thing in certain way.

So I guess now we will actually go around the table again just to ask you, right, for your parting wisdom, right? So two [or] three points that you feel that our colleague[sic] can spend some time to pick up or learn, right, any kind of skill or competency they should look into, right, so that they are equipped to use this generative AI to help their teaching? So maybe go from Lynette?

(31:50)

LT: Yeah, okay. So, I think to be confident and competent with any technological platform or AI tool, we need to have facility with it. So we need to have used it for a period of time across several functions to understand what it can do, and also its limitations.

So as I said, as has been discussed, it can be a teaching assistant, right? It can explain difficult concepts very patiently, customised to your own queries; it can be a research assistant. That's how I use it in my classes: it can be an editorial assistant, a free editorial assistant. It can make your writing flawless in terms of this grammar, as Zhi Xiong has said, and it can make the writing more coherent. But of course, it hallucinates. So it makes mistakes and it's fallible, alright?

So I think the best way to learn about these AI tools in your own context, because you are an educator engaging with students, is to learn it together with your students. That's the greatest area of growth for me. Look at how they're using it, see how they can use it more effectively in your course in order to meet learning outcomes. And also very importantly, ethically as well.

SYJ: That's a very encouraging point for our colleagues, I believe. Right, so Qi Zhang, please.

(33:14)

LQZ: Okay, I think...I talked to some colleagues that still have some mindset where like, a few years back, when we talked about artificial intelligence, it seems to be something like rocket science, right? Especially for those not working in [the] School of Computing, right? Um, so even with so many things being talked about, uh, generative AI, ChatGPT, still have some colleagues [that] have a mindset where, "Wow, this is something difficult, or this [is] something that is not easy for me to pick up", that somehow deter them from adopting it.

But I think generally, generative AI is such an amazing thing where it really have[sic] very low entry requirements, right? Everyone can easily use it. It's just like how you use it, right? So first point, my suggestion is the colleagues—all of our colleagues—should at least explore [AI], look into it, see how it [can] help their teaching.

The second point is, um, [it] doesn't matter [if]you like it or not. This is a trend; we all need to adapt to it as educators. As I mentioned in many different occasions is if we don't change ourselves—as an educator we don't change, or [the] university as a whole doesn't change—there will be disaster where if our students spend four years of their most precious time in the university...the parents spend so much money, yet we produce a graduate...we produce graduates who do jobs where someone [who] didn't go through university can just use AI to achieve the same level, that will [be a] disaster.

So we as an educator, like it or not, we have to adapt and we have to look into say, how do we really create value add to our students, right? What we are teaching student[sic] can, one way or the other, use AI to do it, then we must change. So, I think that these are things, um, just to share with colleagues.

SYJ: Right, thank you for the very important reminder, right? So, can we move to Hsiang Hui?

(36:03)

LHH: Yeah, so I guess...practically speaking, if you look at, um, I mean, I raised some of the concerns earlier, but many of the concerns is to do with like, students might not

really understand, whether the output is correct or not. But as educators, a lot of times we do know whether the output is correct or not.

So I believe we will agree that when we are teaching, right, if you want to do a good job, you could do rehearsal. [I think] if you were to like, conduct a class before the actual class as a rehearsal, we usually would do better. But unfortunately, we don't always have the luxury, or we never have the luxury of doing that. Um, but here comes a tool where you could actually do that...you could actually say that, "I'm going to teach this. I'm going to explain it this way. Could you critique the way how I'm going to explain this theory?" And I think this is a way...we could utilise or exploit tools like this to actually better sharpen our teaching, better sharpen our explanation.

And, of course, if you consider from a student's perspective, sometimes we only have limited classroom time, so we might not be able to explain every single concept in a very detailed manner. So I think that's when a tool like this, right, could supplement what is being taught in class.

Yeah, so...like I share with my students saying that, "You guys can actually put in this prompt into ChatGPT and it will explain what these three lines of codes is actually doing. And you'd be surprised that unlike a human way of explaining, where we say that, "Oh, this function is doing this, [or] this argument for this function is doing this", actually ChatGPT went on to explain the rationale behind it and what really happens behind the scene, and it actually gives you a very elaborate kind of explanation. So I think, granted that sometimes it might not..I would think that it might not always give you [the] correct explanation, but at least it's there to supplement something that we cannot always do it. So it's this so-called 24/7 online TA (teaching assistant) that's always there.

(38:17)

CZX: So I guess, I would like to maybe share my parting message to two groups, right? I think the first group that Qi Zhang alluded to: for[sic] those who are apprehensive or even sitting on the fence, [being] mildly resistance[sic], I would encourage them to, you know, learn from it. I would encourage them to collaborate with it, very much like a two-man or two-woman kayak, right? Um, how you collaborate [with AI] is also very important: are you in the front seat or the back seat? I leave that as an open question.

And I think it's also important to respect it. It is not going to be the case where we are always going, AI is always going to be right, right, so that's why we are challenging it.

We are saying, we need to question it, critique it and all that. But it also won't be the case where we are always right, or AI is always wrong. Inevitably, it is going to give us something that is actually useful, beneficial, and meaningful that probably as an individual, we would have never thought of, right, because clearly because of its collective power.

Um, so I would say, enter into that relationship with a lot of respect. And, just like working with a new, highly brilliant colleague, right, do not fear it but respect it.

Now, for the second group who go in, who look at generative AI with rose-tinted lens thinking that this is going to solve humanity's problem[sic]. You know, I'm less concerned about the power [of] generative AI devaluing us. I'm more concerned about how humans may inadvertently use it to devalue other humans.

So I leave with my final statement by saying that, even as humans make AI more human, let's be mindful, you know, not to allow AI or its use to dehumanise us, or other humans.

Closing Remarks

(40:23)

SYJ: I guess that's a very timely message, right? Thank you, Zhi Xiong.

So I believe as educators, we always hope our students, right, to be a lifelong learner with [an] open minded[sic] attitude, to grapple with and adapt to new changes. I think as educators, we should actually be the role model, right, and we should embrace new technology like this, and think about how we actually can leverage it in our teaching and learning, and let us embark on this journey together, I guess.

So, thank you Zhi Xiong, Hsiang Hui, Lynette, and Qi Zhang for sharing your experience and insights with us.

Panelists (all): All right. Thank you. Thank you.

Outro Voiceover

“Thank you for tuning in to the CDTL podcast.”
