

## **Transcript for Integrating Prompts and Generative AI into Teaching and Learning (November 1, 2023)**

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**Presenter: Lucas Wright**

HELENA PRINS:

I want to welcome you, and for those of you who are streaming online, we're so glad that you could join us today. Lucas Wright actually needs no introduction, but I'll keep it short. I don't know how many of you know that he used to work for BCcampus. We consider him family and we're so thankful that you said yes to do a session here at Studio23. He is at UBC, he's an educational consultant and today he's going to blow your mind. I'm a very big fan. I watch LinkedIn, and he shares so many good resources. So if you're not connected to Lucas, I really encourage you to do so. Well, Lucas, they are here for you.

LUCAS WRIGHT:

Wonderful, great to meet everyone. I don't know about blowing minds today, but hopefully we'll have some fun. I'm Lucas, Wright? I'm a senior educational consultant at the Centre for Teaching, Learning, and Technology at UBC. For the last, I guess 13 years now, which is scary, I've been helping faculty, staff, and students think about teaching and learning, particularly with technology. But I also facilitate the ISW there. I'm really interested in teaching in general. I've been interested in AI, I think as most of us are generative AI just for the past, probably year or so as it got popular. But I've had an opportunity to do a lot of presentations and develop resources and have the privilege of hearing from other folks about it, doing my own reading about it, and learning about it. So I wouldn't say I'm coming to you as an expert, but maybe I'm three months ahead of a few of you. Although I want to also acknowledge there's a mix in the room. So today's session, what I've been finding is the most interesting way, and the best way to engage with generative AI is playing with it, trying it out, and using it, rather than talking about it only. I'm sure there's lots of different workshops, different opportunities you have to talk about it. Hopefully, we'll move beyond that today. I'm hoping that one or two of you or a few of you at tables have devices and by devices, thank you, I mean, laptops. When we go through the activities, just share with the person next to you if possible. Just to get us started off, I'm just going to go to the next slide.

I'd like you to enter this bitly address... and actually, before we do that, let's just gauge the room on what your experience is with AI. Could I get you in a second just to do a quick vote for me? If you are brand new to this, haven't used generative AI in a second, hold up one finger. If you've used it a little bit but not much, hold up two, and if you've been using it regularly in your work or your facilitation or your teaching hold up three. Ready? 1, 2, 3. Wonderful. We got a lot of twos there. A couple threes, which is great. This would have been all ones up until not that long ago. The first thing I want you to do... Who's heard of Padlet before? Great, we're going to do a Padlet activity. The purpose of this activity is just to get you a chance to create some GenAI art, get to know each other a little bit. If you can go to the bitly link on the screen here. I won't read the whole thing. [bit.ly/Studio 23GENAI](https://bit.ly/Studio23GENAI). When you get to that link, you're

going to see a Padlet. If you don't have one, you can go on your phone if you want. Just take a look over the shoulder of the person next to you. Once you're there, I'm we'll do a quick activity together. Just let me know once you get to the Padlet. Yeah. Oh, sorry about that. One moment. There's a QR code right there. You should be able to scan that with your phone. Let me just minimize my slides here. One moment. Whoops. There you should be able to see the QR now, all the phones go up. Great. Thank you. If you're online, I've shared a link. I think I have the Padlet at the top of the link. Otherwise you can do this. So once you've got it, I'll just give everyone a couple minutes to get it, and we're just going to do a quick activity with that. I don't want to take it down yet because then there's always people are like, "put that, slide back up again." All right. I'm going to give you about 10 more seconds. And then I'm going to jump onto the Padlet. All right, that was the 10 seconds.

Let's take a look at the Padlet now. All right, Padlet has built in some GenAI to it, which is interesting. They have a tool in here that we get to play with a little bit. I think what we're going to be seeing is more and more integration of these tools within... Sorry, GenAI within these tools. What I'd like you to do is just a first ice breaker activity is click on this + sign here that's going to open the Padlet. Once you're there, you're going to see three dots right here. Click on the three dots. You should see in that menu something that says "I can't draw," which is like me. Click on "I can't draw." What this is going to do is it's an integration with DALL-E 2. It allows you to generate some generative AI. What I'd like you to do with this is think about your metaphor for generative AI in education. And enter your metaphor here. I'm going to go "robot. Teaching robot to robot." I'm not sure what to do, but we'll try that one. Once you've got that, click on the arrow and that's going to be calling the API and DALL E2 now. And it's going to be generating GenAI art using this. Oh, no. That's too many robots. Let's try again. Let's just say, "robot teaching a robot." Everyone cross their fingers for me. Okay, we got an owl. Good. So it's working for someone, which is making me happy. It might take a little bit. As I'm doing this, and it's taking a little bit, why don't you go in there and again create your metaphor for GenAI Let's just try it again here and those should start appearing here. Is it working for folks? All right. I'll just give everyone a couple of minutes, we'll see if folks can get stuff up there. All right. Great. We have one up there. We have a second one that's coming up, and all of these are original art, which is quite an interesting part of GenAI. Who did this one? Yeah, what is it? Oh right so have Hal. Who did this one? Perhaps someone online. Oh, interesting. A cosmic one. A very realistic robot. Oh, interesting. A train. Can I ask who did this one? And what's the meaning? Oh, nice. Yeah, okay, wonderful. Thanks for sharing those. It's just a quick ice breaker activity to get us going and to start showing how integrated these tools are in different tools right now.

So what we're going to do today is start with an activity or a discussion of the story so far. What I mean by the story so far is just to get folks on the same page a little bit and to think about where we might be at with generative AI. This area changes so quickly. I've been finding I've been changing out these slides and changing things almost every day.

After that, we're going to take a look, we're going to take a look at prompting and think about some different approaches to prompting for GenAI. And then we'll do an activity around

prompting, and if we have time, I don't think we'll do it today. I want to demonstrate a little bit around bots and creating our own chat bots. It might be more of a demo and getting you to do it, something tonight. I was reading the room and thinking it might get a little challenging for all of us to jump into another program.

Let's start now with the story so far. But before we do that, at the bottom, you'll see there's a document [bit.ly/Studio 23Doc](https://bit.ly/Studio23Doc). I don't have a QR code for that one, I'm sorry, but what I'd like folks to do is if you can go into the document, I've included all of the resources as well as prompts that you can use for the session, as well as links to any of the activities that we're doing. Give you a chance to get into that link now. Again, caps matter for speaking of AI, I'll give you a chance to log into that now. Also mentioning while we're on there that we're going to be using some of these tools up above for this session. If you do have ChatGPT and you can open it up, that would be great. If you're not comfortable using something like ChatGPT, you can go to [talkai.info](https://talkai.info). It's a little bit spammy or it's really spammy, but it doesn't require a login. It uses ChatGPT with no login. If you're not comfortable sharing with Sam Altman, you can go there. Don't worry about going into POE now, we'll talk about that later. I think the key here is to have one tool that you can open up and do some prompting in and having that document open. Yeah, I'll give someone, folks a little bit more time to do that. Once we're done that all the links, etc. on the document [bit.ly/Studio 23Doc](https://bit.ly/Studio23Doc). I missed just being able to share a document in Zoom. I'll just give everyone about 30 more seconds and then I'm going to jump in. I have a seven year old, so my time is very changeable. 30 seconds may be a minute. It may be 10 seconds, you never know.

Let's talk a little bit about the story so far. This is basically an intro to GenAI as I know it as of today, related to teaching and learning of course.

A definition of generative AI. Generative AI, this is from Wikipedia, "is a system that's capable of generating text, images, or other media in responses to prompts. Generative AIs learn patterns and structure of their training data. And they make statistical inferences, and they basically predict word order, language order, and what's coming next.

There's lots of different pieces of language that can be generated with generative AI. This image is just for your interest. I generated this using DALL-E3. And I've set up some quadrants around generative AI. On the left-hand side, you can see a painting. Generative AI can generate art; we've seen lots of different GenAI art. You just created one. On the right-hand side, top right, you see molecules and generative AI can generate novel proteins right now as well, and those are being thought about what that might mean in the scientific area. On the bottom right, you'll see data, and generative AI can generate Python and can generate code which can do data analysis. I'm using it quite a bit in my own work to do data analysis when it's okay for privacy. In the middle a typewriter. As you know, generative AI can generate text quite well.

But when we think about artificial intelligence or generative AI, I really like this term that a colleague discussed with me and that is augmented intelligence. Rather than thinking about

artificial intelligence that replaces what we do, I think the idea of augmented intelligence is valuable. And I put a link to a paper around augmented intelligence on the document. Rather than replacing us, what can be done with generative AI that enhances our teaching, that amplifies human creativity and problem-solving?

This could be used to reduce repetitive tasks. I get a show of hands. Is anyone already using these tools to reduce repetitive tasks? All right. I think this is one of its early uses. Support and amplify creativity and problem-solving. Being able to have a partner or someone to work with to go deeper on problems to amplify our creativity and perhaps enable ideas to scale faster. As we're going through this thinking about the idea of augmenting intelligence, rather than replacing it.

What about capabilities? And this has been a big change in the last little while. I think last January when generative AI first became quite popular with the emergence of GPT3.5 There were a lot of articles saying things like, I'm not that concerned about what it can do. I put an essay through it, and it didn't do much. Maybe get a C on it. This has really, really changed, particularly with ChatGPT4, the capabilities have really increased. On this graph, you'll see GPT3.5 and GPT4 on standardized assessments. An example of this is GPT3.5 was scoring in the 20th percentile on the bar exam. And GPT4 scores in the 90th percentile. Capability wise, GPT4, I've seen it now in the context of medical education, being able to pass OSCE exams, being able to pass regular medical exams. I've seen it in terms of critical reflection. There's a paper by Lee et al. What they did is they analyzed critical reflection by pharmacists. And they had pharmacy students create a critical reflection. They had GenAI create critical reflections on the same assignment. Then they had them evaluated without knowing who did what. The evaluators consistently marked the GenAI critical reflection higher than the students, and they couldn't differentiate between the two. So huge changes in capability around these tools. This continues by the day.

Just to get an idea of capabilities, I'm going to do a quick demonstration on these tools and I'm going to use GPT4 to do this now. What I've done is I've included a lot of prompts on that document that I shared with you.

You're welcome if you want to try out any of these prompts on your own computer just to get a feeling either now or later,

I'm going to open up GPT4. I'll talk a little bit later about... And that's so interesting. As of yesterday, I'm just taking a look at it, GPT4 is now multimodal. It must have updated last night, meaning that you can speak to images, speak to PDFs, etc. This is GPT Plus. I pay about 20 bucks a month for it, and this raises significant equity issues. Thinking about our students, thinking about our society.

I'm going to do a couple different demos and the first one I want to do for you is acting as an outline expander. I got a lot of these prompts from a course that I did out of Vanderbilt in

Coursera around prompting. And this prompt is interesting. When we think about how our students use it, how we use it, they're not just putting in a title and putting in the topic of your essay and seeing what comes out. They're doing very complex prompting with it. This prompt almost acts as a program. The prompt I'm using is, "Act as an outline expander and generate a bullet point outline of a summary essay about the state of nature in political philosophy. Then ask me a bullet point I should expand. Create a new outline for the bullet point that I include at the end. Ask me again which bullet point to expand." I've chosen the state of nature because I did my undergrad a long time ago. I can actually get an idea of whether the tool is lying to me, whether it's hallucinating, or whether it's incorrect, and a little bit around the quality of the output. Let's give it a try. It's going to give me this outline now, and it's going to pause. Wait for a second while it pauses. Of course we get the network today. We'll try it again. I have hope, great. If you know the state of nature, it's going through the different types, it's going through contemporary relevance. What I can do right after this is I'm going to get it to talk a little bit about Rousseau. I'm going to copy this. I don't. Yeah, we'll just wait for that. It's going to give me a conclusion. Again, thinking about our students, not just putting in a single prompt, but going through a process where they are building these. Okay, which bullet would you like me to expand on? I'm going to grab that one and now it's going to do the same thing, and we can go deeper and deeper, and deeper with this tool. Second example I want to show you, I'll just stop this one, but now I've almost changed it into a program of sorts.

The next one I'm going to do is image creation. It looks like I don't even have to leave the tool to do this now. It should call on DALL-E3 to do this. Okay, one moment. It looks like I still need to do it the old way. I'm just going to go new chat, ChatGPT4. I'll scroll down to DALL-E3 and I'll paste in this image. Create a photo-realistic image of Nike Airs made of cheese. Once it's done that, it should be able to do it. And what I'm going to do in a moment is show you its ability to read images and to see what's in an image. Here we are again. These are unique images that are pretty high quality.

The last demo that I wanted to do is having it view images. I just realized I don't have my images with me, I'll have to share that with you a little bit later. But what it's able to do is if you upload an image, I had an image last night of me dressed up with my son at a comic con and he was dressed up as Spider Man. I was dressed up as Deadpool. I uploaded the image and I asked ChatGPT what's in this picture, and it said there's two people in the picture. One is dressed up as Deadpool, one is dressed up as Spider Man. Yeah, I don't think so. We could try that one though. Where did you see it? Oh, thank you. Let's give it a try. Where did you see that? Yeah, thank you. That's awesome. I had this from yesterday. Here's the image. Tell me about this picture. This is a few years ago, and you'll see that it's able to... We'll just see what it says here. The picture shows two individuals wearing masks. On the left, there's someone wearing a mask that resembles Deadpool, Given the appearance, it guessed that it was at a comic con. Interesting to think about what this visual tools. Then I asked it, how would you improve the costume? It said, the masks... It's totally right. It was a super cheap costume. The mask looks relatively simple. You might upgrade that, you might include some accessories. I also asked it, I did a one where I asked it for me paddleboarding. I paddleboard quite a bit. And I said, what's

he doing in this picture? What level is he at and where is he? And it was able to say in paddleboarding. It was able to say approximately where I am, like probably in Vancouver. And it was able to say level and it said, I'm expecting he's intermediate. I'll go intermediate because of his posture, the fact he's the gear that he's wearing and that there's gear strapped to the front of his board. It's an interesting experiment just to think about what these image tools could mean. For these slides, for this presentation, I used it for all my Alt text.

It took me 10 minutes to develop alt text for all of these slides. I'm just going to see if I can show you that now. This is a really complex slide. This is the alt text that it did for it, a richly detailed collage. It's almost a page long of alt text that goes through every single quadrant on it. It can also read signs. It can read text. If text is on an image, it can see all of that.

Just wanted to give you a quick demo of some of the capabilities with the idea that these capabilities are happening really, really quickly. And these are really powerful tools.

Let's talk about some of the issues around these tools and I was talking with a colleague about this. I'm really excited about GenAI and personally I'm excited about it. I was talking to Barry about this earlier. I have poor written output and I have since I was a kid, this has been a game changer for me. I can write emails, I can write reports, and I'm not embarrassed about them. I'm thinking about going into my PhD. I have a master's. Because in the arts so much of PhD is based on writing ability. And I don't write to learn. It doesn't happen for me. I always am learning to write. So that's why it's important for me. On the other hand, if someone gave me a choice now. If there were a button that said turn this off or turn it on, I would click turn this off. There's huge issues with these tools. It's hard to reconcile those issues. The first issue is privacy. There is lots of institutional data going into these tools. There's lots of personal data and lots of student data going into these tools right now. The privacy terms of service on almost all of these tools are incredibly vague. They're using our data in training. They're leaking our data. There's been multiple leaks with ChatGPT already. It's not PIA approved. So when we're asking our students to use these tools, we're putting them in a really difficult situation. I have talked to numerous students who won't touch these tools and who ask, why would you want to use this in your class? This is, I don't feel comfortable ethically with this. I don't feel comfortable with my data. So how do we think about the privacy? I expect as these tools mature, we're going to see more of them, like Microsoft will be releasing enterprise into different schools. It will give us some privacy guards, but I think the privacy questions still remain.

Secondly, I've realized I talked to the wrong robot. Secondly is IP and copyright. They did a study and found out that all of the data in ChatGPT, all of the data in these tools has been scraped from the web. That means all of our collective knowledge is residing inside these tools and a cynic would say being sold back to us. I had recently a workshop with a lawyer in it. She had written in a very specific field of Canadian law, she was able to find information about an article that was paywalled she had released it within ChatGPT. Recently heard with Indigenous languages that someone who was Māori, and I actually tested this last night, the ChatGPT voice will speak Māori to you. It had scraped Māori language without permission. A lot has been

crawled with these tools. And again, how do we reconcile that? How do we reconcile that as artists? How do we reconcile that as academics? How do we reconcile that as creators? And then learning. We've talked a lot about academic integrity. I'm sure you have in other workshops. I think there's some really significant academic integrity challenges here across disciplines. Especially when we're thinking about banking model education. When we have more traditional assignments where we're passing on knowledge, students are going to be able to do quite well on different types of assignments outside of the classroom. And what does this mean for academic integrity? How do we deal with this? But also about learning. What does it mean for learning if students are able to extend their cognition in certain areas? What do we need them to keep? What is it okay for them to offload onto these tools? How do we help them understand that? Back to my example about writing. I think for me, I'm almost 50. I've come to the understanding that my writing is probably not going to get that much better, so at this point, I don't mind offloading it. But if I were still learning, if I was much earlier in my life and I had a chance of improving at it, the ability to offload it, may really impact my learning. So in our disciplines what are we allowing students to offload? What are we helping them hold onto? I think students are going through some of the same questions here with these tools. What did they want to hold onto and what did they want to offload equity?

And equity. I mentioned GPT4 as a paid service. That means some of your students are going to be able to score in the 90th percentile on a law bar exam and other students are going to be scoring in the 20th percentile because of the money they're putting into this tool. To add a complexity, prompting makes a huge difference in these tools. Some students, as mentioned in this quote, are able to really make these tools sing, whereas other students are not. When you look at assignments, you look at emails, I've been chatting with a few faculty about this and say, I'll hear, oh yeah, I can tell when it's ChatGPT, I can tell when it's AI. I don't know if that's true. I think what you can tell is when it's badly done AI. And when it's really well done, these assignments, these essays may be going through unnoticed. How do we think about equity? And then with privacy, when students don't want to use this tool, how do we develop equitable assignments so that the students who don't develop this tool are still able to learn, they're still able to be assessed in the same manner. Again, I think there are more questions than answers. How are we going to work around this?

I want to move us towards an activity now. I want to talk a little bit about prompting. I called it prompters block, But prompting as of now, is a real integral part of these tools. It's as complex as coding. It really makes a difference in terms of the output. I'm going to talk about prompting for a couple minutes, probably five or ten. And then I'm going to give you a chance to do some prompts for education.

Has anyone seen this picture? Yeah. What is it, Tracy? Yeah, exactly. Yeah. This won a state fair award. I forget the state fair. It caused a kerfuffle because it couldn't get copyright, which is another fascinating thing about AI, so far has failed all the copyright tests. Why put this picture up here today? As I was reading an article about it, I don't know if I linked this in the doc, but I'll

add it later. This took two weeks of prompting to develop. Prompting really makes a difference in these tools. And it can be a very complex, intricate act.

A basic anatomy of a prompt. We put up a prompt here and you'll see a couple aspects to the prompt. Let me just see if I can move this. First of all, personas are one way of improving our prompt. In this example, I said you are a political science faculty member. By using a persona, we're able to call on richer data. You know the term garbage in, garbage out. If you give generic prompts, the data it pulls are very generic, and you'll get very generic answers. You're a political science faculty member at a research university in Canada with 20 years of teaching experience. You can even give the persona things like years of experience. One of my favourite prompts is, "Act as a cynical faculty member and evaluate this workshop." For some reason it really gets down to what's wrong with my workshops. It's been quite shocking sometimes, and I've done some really big workshop revisions based on that. But you can give these prompts characteristics. There's a specificity in here. Write 20 ideas for learning activities that correspond to different levels of Bloom's Taxonomy. You can start feeding it with sources. And this is where that IP piece comes in there. It has scraped so many sources. I've had to create backward design tables based on Dee Fink's work. Recently I read a book called *Breath*. Has anyone read that? Fabulous book about breathing. I asked it to create a guide for me so that I can implement it in my life, Like it definitely has read these books. Sometimes it will deny it, but you can get it to pull on different data.

This is from UNESCO. They have some tips in this guide that I've linked to the "Guidance for Generative AI in Research." Some tips for prompts. Simple, clear, and straightforward language that's easily understood. Thinking that this is a machine. Examples to illustrate the desired response or format. For example, if you're putting in a learning objective, you want it to get learning objectives. Give it a couple measurable learning objectives that are using no do in value, so you get a good quality learning objective out. Something students may be able to do with it. And this is where under the radar comes in is you can train it with your own writing. Put in an email, say "Write an email that sounds like this email. I wouldn't do that. It would mix up all the grammar and sound terrible but you can get a tone, use examples, etc. Adding context. So it's important to have context and then a refinement process. If any of your prompting, it's probably conversation, so you're probably spending a lot of time going back and forth, maybe getting a little bit mad at it. I find it fascinating how I get angry at AI, similar to, Does anyone have an Alexa? I'm always... in our house, we're constantly, like I said, make an announcement, so going back and forth to refine these tools. And then ethical prompt. What are we putting into these tools? How are we thinking about copyright? And then how are we thinking about bias around the output? If you prompt mid-journey and then ask for a computer science professor, it's always going to give you a bearded white male with glasses. Always. So thinking about how you can prompt it in a way that's less biased,

How can we use prompts and what prompts can we use? Well, one way that I think a lot of faculty, staff and students are using these tools is to create learning materials. I've used it quite a bit to create workshops. I've used it to create case studies, to create scenarios. That same



lawyer I mentioned in my workshop, when she started running ChatGPT in the workshop, she said, "I'm never going to write hypotheticals again." Like it's wonderful for creating learning materials, although we really need to think about what that copyright issue means when we're doing this.

Some prompts to run learning materials. First of all, is the persona prompt. "Act as a physics professor." "Act as a cynical faculty member." The outline expander prompt that I shared with you is a good way to go deeper. Getting the tool to ask you questions. It's quite strong if rather than you telling it what to do, it asks you about something and then produces something. Ask me questions about paddle boarding safety, and based on my answers, evaluate my knowledge and then give me a guide. It can go back and forth interactive. Using different sources. Write a learning objective based on Fink's taxonomy of significant learning. Here's an example, prompt priming it a little bit with examples.

The other thing we can do is start refining the output of our prompts. Once we prompted it, start refining what we're doing. One way to do it is say, when I add a prompt, refine the prompt to make a better one, or this is the "act as a cynical faculty member, critically evaluate this document, what changes would you make? Now rewrite it based on those changes." You can loop this. You can just loop, loop, loop. And as you loop, you're getting better and better output. Provide the perspective of three different domain specific experts on this passage. How would they approach it? What is missing? This is interesting to start seeing what something you write, how it could be perceived through multiple different lenses, through multiple different domains.

Here's another example of a prompt. And what I'd like you to do is if you have your computer open, I've put this prompt on that document I shared with you. Run it through the document. Run this prompt through. It's a fairly complex prompt. "You're an instructor teaching a second-year political science course called Introduction and Comparative Politics. Design a 10 question MC quiz that tests students' understanding. And I've given it some topics. The multiple choice question should follow the suggestions offered Kar, Lakshminarayanan and Mahalakshmy. Put that prompt in there and see what the results are. I'll just give you a minute to do that into ChatGPT, either 3.5 or 4. You could use Bing Chat or Talk AI. I've linked to them all in the document as well. And then I'll get a couple people to let me know how the output looked. Yeah, interesting. I'll just give folks. Yeah. Okay. Okay, interesting. So you had a similar response here. What sort of responses did y'all get? How was the quality of the response? Yeah. All right, so for the streamers,

HELENA:

So for the streamers, if someone here wants to answer, we'll pass the mic so they can hear as well.

LUCAS:

Okay. Does anyone want to share what the quality of the response was like? Maybe Barry, do you mind sharing here just about how yours were a little similar? We'll just pass you the mic.

BARRY:

I'm not sure if I can really speak too much to the content, but it gave us a 10 question quiz, multichoice, and Mary, who I'm sitting with, and we work together, and we're using the same account by the way, it gave us very similar, but not identical. And so maybe that's got something to do with it, but yeah, this is a pretty interesting set of questions. I'm not sure that I could answer myself.

LUCAS:

Yeah, I couldn't answer them either. But relatively good quality questions doing this. I'm going to keep going here. Thanks for sharing that.

We talked about developing learning materials. I shared some prompts. Another strength of generative AI, and I think this is also fairly low-hanging fruit, is using it to develop games or tutorials for our students. Not necessarily creating classroom assignments for it, but giving them games, using it as playable media. My son recently was learning about WHMIS and I came home and made a game for him so that he could learn WHMIS through ChatGPT. It just asked him questions and went back and forth with the tool. I've linked to an article about playable media. Here's some aspects of playable media, but it basically means interactive media that we can work with.

A couple playable media prompts. I want you to play a game with me, to practice X. Use Socratic questioning to understand my knowledge of X and to learn more about the topic area. If you have the app on your phone for ChatGPT, its voice is excellent, which it's quite frightening. I had it do a Socratic dialogue with me back and forth about the state of nature again. It was able to ask my knowledge of it based on my knowledge, give me feedback on it. Act as a tutor of X with experience with Y. Ask me questions to evaluate my understanding, and based on these questions, create a guide for me to learn more. Again, I think Ethan Mallick talks about this, who writes quite a bit about generative AI, is giving these prompts to our students so they can practise a little bit more at home rather than having to change out our assignments.

I have a huge prompt for you to try, and I've linked to Breen blog post on this prompt. Breen is a historian and I'm going to run this one as well. He created a game prompt for his students to play, which is quite a complex role playing game. I'm just going to... It's gone. I'm going to show you what this prompt looks like and I encourage you to run this as well on your own end. I'm going to go to GPT4 again, I'll create a new chat. And I'm going to paste in this prompt. What he was trying to do is think about what it might mean to be an apothecary in medieval times. Here we go. It's giving me full turn taking. It set up things, you're in medieval Paris. Turn one, Paris is in disarray with the Black Death at every turn. What do you want to do first? I'm going to do map just because it's easier to spell. It's going to tell me where I am, and I can go back and forth and do turn taking with it here. I'm going to try to diagnose someone. Someone shuffles by,

they're coughing violently. How do I want to diagnose them? You'll see just with a single prompt, it created quite a complex historical game. And if you look in the blog post, he talks through that a little bit. And I'm just going to check in on our time. We're done at 20 after, is that right? Wonderful. What I want to do is I've gone over a lot now. I'd like you to spend a little bit of time. I'll walk around the room. If you're streaming in, do it on your own. But I've given you a set of prompts. Work in groups of three or four at your table. And try out some of the prompts to either develop a case study, a learning resource, or create an educational game. Again, share with the people next to you. I'll give you about, I think we have about 7 minutes on this section. And I'll just walk around, see how you're doing with this one morning.

All right. Two more minutes. Yeah, I know that. What's up? Oh, that is that GPT4? I've never seen that before. That's fascinating. Maybe it's a chain. Yeah, I've never seen that. That must be a brand new because I think they just updated today. It's fascinating, the speed of updates on these is wild.

One more minute. All right. Again, I have a seven year old, my minutes are very changeable. I'll just get folks to look up. Thank you. I'm sure some of you played with that. I hope it, if you have it, it gave you a chance to play with it and think about the prompt and what a difference they make. Susan mentioned while we were talking, asked if I was going to talk about hallucinations and truth. I didn't do that. To be honest, my issues part, I could have about 20 slides on issues with it. I think it is worth bringing that up is these tools do hallucinate. And by hallucinate it means throw random things in there, throw things that aren't true. From what I've read, they're not sure whether they're going to be able to build or the extent they're going to be able to take those hallucinations out of them. But where I've seen that in my day to day is sometimes it will make up fake references. Completely fake set of references. One of my colleagues said that she had a student come to her and say they referenced a paper that she actually didn't write. It said she wrote it; it makes up facts. And an example is I paddleboard. I'm from a town called Atland, B.C., in the north. And I asked, where should I go paddle boarding there? And it told me, oh yeah, just go across the lake, and it's like you can, you'll die. It just lied to me straight up about where I could go, so right now... The good part of that is it needs a human there, and it needs an expert in the middle. And it brings this idea of augmented intelligence. And I think a lot of you are experts in your field. There's a very different way of seeing these outputs as an expert from seeing them as a novice, if you're a novice, you don't know where it's telling the truth, where it's making things up. There is a great space for this expertise. I will be curious where it goes as we go farther. That brings me to the end, I think, of the session. I've given you all the resources I talked about, and I hope you had fun playing with these tools and thinking about it a little bit. Yeah, I probably could take one question or comment before we end. Yeah, go ahead. I guess the mic's got to get to you.

PARTICIPANT::

I think the one thing I realized was I don't know if a ChatGPT actually looks at how often you look at use it. Because the kind of questions it gave me, I don't use ChatGPT often. This was like my third time opening it, but it gave me very generic questions when I prompted it, as opposed

to my colleague here who had a whole history and it was giving her very detailed. So that's an interesting thing to see. Does it give you answers based on how often you use it or your experience with it? That's an interesting aspect.

LUCAS:

That's fascinating. That links to the... I can share the paper on the document, but a paper came out last week. I think, that said it's been inferring personal characteristics based on searches put into it, which is a whole other side of privacy on it. Yeah. Cameron, go ahead. Good. I can sneak in one question.

CAMERON:

Good. I can sneak in one question. So how I've been using ChatGPT a lot is having us as a class ask it questions that we're grappling with, or create a course outline and then using it to have students critically interrogate how it answered a particular question. Yeah, that's worked really well so far, but I'm starting to wonder about it moving forward one, how much more apt it will be to be able to answer those kinds of questions. But also the critical thinking skills. Whether or not my students moving forward would have that self-awareness to be able to actually critique or interrogate the output. And I just wonder if you have thought...

LUCAS:

Oh, that's so interesting. I mean, I've been reading articles that say Derek Brust out of Vanderbilt talks about there's still this space of productive learning. That space is the analysis. Will that go away? I don't know if, do you know the game Go? The computer couldn't beat Go for a long time. Now it can beat Go and now Go masters train against the computer to learn new insights. Where is this going to go? Or will the hallucinations always be in? And how do we maintain things like critical thinking within our classrooms? [Inaudible]

PARTICIPANT:

But then I apply for students and I like, how are they going to learn that critical learning skill? Did I talk loud enough?

LUCAS Yeah, just folks online.

PARTICIPANT:

Yeah. It just makes me think exactly how are we building the critical thinking skills so that they will eventually get to the place where am I making myself clear? Yeah. You know, like I said, you've got 20 years of experience, so I trust it. But if they are using these tools now in their training years and their learning years, when will they develop the skills so that we can trust they have them throughout their career?

LUCAS:

Yeah. Yeah. And, you know, how do we move them from novice to mastery? But I mean, I think I'll end with this question. Another question is what skills are they going to need to develop? And I think that's a whole other piece that's in there. So thanks so much. I better stop now.

HELENA:

Oh, that was so awesome. Let's give him a hand. I think the next conference might have to be generative AI. Thank you so much, Lucas. I was just thinking it is such a challenging time to stay abreast of these things. I'm trying every day and I'm just falling behind. And even today, we discovered there's been updates since last night, right? So it's difficult to stay on top of it. And that's why I'm thankful for leaders like you, who help us stay on top of things. So I said it at the beginning, and I'll say it again. If you don't follow Lucas yet on LinkedIn, I highly recommend that. He shares fabulous resources. That's how I stay on top. So thank you so much. Thank you. Let's give him another hand.