DARREN BRITTEN: Welcome, everybody, and thank you for joining us today. My name is Darren Britten, and I am the National Assistive Technology Project Officer at Australian Disability Clearinghouse on Education and Training, ADCET for short. I'm a white man in my mid… I will say early 50s, still early 50s just, and short blond hair, beard, wearing some blue rimmed glasses and wearing a blue button up shirt today.

Just to let you know, this webinar is being live captioned and will be available after this session on the ADCET website. To activate the captions for this, please click on the cc button which will be located in your tool bar, either at the top or the bottom of your screen. And we also have captions available via a browser, which will now be added into the chatbox as a link for those that wish to access it that way.

ADCET is hosted on lutruwita (Tasmania aboriginal land) and in the spirit of reconciliation, ADCET respectfully acknowledges the lutruwita nations and also recognises the Aboriginal history and culture of the land, and I pay my respects to Elders past, present and emerging, and to the many Aboriginal peoples that did not make elder status. I also acknowledge all other countries and lands of participants in this webinar and also acknowledge their elders and ancestors and their legacy to us and any Aboriginal and Torres Strait Islander People joining today.

Now, today's webinar, ADHD & Artificial Intelligence Strategic tools and academic practices for students with ADHD, will be presented by Tiana Blazevic. Tiana will discuss the use of specific AI study tools, discuss recent research on the use of AI for students, and showcase some of the ways that students can use AI in their academic practice.

Before we begin, briefly a few housekeeping rules. This webinar is being live captioned by Helen from Bradley Reporting thank you, Helen and is being recorded, as I mentioned, and will be available on the ADCET website in the coming days. If you have any technical difficulties, please email admin@adcet.edu.au, and we will try and get you sorted.

This presentation will run for around 70 minutes or so, maybe a little bit less, with lots of time for questions at the end. Throughout the presentation, please feel free to use the chatbox with us and to chat with each other, but please remember to choose "everyone" so that everybody can read what you have to say. If you would like to ask a question of Tiana, please use the Q&A box rather than the chatbox so that we can collate questions in one spot. Tiana will be happy to answer those questions at the end of the presentation, so please feel free to throw some curly ones in there, though I'm sure there's going to be lots of excitement with the presentation today. Very topical, very now, and the numbers of attendees, which continue to climb as we speak, is showing just how much this is of interest. So without anymore from me, I will throw over to you, Tiana. Thank you very much for joining us and I will let you introduce yourself.

TIANA BLAZEVIC: Hello everyone. My name is Tiana Blazevic, and I'm the Coordinator of the University of Adelaide's Neurodiversity Project. I'm a late diagnosed ADHD individual with dyslexia. Today I want to show you some of the ways that I teach specific Generative AI tools and use them to overcome cognitive load in my work but specifically my PhD. I have taught students with neurodivergent conditions since 2020 in a one-to-one capacity as a learning advisor, and I also facilitate and create the neurodivergent study skill workshops at the University of Adelaide.

So just a bit of a brief agenda. Here are the topics we're going to cover today, starting with a live demonstration of Gen AI tools I use and recommend to students; a brief history of Gen AI and some terminology, what is LLM and what is RAG; new research on Gen AI in higher education; some of the current literature or specific study done on ADHD Generative AI and reading comprehension; and then an analysis and some anecdotes of the benefits of some of the tools I'm going to show you today.

Practising what I preach here and being honest that I've used different Gen AI tools to create this presentation, this includes inputting information into a Gen AI tool which creates diagrams and visuals called Napkin AI, and I will explain Napkin AI later on in this presentation.

I think it is now well established in the literature that students with ADHD have challenges related to cognitive load and executive functioning. For my brain, it moves sometimes a bit too fast and sometimes not fast enough. That in and of itself leads to cognitive overload and paralysis.

In saying that, I do not use AI frequently. I use it with a purpose, and that is what I teach students to do. I still believe in traditional study methods, but sometimes my brain does not want to read the chapter or the book. I need to slowly launch myself into that study mode. This can sometimes take one hour, sometimes it can take several hours, or even weeks if I'm feeling burnt out. However, Gen AI has helped me to understand some of the concepts that I need to read about for my PhD thesis very quickly. It assists me with deciding whether or not a source type is worth reading. It helps me get through dense and sometimes poorly written material. And with the new audio functions, it helps me to do two things at once. Importantly, it helps me understand Latin and Greek text. I will clarify here that I have two and a bit years of Latin and the equivalent of one year of Greek. So I use ChatGPT to help me translate and break down the grammar as that is what I am currently training it to do.

I also want to state that I'm not a programmer or computer scientist. My interest in Gen AI comes from an interest in how far right commentators have weaponised social media algorithms to change the everyday person's view of history, and how social media then becomes a form of computational propaganda. I am simply a historian trying to work with these tools in the last throes of my thesis, and I'm working in the field of history, of medicine, religion and theology, where I'm currently examining epilepsy in the 13th Century.

I look at a Greek word called "pneuma" that no longer exists in our modern world, and it translates to lots of different things, air, breath, life, spirit and soul. My thesis methodology uses a philosophy of mind approach, which is termed social reality theory, and it argues that humans create their realities through language and by assigning specific functions to specific objects or terms. In a way, Gen AI will now be part of that conversation. I'm essentially trying to use a sociological and philosophical framework that I haven't done before to approach the historical problem of epilepsy knowledge and its link to demonic and divine bodies in text. Not only is AI helping me overcome the challenge of living with multiple neurodivergent conditions, but also forms new knowledge and translate new text.

My moral stance on the use of Gen AI is that if I want to use this tool and teach this tool, I need to understand how this tool works and the ethical implications of this tool, because with any rise in innovation comes ethical issues and comes issues of control. Whilst I have used various forms of Gen AI over the last few years, it's really been the last year I've actively tried to work with it, understand it, and create my own pedagogy to not only help me complete my thesis, but to teach it to students who, like me, are neurodivergent. I find AI to be both deeply confronting and amazing.

So today I want to show you the LLM systems and RAG tools that I use to help reduce cognitive load, assist with my comprehension, and overcome paralysis. And how I use them purposely alongside another application I use called Obsidian so I can store the conversations and the audio offline. The main focus will be on Notebook LM and Google's Gemini as they are free to use for students, but I will briefly show you comparable systems that do require a log in or subscription.

After my demonstration I will show you how I scaffold each tool when showing students how to use them and how I have conversations around Gen AI.

Okay. Here we go. The first tool that I want to show you is something called Notebook LM. I will show you the landing page. So this is Notebook LM. As you can see I don't have that many notebooks, and I will explain why at the end of this demonstration. But today I want to show you the one that was created last year on medieval logic, and it's one I've been playing around with the most. Here is what it looks like, the notebook itself. Now, you can see here on the left-hand side we have the sources. And you can see that I've inputted, just for the benefit of this presentation, because sometimes some of these tools take a while to generate, and we've got a time constraint here. The sources here is a medieval journal article about the four phases of medieval epistemic logic, so some very dense material, a lot of terminology, and the Stanford Encyclopaedia's website for medieval philosophy, which is, essentially, a very long written blog post about all the different forms of medieval philosophy.

When you press add, here is where students can upload any of these source types. You can upload a PDF, you can upload text, you can upload Markdown, you can upload audio, e.g. an MP3, so like a lecture note if you download it, or any type of videos that you have downloaded. You can upload Google Docs, Google slides. This is a Google tool, so both the tools I'm going to show you, Notebook LM and Gemini, are from Google. You can also, as I have shown you, upload a link to a website, such as the Stanford Encyclopaedia, you can upload YouTube videos, or just copy and paste text straight in. Let's say a student is using something like EndNote or Zotero, or Notion and they've got a whole bunch of notes, they can copy and paste it straight in.

In the middle pane here, once you've uploaded your sources, you can see that this middle pane is called chat. In the middle it gives you a sort of brief overview of the sources that you've uploaded. Generally in my trials and tribulations of this particular technology, I tell students to not upload generally more than three sources, because if you are going to upload more than three, even two, and you're trying to upload things that are diametrically opposed, or quite different, the audio it gives you, the responses it gives you, the study guides it gives you is not going to be what you want. You really want to try and make sure that you're uploading things that are interrelated content.

So here in this chat function it will give you that brief overview. Here you can see it's got a couple of different options. We have "add note", you can save these notes, you can copy and paste this description, the audio overview which I'll talk about shortly, and then a new function called a Mindmap, which I'm still playing around with. Here in the chat area is where you have that ChatGPT like functionality. So you can ask questions about particular sources that you've uploaded; you can start typing and going back and forth in an interactive way.

As you can see here at the bottom, it's already given me a prompt to question the material. Over here on the far-right hand side we have studio. So here is where you have your audio overview, you also have another option down here, which is to generate a study guide from the material and I will show you those in a moment a briefing doc, frequently asked questions, or a timeline.

For me this tool is useful for the timeline option. If I click the timeline here, you can see it gives me a detailed timeline of medieval epistemic logic and related philosophical developments. It has given me the philosophical developments based on both the sources I've uploaded, plus it's also given me, right down the bottom you can see there is a lot of information here and that's because the sources I have uploaded are quite dense down the bottom the cast of characters. Here is a curated list of all of the characters I should know about based on the sources that I have uploaded. And it has also given it to me again in a format that I can copy and paste it into other systems, such as Obsidian, Notion, or again even Zotero, Word documents, files, you name it. So that's one option.

I'll then show you the other option which is generating a quiz. So it can generate a quiz for you. So this is that study guide where it gives you some questions based on the sources. If I read question 5 here, it says, "What was Peter of Mantua's counterexample intended to show regarding the common definition of knowledge? What additional condition did some philosophers propose as a result?" It can create some questions for you. It then also gives you the answer key as well, if you wanted to test yourself, which I think is brilliant for students who are having to do a lot of rote learning based on their content. So that's just some of the basics for your frequently asked questions, study guide briefing document.

The mind map is also quite an interesting one, if I click it here, it will open up to this mind map which you can also download as a PDF or a PNG and place it again in your notetaking files. So here we've got medieval philosophy. It's given a couple of branches. We can look at importance of knowledge. We click that, it gives me its three basics that it has decided, based on the sources that I've uploaded, is the most important. So Arabic logic, Latin logic.

If I click Latin logic, it will take me back to the chatbox, and it has prompted it. It says, "Discuss what these sources say about Latin logic in the larger context of the importance of logic." We can see it's generated quite a lengthy response. If I have a look here and go down, it is, again, quite large. But notice these little numbers. If I click and hover over the little number, you should be able to see here where it's pulling this source from. So this particular bullet point is from the Stanford Encyclopaedia of Philosophy. If I click on another one let's look at number 3 and let's look at this one so this is all about Latin logic its pulling again from the Stanford. So this is how students can differentiate which sources the large language model is producing its content based off of.

The next thing that I want to show you and if you keep scrolling down, by the way, you can see other chats you have had, you can copy and paste these chats into, again, any systems you use is probably my favourite function of Notebook LM. So bear with me here. Fingers crossed, no tech issues. This audio overview is probably the most beneficial for a student like me, a student with neurodivergent conditions. It is not just a robotic overview, it's not just a robot talking to you; it is two people talking about the sources that you've uploaded in American accents in a podcast conversational like way. So I'm going to press play and we will listen to the first 20 seconds of the audio.

AUDIO: Welcome to the deep dive. Today you've sent us down a particularly interesting rabbit hole. Medieval epistemic logic. That might sound a bit, well, academic maybe, especially with that dense paper you shared, four phases of medieval epistemic logic. It looks heavy but, honestly, beneath the surface is a fascinating journey. It's all about how thinkers

TIANA: So pretty crazy. Again, did I expect this to be on my 2024, 2025 bingo card that I can listen to my journal articles or things I upload in a podcast fashion? No, I definitely didn't.

You can also share the audio overview. If I click it we can make it a publicly accessible link. So you can again keep it for your own personal notes or you can place it in a file like I do. We can also change the playback speed. So it doesn't have to be this speed. If you need it faster, you need it slower. And what you can also do is you can download it. Because I use Mac, generally when I've downloaded this it's gone straight into iTunes and I don't particularly use iTunes. I use, instead, a bit of a work around I have developed in the last couple of days which is Obsidian.

So this is Obsidian. And I will very briefly show you how I transport everything that I have seen from Notebook LM into sort of different yeah, different notes. So this is something that I'm about to show you which is how Gemini can produce really long research reports. It's another notebook tool. Here the audio overview is specifically that podcast. So I just command record in Obsidian. I'm not going to tell you too much about Obsidian because in of itself that would require an entire webinar. I just want to show you how you can take that audio offline. It doesn't have to be something that you're consistently logging into, and you can also place it perhaps in a format that's a bit easier for students to use.

So I just press command record. I go and read something, or while I'm listening to the audio, go and wash the dishes while it goes into my vault, which is my notetaking vault. This is a different audio.

AUDIO: Demonic. Okay, so you're ready to get into this whole medieval thing, right? Right. Demonic bodies. Exactly. In Christian and medical texts. Right. From the 10th to the 14th centuries. It's wild, right. Yeah, I bet

TIANA: So while I'm looking at other notes, or going and doing something else, I can just pop the audio overview on. If we scrub to let's say 7 minutes, 17 seconds.

AUDIO: ...for knowledge instead of it is known that a white thing is a cat, the divided sense might be something white is known to be a cat. Meaning there is a specific white thing and that thing is known to be a cat. Precisely. The known attaches closely to the something white. Okay. I think I see the difference in meaning.

TIANA: So that's Notebook LM, in a nutshell. It's quite user friendly, it doesn't take too much to learn, and there's some amazing YouTube videos out there, but that audio function to me has been a lifesaver for journal articles like this where I have to learn a lot and consume a lot really quickly.

I'm now going to show you Gemini. So Gemini is another new tool that has come out. It went under a different name for a while, but this is now the system that we have. It is another Google tool. The specific one I'm showing you is Gemini Deep Research, which is a tool that can produce research reports for you based on the question that you ask it. So here I'm showing you the question that I've asked it. Now, note that this is a very long question. And that's because when I use these types of research report tools, especially something like Gemini, I use it with a prompt hacker so that I'm able to get as much as I can out of the conversation, and then not having to keep going back and forth and keep interacting with the tool. Therefore, lessening sometimes the amount of electrical consumption of overreliance that I have on this tool.

Here you can see is the prompt. So the prompt is very specific. Now, I had this generated by a prompt hacker so this isn't all of my language. But what I did do and I will show you this website here is the Prompt Hackers.Co. Here is where I generated the prompt. I head over to generate prompt, I say this is what I want you to do, what role do you want ChatGPT to play? This isn't just for ChatGPT, you can copy and paste the prompt and take it anywhere. And then here is where I've asked it, "Okay, create a reading list for me on the relationship between pneuma and demons in ancient literature." You press generate prompt. Sometimes it can take up to a minute. Here we go.

So here it's given me the specific introduction. So it states "your expertise lies in understanding how ancient cultures conceptualise the spiritual world, particularly the relationship between pneuma, spirit breath and demons. Your task is to create a comprehensive and insightful reading list for someone interested in exploring this topic." Then it's given me the format. This is, essentially, the language that these large language models use. In a way it's really helpful because it's teaching me a new skill, too, around how to code these things particularly. Here we can see I want brief introduction to pneuma and demons and ancient thoughts, brief overview of the concepts of pneuma, the reading list so book title, author, summary, relevance for all of these books. You copy and paste the prompt and then you place it into your Gemini or ChatGPT as well.

If we go over to Gemini, this prompt that I used is not the same as that one so it's a little bit different. With this reading list I wanted it to be more in depth. When I put in that this is what I want you to do, I stated that I am a PhD student already well versed in the contextual background and general knowledge of the area. This list should prioritise very specific text." Instead, it turned that language into "this list should prioritise seminal text and cutting-edge scholarship offering a deep dive into the nuances of the topic".

Then the format that it created for me was really interesting and really helpful for this Gemini report. Here it gave about three or four, I believe, primary sources. Here we've got the code. Author, if known, the approximate date, the key themes and arguments, the relevance to demonic bodies, recommended additions or translations, the justifications for inclusion, and so forth and so forth. Until it got to the secondary source types as well.

This one was really interesting in what it did for me. "Give me the journal article, the author, the publication date, strengths and weaknesses, justification for inclusion". I know some of you might think, well, this could be hallucinations, it could be pulling from hallucinations, or it could make up resources or references, like we know that ChatGPT does do. However, this is where Gemini Deep Research is different.

So this is what it will produce for you. And you will go, okay, more, you can see what it says. It has gone through, there is the code, here is the challenge, search for these primary sources. It created it and generated it for me. This was on April 3rd. I open the report, here it is. You can export this report to Google docs. It was about 4,000 words in total. So it was very dense, a lot of stuff to get through. I can generate the audio overview that I just showed you in Obsidian. And then I can also just copy and paste this entire report directly into my Obsidian vault.

If we have a look at this introduction here it has given me a brief introduction like I've asked it to. If I click the "learn more", this is where you can see what sources it's pulling from. So here I've got a Wikipedia article, I've got some Blogpose, I've got a Word Press article and another website. I can click these to verify that information. If I go down to the first primary source it's given me, the text it cited is Peter Lombard's work for Book of Sentences, approximate date. It's given me the key themes and arguments. Then if I click down, you can see again where it's pulling from. It's pulling from Open Access information. If I click again, it's given me a couple of different Amazon websites to find recommended editions and translations.

If I click "learn more", here I can see that it has used, or has tried to use an academic source. I have this book already. So this is The Demonic Body. I have this book. This is an academic reference, 100%. So I know that based off of that.

So I will keep scrolling down. You can see that, again, it's very, very in depth. It keeps going. So this is all just the primary sources that it's recommending for me. Click again on the Thomas Aquinas one, it has given me a couple more Taylor & Francis articles. These are academic resources. If I scroll all the way down to the conclusion and this is probably my favourite part, however I also want to point out again for the secondary source list, this book, Fallen Bodies, Pollutions, Sexuality and Demonology in the Middle Ages is, again, a recommended text for people in my area, so it's pulling correct information in this instance.

If I scroll down, another one that's a recommended text which is Nancy Caciola's Discerning Spirits, Devine and Demonic Possession in the Middle Ages. Then it has also given me this one that I didn't know existed. So this is the Hybridity of Demons, Theological and Visual Conceptions in the Medieval Period. This was published in 2021 which is when I started my thesis, but I wouldn't have probably come across this just yet. If I scroll down to the conclusion, it gives me some further research directives which, again, is really interesting for an HDR student where I can go, "Okay, what does it think I should be doing? What further research areas?" It has cited a couple. The Comparative Analysis of Demonic Bodies in Different Genres; The Role of Gender and Perceptions of Demonic Bodies; The Intersection of Humoral Theory and Demonology, which is actually my thesis area. That's the further directions it has listed. If I scroll down to the conclusions, it's given me quite a really good conclusion but also it's given me what I love to see, which is a table. So it's kind of given me a table of all of the information that I should take from this report. So it's given me the source type, the example source that it's pulled from, the description of demonic body based on the source, key characteristics and potential symbolic meaning.

If I scroll down, I can export that table into Google Sheets or, again, I can copy and paste it and put it into my Obsidian. It has also given me another table specifically on the medical question that I asked. Here is where it's different to things like ChatGPT. So the sources used in the report this is its reference list. This is all of the references that it's given me that I can then go through and check and verify these references and sources. There's quite a lot of blog posts on here. When I did a little bit of deep diving, I noticed what it was pulling from was blog posts that were talking about academic articles that had just come out, or blog posts by the academics themselves talking about their work, which I thought was quite interesting.

If I scroll all the way down, you can see the list is quite intense. This is a lot of research, but that's because of the way that I have prompted it. I have made it generate something that's quite in depth and this is why I recommend the use of the Prompt Hackers. It's also got a section that is sources read but not used in the report. If I scroll down here, you can see that we have, again, a whole bunch of different websites, a couple of them most of them blog posts, a couple of them some odd websites and public domains.

But what I also like about this and this is how you can teach students to use it is that it shows you its methodology. So here we have the thoughts. So the initial search focus, considering medical perspectives, the next step that it took. Then here you can see what websites, based on that first introduction, it decided to evaluate. If I scroll down and I look at the key theological text identified, it said it found Peter Lombard's Sentences, which is a seminal work in my area. You have to know that text. From The 12th Century is a significant theological work that discusses the physical attributes of demons. "This text was wildly influential in medieval theological education". That is true. It was quite influential. Along with Thomas Aquinas which it has cited as well.

It then gives some further investigation as well. It says, "I will now concentrate on finding more details about Peter Lombard Sentences, including the availability of English translations, potentially include it as a primary source. I also plan to search for primary medical texts from the 10th to the 14th Centuries which addressed demonic influence on health and body." Again, this is based on what I uploaded, the prompt that I used, and there's all of its sources.

This is why I like Gemini. I've only used it and I will show you my Obsidian vault I have only used it for a couple of key things that I need to do for my thesis for my review. I'm at that point in my thesis where I have to synthesise and rewrite so much work and make sure that I'm on the right track.

So here I've copied and pasted directly into Obsidian. You can see I've got all of the headings there. If I go down to that table of sources, it's copied and pasted it directly into the table. Obsidian is all searchable, so you can search everything that you need. And if I wanted to maybe read something else, I can then go and listen to scrolling quite fast here I could then go and listen to that audio overview.

So this is why I do really enjoy Gemini. I think it's a really good tool for researchers, for students. But again, it's all about how you prompt it. That's probably the most critical component. Just for my own benefit and for students' benefits, what I do is I always tell students to make sure that they're keeping their prompts. If I look at the prompt generations, these are all of the prompts that I've used recently to generate these reports. So it's really integral to keep a log of all of these reports that you're doing. Any usage of AI, you need to keep that log, so that's what I'm doing at the moment.

Moving on, I want to show you some similar tools to Notebook LM and Google's Gemini that do require either both log in or subscription, so you have to pay for these services. If I look at this one so this is Mindgrasp. I've probably been paying for Mindgrasp for about 6 months now. In terms of whether or not it's comparable to things like Notebook LM or Gemini, not really. I think Google's kind of cornered the market on this one, especially with the audio overview. But something that I think is still helpful for this tool, this specific tool is that, like Notebook LM, you can upload any source type into it. So that is inclusive of lecture notes and live or recorded lectures. That's what I see it advertised for the most on Tik Tok is to get live lectures into this particular system so that you can then go through all of the headings like it generates here.

So I uploaded the exact same article for your benefit, the Four Phases of Medieval Epistemic Logic. And here is what it generated for me. So the original content is the article. You click over to AI notes and it gives you some headings, it gives you some basic dot points on each of the headings, and it also has ChatGPT like functionality again, like Notebook LM where you can go in and you can go explain more. I pressed "explain more" for this particular section. So we have the AI notes, Four Phases of Medieval Epistemic Logic, briefly explain more about four phases of Medieval epistemic logic. In the chatbox on the far-right hand side we then have its breakdown of those Four Phases of Medieval Epistemic Logic, given me some key things, phase 1, phase 2, phase 3, phase 4. It's then also given me like Gemini and like Notebook LM, a sort of summary of key developments but in a table format.

Then the references from the original content. So like Notebook LM and also, in a way, like Gemini, it's pointing specifically where I found this information. It also has something that I think is quite helpful for reading comprehension for students who, like myself, are dyslexic, ADHD, autistic, is the focus reading. If I press "focus reading", you will see here on the AI notes it has highlighted a couple of the 4 to 3 of the first words so that students can read these in a focused reading way so it's easier for comprehension, easier on the eyes.

It does also have an audio function but the audio function is very robotic. It only goes for about 3 or 4 minutes. Don't get me wrong, I'm not sitting here and having like a sponsorship with Google or anything. I've been using this tool for 6 months. I've definitely used it to, again, break down some articles for me, but it's something students have to pay for. It's $15 Australian a month and the price is going up. In comparison to the currently free Notebook LM, Notebook LM is where I'm going to send students as opposed to something like this. I have the means to be able to pay for this software that I'm still not even 100% on and I might, potentially, if I don't use it anymore for the next couple of months, probably cancel the subscription and find something else.

So moving on actually, very quickly, it also generates flash cards for you and quizzes in the same way that Notebook LM can too, which is also very helpful. So you can ask how many flash cards would you like to generate. Let's do five as the minimum. Select specific topics for your uploaded content. So you can then go, okay, based on the headings this is probably what I want to do. Let's do understanding and knowledge in late medieval philosophy. Press "generate". There was an error, probably because I haven't saved it. So a good example to show that the user interface is sometimes not the best, but the point is you can create flash cards. You can also create quizzes as well and also generate another AI summary too and dive deeper into the source. So this is Mindgrasp.

Another example I want to show you which, again, requires a log in and requires a subscription, if you want to search for more than 10 articles, if you want a report that's more than 10 articles long, would be Elicit Scholar. Elicit Scholar uses a software that's been around for a while called Semantic Scholar. This website is more for, I guess, sort of academically more for the academics. Notebook LM, Gemini, still for the academics, still really helpful but I probably have come across academics that use Elicit Scholar more often or probably know of Elicit Scholar because it uses the previous system called Semantic Scholar.

If I head over and show you. So here is where you can copy and paste your research question. You can ask a research question. It will then change the research question for you, sometimes based on whether or not you want to clarify something, based on whether or not you want to get more in depth with something. So if I show you the ones that I've done, this would probably be a good example. So I asked a question about medieval medical curriculum sources because that's a chapter I have to start preparing for. I clicked on to it. It takes a little bit sometimes to load. So I asked the question of what was the medieval medical curriculum from the 10th to the 14th Century? What should I be focusing on? And here is what it can produce for you. Like I said, if you pay for this it will find up to 50 or more sources, but if you are not paying for it, which I'm currently not paying for, I only want 10. That's what I tell to students. Realistically, if you want to use something that's perhaps more approved by academics because of its connection to Semantic Scholar, Elicit is your best bet. And 10 sources is enough for a 1,500 word, 2,000 word essay, sometimes even more than that.

Here is where we have one central panel. You can see on the side here, on the right-hand side it gives you the report. So it says I've gathered the papers, I have found 50 papers. I've included 10 papers in my screening. And then I've extracted 30 data points from all of those papers. You can click and jump to these steps to find further details. In a similar way to Gemini, you can see its methodology.

It also generates the report for you and sends it to the email address that you've used with this system and then you can save it as a PDF if you wanted to put it through a text reader. It also has a chat function as well. So you can try and get more in depth with the sources and go back and forth.

So I will show you here its top title. So "between 1050 1300, medieval medical education centred on translating Greek and Arabic texts, such as Avicenna's Canon and Hippocrates' Aphorisms, alongside Latin compilations such as Artella, which were widely used in major universities." It's given me an abstract, given me the top sources that it's screened. Go down, it's given me the methods. It says, "we've analysed 10 papers from that initial pool of 50 with 8 screening criteria". You can click on it and it will ask you more on the methods but because we're running out of time I want to be mindful of this.

Here, though, again, is where I like Elicit Scholar. It gives me the study, it gives me the study focus in this table, the geographical region, the time period, the source type examined and the full text retrieval. It will also give me a thematic analysis in a table. We have the text name, the origin, the period of introduction and the Universities that are using it.

If I scroll down even further it also gives me and I will zoom in on this so we can see it more clearly the translation and transmission. So it provides some contextual information based on those papers, the institutional integration. You can hover over all of these asterisks here on the screen, like Gemini, to see where it's pulling this information. And if we scroll all the way down, this is where it gives you the reference list and you can export this either as a bib file or an rss file or txt file.

Elicit Scholar is good because it's used already by quite a lot of academics, its connection with Semantic Scholar, but the downside is unless you are looking for more than 10 papers you will have to pay for it. The cost is expensive in comparison to the free systems like Gemini.

So lastly, I want to show you Goblin tools. If you are feeling concerned about some of these tools, you want to recommend something which is good for a student with ADHD but not feeling as confident with tools like Notebook LM, Gemini, Mindgrasp or Elicit, or perhaps your University doesn't have the best AI policy or still forming its AI policy, like we all are, here is a fantastic tool that's been around for a while. This is free to use for students. It breaks the tasks down for you. So I've just, for everyone's benefit, included and inputted some data already. I've asked it to break down for me this particular task that I might have to do, which is read and digest Gemini reports and listen to audio overviews, start writing chapter 1 for thesis.

And because I've put it on what's called the spice level, the maximum spice, it's asked me how much breaking down do I need? I need a lot of breaking down. So it's really broken down each step, such as gather the necessary materials, ensure that all electrical devices are fully charged or plugged in. It's really given you a lot of information as opposed to something else. What I love about Goblin tools is you can tick things off as you go if you need. You can swap things around if you need as well. If we hover over the little book here, the task, it can give you a time estimate on all of these tools, which is good as well. However, the time estimate is always a little bit skewed, so I would be mindful of that.

You can edit all of the tools. You can add subtasks. You can clear these tasks or you can remove this entirely. So let's just say, let's remove it entirely. The other options that you can do for Goblin tools, the one that I probably refer students to the most because it's, you know, really important, is the chef. This is really helpful. Here you can write what ingredients you might have left in your fridge, and any dietary constraints you might have, your serving sizes, or anything like that. We know students with ADHD don't sleep well, diet can be a struggle, trying to get good nutrition can be a struggle, they want to cook for themselves, clean and do all those things but sometimes it's incredibly hard.

So let's say I have something random. Eggs, apples and beef. Something really random. Suggest. Sometimes it does take a while to generate. It has given me savoury apple beef scramble with a serving size of two. Ingredients, four large eggs, one medium apple. I haven't specified my quantities in this, I just said I had eggs so anything can be there. It has given me the instructions to cook the meal. I can copy and paste this into my notes. I can copy and paste it anywhere. But I can also send the results to the magic to do, so I can then go and see how I would break this down based on that maximum spice level.

It also has speech to text. So you can hit the microphone and talk into it if you don't want to type as well, so it's fully accessible. What I like about this, too, is the compiler. Here is where you can put your brain dump. This website was created by neurodivergent people. So the language that it uses is very much, you know, that neurodivergent community. I love the idea of the brain dump, trying to put everything in there that I can. It will then turn it into curated tasks and send it to the magic to do list.

What I also like is the formaliser. I tell students to use this for emails to take the cognitive load and take the work out. And, of course, you can get ChatGPT to do that for you as well. But this is, I think, you know, a tool that is good for students, too. So let's say I want to write to somebody that "I am not sure about generative AI at this very moment". And let's say I want to make it more professional, more technical, more accessible, more polite, less snarky, angrier, easier to read. Let's say I want it to be more compassionate. I convert it based on only three spices so I don't need much of conversion. "Right now I'm filled with a whirlwind of uncertainty about generative AI." I can make it more formal. Convert it. Takes a little bit. "At this moment I'm uncertain regarding generative AI."

So this is how I tell students if you're struggling to write that email to your Professor to get that extension, you can always pop whatever you are thinking and try and get the text to do this for you. Those are probably the three areas that I would use Goblin tools the most. There is, of course, also The Judge. This is really helpful. "Am I misreading the tone of this?" If you do perhaps get an email back that you might misinterpret, you can pop it in there and suggest a response or get it to judge it too.

These are some of the top tools I'm constantly talking about with students, and I think really have been quite helpful for me personally, and will probably continue to be helpful.

Okay. I'm now going to head back to our presentation. So we are now going to have a five-minute break. While we're waiting, let's do a temperature check. Are you feeling amazed at the capabilities of these Gen AI tools or frightened or maybe it's both? Let me know in the chatbox and then in five minutes we'll head into a discussion about AI policies, academic integrity, power and all of those things. Thank you.

Okay. For those of you who are feeling a bit frightened at these tools, I think it's good to highlight that Gen AI has been around for a while. But in saying that, its language capabilities has really skyrocketed past 2010 and who knows what the next five years might bring.

Before I discuss terminology and how I discuss that terminology with students, I want to show you where I've been learning about AI more broadly. I think it's really important to remember there are some accessible texts out there that discuss Gen AI and it can help to demystify some of the technology, even for those who do not have a computer sciences background. These are my recommended authors and titles to start with. I really enjoyed Kate Crawford's work and I would like to read you out a brief section from her conclusion, because whilst I do agree with this point wholeheartedly, I also want to ask a responding question which relates specifically to accessibility and inclusion in Gen AI.

So Crawford states, "To understand what is at stake we must focus less on ethics and more on power. AI is inevitably designed to amplify and reproduce the forms of power that's been deployed to optimise. Countering that requires centring the interests of the communities most affected. Instead of glorifying company founders, venture capitalists and technical visionaries, we should begin with the lived experience of those who are disempowered, discriminated against and harmed by AI systems. When someone says AI ethics we should assess the labour conditions for minors, contractors and crowd workers. When we hear optimisation, we should ask if these are the tools for the inhumane treatment of immigrants. When there is applause for largescale animation, we should remember the resulting carbon footprint at a time when the planet is already under extreme stress. What would it mean to work toward justice across all of these systems?", she asks.

In the context of this discussion and in education, I would caution against Universities and educators who are creating assessments that circumvent some of the tools I showed you. For example, taking a photo of a text or journal article or piece of written text, that it can't be uploaded into something like Notebook LM also prevents it from being processed through a text reader so that text to speech accessibility no longer works. Students with visual challenges or neurological conditions can no longer access it. And this goes against the principles of UDL. It takes the power away from the student.

Whilst there are problems with AI, as Crawford states, inventions like speech to text and text to speech have allowed students who have not been able to access that material gain access and thus gain power in a system that may or has historically excluded them. For example, and in the context of ADHD where Gen AI assists those with executive functioning and reading comprehension is in the areas which it supposedly excels. As you saw from my demonstration, Gen AI is most useful for me because of its language capabilities, summarisation and the audio function. According to Our World and data, Gen AI sits at 18 base points higher than human capability for reading and 15 base points higher for language understanding. However, there are plenty of areas that Gen AI is still lacking, such as complex reasoning, which is why I communicate to students that Gen AI tools can and should only be used as a supplementary tool. As I have stated in the recent data, it's important to remember that while there are remarkable achievements and these show very rapid gains, they are the results of specific benchmarking tests outside of the tests AI models can fail in surprising ways and do not reliably achieve performance comparable to human capabilities.

So whilst tools like Notebook LM and Mindgrasp can summarise and explain things more quickly than humans, it still can't solve complex problems or answer every question. When showing students these tools, it's important that I think we demystify some of this technology for them so that they can realise this is not magic, nor is the tool some disembodied spirit. Most of the tools that I showed you use large language models or what's called LLM for short. LLMs are tailored specifically for natural language processing tasks, including but not limited to language translation, text summarisations and question answering. So the reason you may enjoy it, as I say to students, is because it's designed to be interactive and provide answers, even if they are wrong. I think students can also be drawn into these systems because the texts that are generated are humanised in a way that academic writing is sometimes not, which is inclusive of not only journal articles but poorly designed assessment instructions. These systems types are machine learning and they use a type of deep learning. They are built on neural networks, just as the human brain is constructed of neurons that connect and send signals to each other, an artificial neural network is constructed of network nodes that connect to each other. Large language model systems can also learn from themselves as more information is inputted, and in order to enable this type of deep learning. These models are trained by human programmers and utilise a colossal amount of textual data systems and are only capable of discerning the relationships between words, these particular systems, within that text and it's predicting the succeeding word in the string of words based on the antecedent. So there's a lot of work that goes into it.

So I say to the students that the conversations you're having with ChatGPT can and will hallucinate depending on the prompt, depending on the conversation and those antecedents. I always explain to students that these systems are designed to give you an answer even if that answer is incorrect or skewed. So when students tell me of the systems that they're using, I will ask, "Okay, are they using a large language model or is it using RAG as well?"

RAG stands for retrieval augmented generation systems. For example, Notebook LM, Gemini and Mindgrasp use RAG. So does ChatGPT 4. This is where the system searches for relevant information from external or internal documents, databases, webs, the sources you've uploaded. So the language it's generating is from a verified source or, at the minimum, verifiable sources. In most cases systems that use RAG can generate a more informed and contextually accurate response so there is less likelihood of hallucinations and misinformation in its text generation. With systems that use RAG it can provide more access to up-to-date information, allows for deeper learning with more customised resources based on what the student is needing. This is, however, based on their prompts, which I think is a future skill but, more importantly, the AI is less likely to hallucinate when it uses RAG because it's trying to understand the language from the source itself, and this is why I emphasise to students the need for their own deep read and critical analysis, which includes any prompts you use, any hallucinations. You can't just listen to Notebook LM's audio. You have to question it as well, which we should be teaching students to do with any source type or information. Nobody should ever take anything at face value. Part of the challenge, however, with these systems whether or not they use RAG is language. As I state to the students, language is inherently human and complex.

When I show these tools to students and discuss Gen AI, I like to bring up the Odyssey. As I'm currently using Gen AI to help me translate medieval Latin and ancient Greek. My bachelors and masters was in the field of ancient literature and in my 4th year I had to do a reading of Homeless Odyssey and compare different translations and how that affected my analysis and reading of the text. For example, in the translation of The Odyssey by Emily Wilson, a female scholar, she uses the accurate and very specific Greek term for dog eyed or dog face. When Wilson translates this term in the text, when Helen is explaining her decision to leave her husband and go to Troy, Wilson translates the lines as "shall I conceal my thoughts or speak?" She goes on to say that, "The day the Greeks marched off to Troy, their minds fixated on the war and violence, they made my face the cause that hounded them." So this is Helen speaking. The word in Greek is kynokéfalos, a rare word which literally translates in English to dog face or dog eye. However, this line is translated by Robert Fagles as "shameless whore that I was", and by Stephen Mitchell as "bitch that I am", and by Anthony Verity as "shameless bitch that I am".

The point that my Professors were trying to get me to understand by setting this topic was that your interpretation and argument of Helen's decision to leave her husband for Paris is going to be completely different depending on the translation you read. And this line it appears that the male scholars clearly blame Helen, but the female scholar emphasises that Helen is blaming herself.

My message to students when telling them of this problem in the context of AI is that for them to understand this, they need to understand language and how its meaning is complicated. The machine can't understand the context, as you can see from ChatGPT translations here on the screen, and on the same line it's not very accurate. But neither were the male translations in their interpretation. Both have the potential to harm or destroy our social reality. This is why I've advocated for a long time the need for humanities based courses to appear in computer sciences and STEM more broadly. The need for philosophy and ethics in history to be taught alongside technological innovation as that is where we learn the power of language, knowledge production and how it can form or warp our reality.

Of course, we can't have a discussion of Gen AI without talking about academic integrity issues and Gen AI. I will always preface every conversation in workshop where I show these tools the following: Have you revised the Gen AI policy of the University? What can you tell me about the policy? Have you discussed your use of Gen AI with the course coordinator or tutor? I also remind students when discussing these tools the issues of overreliance and that overreliance on AI can reduce your academic skills and critical thinking, especially when it starts to hallucinate and it can also lead to confirmation bias.

I always tell the student that they should be questioning every source, Gen AI or not, that they read and evaluate everything through a critical lens. I tell them when you use these tools you must be critical about why you are using it in the same way you should be critical about what you are reading, what you're watching, why you're taking notes, why you've highlighted a particular section, why you're being fed specific information by specific algorithms, what's appearing on your social media and why. However, I think whilst we're all debating about students' use of Gen AI and academic integrity, which is an important and necessary conversation, I think we also need to consider notions of power here and the flipside of that conversation as there are currently still millions of people who do not own computers, they have no basic technological skills, let alone understanding something like Gen AI and its language. So this skill gap will cause widening socio-economic divisions between us. Additionally, when I show students these tools I discuss with them the ethical and environmental issues of Gen AI. Each use of ChatGPT does use a lot of electricity. So I often end my conversations asking for the energy consumption, i.e., the token count. This topic on electricity consumption, however, is currently being debated on what its actual usage is. LLM systems and Gen AI also require a lot of water to pull the service. There is no debating that. This is the reason for my use of Prompt Hackers. I want to try and get everything I need in one hit rather than constantly asking questions and, therefore, causing further damage to the environment.

I think you need to be really cautious of the environmental costs when you use it because, as Kate Crawford states in her book in The Atlas of AI, AI is not an immaterial entity. Almost every facet of is linked to the physical which includes the servers, the chips, the mining of precious minerals, and the physical labour of humans."

Some of these topics and issues around AI and its usage in higher education contexts have been discussed in these recent volumes. I have read a few chapters of each and it's posed really thoughtful questions. However, what I keep noticing in the scholarship and studies done in the last three years especially, is we really don't have a consensus on students' use of Gen AI, let alone a consensus on how our neurodivergent students are using AI. This is not surprising to me because as a learning adviser what I have often seen over the years is a reluctance by students to use it because they're fearful of the academic integrity aspect of it. Also because some are not using it for deeper learning but more quick answer to things. In fact, in my time as a learning adviser, even facilitating these neurodivergent study skill workshops, I'm always deeply surprised by how many students still do not use referencing management systems like and they are still typing out their references.

In terms of the specific literature on reading comprehension and ADHD and Gen AI, there is not much that's currently being studied. However, I do want to draw your attention to a specific study that was done in 2023 titled ChatGPT As An Assistive Technology to Enhance Reading Comprehension for Individuals with ADHD, where the students would have been using ChatGPT 3.

This was a very small study of students and their usage of Gen AI for those that have ADHD and what the research has found in testing the comprehension of the students and their supplementary use of ChatGPT as a tool to understand the reading was that out of the 9 students studied, most of them found it was helpful because ChatGPT was simplifying the text for them, it reduced stress, it helped with clarity, gave them relevant and key information, but I think what this study is capturing here is the way that Gen AI humanises and deconstructs the text making it easier for students with executive functioning challenges or cognitive overload to approach study and to approach reading.

In saying that, some of the students in this study who have ADHD also found Gen AI to be annoying and confusing with one participant stating that they believe that ChatGPT, as a tool for reading text, can be both good and bad, but that they may not be motivated to read since they have a summary. This is interesting here and something I also see in myself. Gemini produced a huge report for me. Notebook LM can produce a massive briefing document for me. Whether or not I can handle it that day is dependent on whether or not my executive functioning is functioning and, of course, the issue of over reliance, not wanting to be over reliant on these systems and tools.

The literature and Gen AI use for students is growing, though, but there is currently limited research so far on the use of Gen AI for students with ADHD, specifically, but anecdotally this is what I see in my workshops and in my time as a learning adviser. I think the use of Gen AI for students with ADHD goes beyond just reading comprehension and summarising text. I think it does help with managing executive functioning. The feelings of paralysis are not as high. You don't provide a curating reading list for a busy brain. It humanises the academic text. It soft launches you into study through those audio assistive functions and also allows for the 24/7 interactivity but the overreliance is the issue. The use of Gen AI for students who are neurodivergent I think is more tied to emotions and feelings of competency, rather than the competency itself.

What I liked most about these tools is that when I feel that I'm having a particularly difficult time with my ADHD but I have to focus on my work, is when I turn to Notebook LM's podcast option. After I've listened to the audio and I go and read the article, I feel a bit more competent, despite the fact that it's a two step process and essentially another form of information via a podcast that I have to digest. As we know, podcasts are helpful but as these researchers have stated some time ago, podcasting is effective as a study tool when it's scaffolded correctly. In saying that, this article was published before RAG systems like Notebook LM existed which generates the podcast based on that specific topic.

A recent study found that AI assisted audio learning can increase motivation, increased feelings of autonomy, feelings of competence and relatedness that promoted academic motivation. The article argues that the audio learning potentially enhanced students' feelings of autonomy by allowing them to engage with learning materials in a flexible settings, on the go, or while multi-tasking, which is perfect for students with ADHD. As a result, the study found that the flexibility of this text, combined with the lower cognitive demands compared to reading, may have contributed to increased feelings of competence. Additionally, listening to a human voice, even when AI generated, could have fostered a sense of social relatedness, thus further boosting motivation.

This is what I often see with students and have felt personally, is the imposter syndrome that comes with reading academic text and not being able to understand it and then losing motivation. I think it's a large problem that feeds into the retention of students from equity groups where we expect them to come into University with prebuilt skills of knowing how to decode academic text and we do not teach them that fundamental skill explicitly in their courses. Rather, we sometimes will make it an optional asynchronous learning module. My question is always how exactly do you motivate a student with executive functioning when it's a self-directed module on an essential skill they need to read these texts?

I think we also need to reevaluate how much we're potentially fitting into our courses at all levels of education, primary school, high school and tertiary. As a first in family there was not a single person I could turn to to help me understand how to read peer reviewed works, navigate University systems, or synthesise knowledge from the mammoth amount of content that I was learning.

These feelings of competency and reading are supported in the literature for all types of students, not just students with ADHD. Reading and the emotions that come with it for someone with ADHD is a roll of the dice. I know the minute I start to feel frustrated with the text, it's game over. My momentum fails, paralysis kicks in and it can take me hours, sometimes days to approach that text again. These researchers found that amongst students with and without reading difficulties, reading material awakens fewer negative emotions when the material is not too challenging. This is why I recommend the use of tools like Napkin AI or NotebookLM as it provides a way to interact with the material and give some context first before they go into a deeper read and start taking notes so they are not entering their study mode already feeling that overwhelm of emotions or the imposter syndrome.

This particular passage that I had to study in my Masters thesis before Gen AI would regularly bring me to tears because I would see other scholars cite it in their work and think how on earth do you understand this? The text starts by stating "God is everywhere because he is nowhere, and this is also true of intellect and soul, for each of these is everywhere because each is nowhere but God indeed is everywhere and now here with respect to all things which are posterior to him." This is completely incomprehensible and dense, even with my years of knowledge of neoplatonic text. It took me weeks of drawing and writing to figure it out in 2021, and also placed this in the context of my wider thesis aims which was the reception of neoplatonic philosophy in Egyptian theology, another niche area I know. Last year I found Napkin AI. As I was testing it, I put in this particular passage and here, as you can see on the screen, in a matter of seconds, it was able to turn it into something that was more digestible. This would have saved me so much emotional stress and turmoil at the time. And time is critical these days. Students in Australia are working more than ever, especially HDR students. We're having to work more hours in an economy where our dollar does not stretch as far. Tools like Elicit Scholar and RAG and large language systems like Mindgrasp also assist with precision and finding the necessary information fast. What I also like about showing this particular tool to students is demonstrating to them that at one point they have to stop reading. There is simply too much information in today's world and you can't put so much pressure on yourself to read everything. However, this tool can help you get started and keep you on track with a curated reading list, as opposed to going down a research rabbit hole, something that I often do myself and have seen with neurodivergent students, especially when you combine it with something like Goblin tools to really curate and help you get started.

My opinion on students' use of Gen AI more broadly is that I think the culture of publish or perish, in a way, has contributed to why students turn to things like ChatGPT. I really enjoyed reading about this case study of a Gen AI tool called InfraNodus which creates semantic networks and analyses language connection between articles, in a nutshell. The title of the chapter naturally drew me in because of my research area. If you don't know the story, the basis is that a learned Sorcerer asked his apprentice to clean up. When the Sorcerer leaves and the apprentice thinks, "Well, I know magic, I can use spells to get this done quicker", but because he is not as competent in the language of the spells and the magic, he messes everything up and creates more mess.

I think the culture of publish or perish has created more mess because we've now hit a point where there is so much information, data and research out there that even in niche areas of mine, which is demons and medicine, I need Gen AI to help me sort through it. And this is not just in academia, but every time I walk into Dimmocks I'm struck by the amount of new commentaries and new histories, new biographies, more books, more articles, more podcasts. The more we need these tools simply because we're trying to read and consume everything. As I often say, we can't put AI back in the box, nor can we ask humans to stop producing knowledge of all kinds, but we do need to start creating policy and conversations around the production and control of knowledge and teaching students how knowledge generated by humans who code AI systems is inherently political and shapes our social reality. Importantly, we need to recognise that students with ADHD need these tools as well as alongside traditional study methods. We just have to start having honest conversations with them about their usage, demystifying the technology, discussing the ethical issues of its usage so that they are cautious when they use it and, importantly, telling them that this should not be your first reaction, is to go to AI. It should only come when you're at that point that your emotions begin to heighten and those feelings of imposter syndrome and cognitive overload kick in.

These are the rules that I abide by for myself and the recommendations that I give to students when showing them these tools and having these discussions around the use of Gen AI. Keep a log of everything, including your prompts, your notes, your responses and the hallucinations. Double check and verify the information and question if the response is a real generation or it's a hallucination. Use the tool thoughtfully. Would you use a prompt hacker to generate the most accurate response that gives you all the necessary information you need without too much back and forth? Avoid using it daily and for every research task or life task. It's important to first recognise when you are feeling that paralysis of functioning and ask whether or not the tool will overwhelm you or make it easier.

So to conclude my talking part of the presentation, I think that this chapter cited on the slide here points out something that we might want to consider. The authors state that perhaps the very idea of a new status quo should be challenged. The COVID 19 pandemic created a situation where many traditional face to face educational practices became obsolete, instigating an unprecedented pace of development in online, hybrid and digital pedagogies. In 2024 we are experiencing another seismic shift in education with the growth of Gen AI. Perhaps then there are no static moments. Instead, we simply need to accept the wisdom of Heraclitus, that the only constant in life and in education is change. The wisdom of Heraclitus that they are referring to here is his quote from a Fragment, where Heraclitus supposedly said that no man steps in the same river twice. Most people misinterpret this particular Heraclitus fragment. If you read the entire fragment, plus if you understand the context of pre-Socratic philosophy, Heraclitus is not saying everything will always change or it's always subject to change. There are some things in this world, fundamentals, that will never change, such as a mountain where the river lies. You need to climb the mountain first in order to step into the river and that mountain is not going anywhere. I think students will always have to read and interact with text in order to truly grasp their meanings. Gen AI can create summaries for them but it can't always understand the text, and some students, like myself, might need these tools to make it more accessible. How we read and interpret those texts, deal with cognitive overload and understand how knowledge is produced and shaped by society is the mountain that still requires fundamental knowledge and the teaching of academic skills. But these skills are subject to change based on technology and the understanding of that technology, which is the river that is constantly changing.

Thank you for your time today. I hope that you have enjoyed this presentation. And please feel free to connect with me on LinkedIn or visit the Neurodiversity Project at the University of Adelaide. I'm happy now to answer questions or clarify systems, where possible.

DARREN: Excellent. Thank you very much, Tiana. Look, lots of chat, I'm sure you haven't been able to keep up with, hopefully you've had off screen, which is fantastic, and we might make the chat available along with the recording as well. Lots of questions. We're probably not going to get through all of them. I have answered a couple of them. Quickly, I did go to type an answer and I actually went answer live, so I will quickly address that one, which was about the Notebook LM and the timeline information, did you paste that in or did AI generate it? I believe AI generated the timeline.

TIANA: Correct.

DARREN: We will go through some of the others which have been upvoted as well. One of the most topical, which we would assume, is if you are inputting journal articles or book chapters, does that not breach their copyright?

TIANA: Potentially. You have to look at your open access. It's hard because and I only learnt this the other day the internet was actually created and founded created for the purpose of academic sharing PDFs and sharing their articles and now it's turned into what it is, right? So it's an issue of copyright. Again I ask the same question about accessibility, right? So how are we supposed to make it accessible? Are the Universities going to give us these tools? Would they potentially look at paying it? Should we then be changing the copyright laws and legislation? I mean, a better question that I actually have to ask is I've now produced three publications, three chapters, one of which was in Springer. I haven't been paid for those. I mean, I think that's a really good question. I think the whole system needs to be reevaluated where journal articles and publications are reliant on academics and Universities need us to publish it, then it goes to these publications that make a lot of money, and then I have to buy my own work in my own library, but I don't get any royalties from it? That's a really good question, I think.

DARREN: And there is also I might point out there is also the notion, particularly under Australian copyright law, that does support format shifting for students with a disability. Again, you are talking about neurodivergent students here, and so in the similar vein I always make sure that students that I'm supporting, students with a disability, are well aware of their roles and responsibilities in using some of this and to, where possible, turn off the ability for these engines and various LLMs to source, I suppose, their information and put that into their training models. Most of the tools allow you to do an opt out or temporary option. I think as you pointed out, it's worth keeping hold of all of the prompts you put in and those kind of things. But I just wanted to know if you wanted to add to that and have you had any of those discussions with students that are concerned about that copyright issue?

TIANA: I don't think students know anything I will be very honest. They don't know much about the copyright. I think academics will have that question, and rightfully so. As you have pointed out, you know, we know some of the legislation and the laws around this, as someone with a diagnosis, I need this to make it a little bit more accessible to me. Students, I don't think actually using Notebook LM, I think they are using ChatGPT more than Notebook LM, Darren. I don't know if you are also getting that too, but many of them are not using Notebook LM.

DARREN: Yep. Excellent. Thank you. And it's probably a topic for another day altogether on its own. Next question: have there been any objective assessment on how accurately Notebook LM generates answers to its quiz questions, especially for subjects that are, for want of a better term, subjective?

TIANA: I don't think it's been around long enough. That's probably the simplest answer. I mean, just the audio overview, I think it was only created last year, I believe. So I don't think it's been around long enough. Again, like I said, the literature that I've read on Gen AI, I don't think we're going to come to a consensus about what AI will look like in the next 10 years, how it will affect skills of competency, how it will generate certain things, because we're still at, I believe, that very foundational part where all of our legislation, curriculum, teaching, needs to adapt to the system.

DARREN: Still very much transforming and we don't know what it's transforming into just yet. More research, more evidence is certainly needed. Alfina asks: My University has a traffic light system for AI, the red level explicitly states AI cannot be used for reading summaries. In terms of inclusion, can you state if these tools, in general, I suppose, should be used in terms of considered reasonable adjustment?

TIANA: This is a conversation that does keep coming up about placing some Gen AI information in students' access plans or individual plans. I think yes, the text summaries is really helpful for students with executive functioning challenges and needs to be considered, especially from an accessibility point of view. I think, again, the idea that you can try to circumvent these tools is a little bit of an issue because then it opens a can of worms to a whole bunch of other topics. Like I said before, if we turn around and say "no, sorry, can't put this through any AI models", while we're trying to find ways to circumvent it you are going to prevent access for a whole bunch of other students. I'm not sure what the answer to that question is. From a moral standpoint, from my viewpoint, we should be allowing it for summarisation of things. I mean, each University is so different. Macquarie has a research assistant AI actually embedded now in their library, so they are a little bit more for it.

DARREN: Watch this space. It's transforming week on week, isn't it? Every week. I think you even mentioned you look at the tools and suddenly there is new features in there, as much as our institutions are adopting new features and new ways sometimes without careful thought, particularly when we're talking about things of proctoring of exams and those kind of things where we're using the tools. We're happy to use the tools in some of those senses. I digress. Quickly, a couple more questions before we run out of time here. Lauren has posted "I have heard that there's some changes being made or that are coming to Gen AI on accessing journal articles, that we won't have access to them anymore. What are the implications for the use of these tools if this is the case?"

TIANA: I'm not too sure. I haven't come across that yet. Again, I think it's another question of we keep circumventing, circumventing, when we need to again have conversations around accessibility, and we need to have all of those conversations. And we can't put it back in the box so how exactly are we going to stop students from using these tools? How are we going to stop people from using these tools at all? There is always a workaround. Someone will always try and find a way to make it more accessible.

DARREN: Yep. And, look, I think it's also important to note that it's not always necessarily just journal articles or things that students are putting in there. Students can put in their own notes, they can put in lecture transcripts to help understand lectures better, and to break those down and do that reflective practice and quizzing and prompting and flash cards.

TIANA: Zotero is a perfect example. Zotero is a reference management software system. I can take my notes using the notepad on Zotero and then copy and paste that, which technically would have all of those sections from the journal article and put it into something like Notebook LM. So there is still that problem, too.

DARREN: Yep. And just quickly, there is lots of questions, and you have already agreed, thankfully, to answer some of these questions, and we will add those up with the recording of the website. So if we didn't get to your question today, we will post some thoughts up there with that. But quickly, what are your thoughts, I suppose, again, back to Notebook LM, on how this process might lead to better reading? And they ask because they are noticing AI summaries, audio books can help ease students into some of those readings you've mentioned; some of that academic language?

TIANA: I think look at the audio book industry. I think that is a really good example of the book industry, publications that are turning everything into audible audio books where all of these people who wouldn't have either the time or perhaps even the skill to read are consuming audio books and podcasts at huge levels, levels that we haven't seen in previous years. So I think, again, like I say to my students, it's not like I'm grabbing a whole bunch of stuff off Springer and uploading everything into Notebook LM. You can see I have four notebooks in my entire six months of using it, and it's because I'm trying to, again, have that deeper read, have that understanding. Because let's also be really honest and be really frank, not everything that's published is written well. That's also a problem, right? If we want to have these discussions around copyright and we want to have these discussions about how students are uploading things and engaging with content, can we also have a discussion around the inaccessible language that I have seen in some journal articles too, which make it really hard to engage? It's peer reviewed scholarship. We're asking them to come in and understand how to read something that they are not taught explicitly how to do, and it's created for five people in the world. I feel like am I the only one that's asking that question? Are we not talking about that too, that maybe the reason people are going to these texts and turning it into audio books is because the text in itself is not to their level? Textbooks are created for students specifically for students at various levels. Academic journal articles are not. So unless we want to turn around and say everything is now a textbook, articles are only just for peers, we need to have that conversation too.

DARREN: It's called peer reviewed for a reason. We're going to have to wrap it there. We can chat for another couple of hours. Thank you so much, Tiana, for your presentation today, and thank you to our captioner, Helen, for keeping up with the conversation as well. There was a lot of information covered in there, so please join me in thanking Tiana.

As mentioned, an email will be sent out when the recording of this webinar is available on the ADCET website, and we would encourage you to please share this with your colleagues. We would also ask that you complete a short survey on this webinar and sign up to our newsletter. Links to those will be made into the chatbox, though you might need to scroll to find those links because there is lots of thank you’s filling up chat as we speak. We also ask you please save the date for a couple of our upcoming webinars, one on inclusive placements for people with disability, and another on meeting our digital duty of care, disability data in practice. Further details of those will also be in the chatbox. Once again thank you everybody for attending this ADCET webinar. Thank you to Tiana for an absolutely enlightening session today.

TIANA: Thank you.

DARREN: Thank you, everybody. Have a great afternoon.