ChatGPT and AI in Higher Education Teaching-Learning-Assessment

AI like ChatGPT is here to stay. It will only get more powerful. Students will use it. Although there are concerns, we believe that embracing AI could present exciting opportunities to rethink and reimagine our approach to TLA at SU so that we can equip our graduates with the necessary skills to work responsibly with AI.

DLTE @ SU, January 2023

KEY TERMS

AI
Artificial Intelligence
GPT
Generative Pre-trained Transformer
HE
Higher Education
TLA
Teaching-Learning-Assessment
DLTE
Division for Learning Teaching Enhancement
CTL
Centre for Teaching and Learning
CLT
Centre for Learning Technologies

What is ChatGPT?

ChatGPT is an easy-to-use AI chatbot that can 'read' and 'answer' posed questions and prompts in natural, written language. It can also produce code, essays, poems, and stories, or solve problems in code and identify faults in calculations. It is important to note that this technology is not cognisant but rather retrieves information and linguistic patterns from the data it was provided by its human creator. Incorrect data can therefore be perpetuated as fact, which means that this technology can be described as 'a-moral' – it might present incorrect statements as true facts, make up academic references and perpetuate biases found on the internet.

Because it creates tailor-made 'answers' on command and does not store or share its responses, it cannot currently be traced by plagiarism detection software such as Turnitin. The January 2023 version of ChatGPT was trained on datasets that predate 2021 and it cannot retrieve information by browsing the most up-to-date version of the internet. Although it can provide in-text references and sources in its responses many of these may be falsified, wrongly referenced, and untraceable.

Why take note of it?

Generative pre-trained transformers (GPTs) are not a new technological phenomenon and have been in development and use for many years. Similar AI technologies form the foundation of many educational tools we already use, such as SUNLearn and Turnitin. ChatGPT is, however, one of the first GPT models to become highly accessible and it highlights the ease with which these tools can be used by ordinary individuals. AI like ChatGPT is here to stay and will improve rapidly. Given that this will become a part of our students' future careers and everyday lives, it may not be sensible to prohibit its use outright. Is it not perhaps our responsibility to teach students how to engage with such tools in a critical manner, as we do with information literacy?

The immediate implications of ChatGPT on TLA at SU include both concerns and exciting opportunities. One of the most obvious **concerns is regarding assessment,** and more specifically **non-invigilated summative assessment tasks**, such as essays on common topics, take-home exams, quizzes, critical responses to standard texts or summaries, The most common responses to this concern are to

1. use sit-down, invigilated assessment only,
2. develop new plagiarism-detection software, capable of spotting AI-generated responses,
3. and improve proctoring software.

With the rapid development of AI, option 1 is not feasible. Although options 2 and 3 are becoming technologically possible, these approaches may contribute to a continual catch-up game.

Equally important are the **concerns for teaching and learning**, for example:

→ Students may become too reliant on the use of chatbots in their learning, which could hinder their ability to think critically and qindependently.

→ Limited understanding of the material: Chatbots may provide answers to students' questions, but students may not fully understand the context or reasoning behind the material, which could lead to a shallow understanding of the subject matter.

→ Privacy concerns: Chatbots may collect and store personal information about students, which could raise privacy concerns if not properly protected.

While ChatGPT cannot replace humans completely, it does impact the way in which we interact with students in our learning environments. We should therefore quickly **adapt and rethink our approach to TLA at SU** so as to remain relevant and up to date in this new and exciting HE-TLA-space.

How can we respond?

At SU we strive to use technology in a meaningful and innovative way within the TLA environment. This includes a critical, integrated approach to the use of AI technologies such as ChatGPT. We promote the ethics and academic integrity of both students and lecturers within this new TLA-context.

As a leading HE institution and trusted knowledge partner, the most responsible response is to alter and adapt our TLA practices to account for the advances in AI technology and its future applications. We motivate, therefore, that **there are ways of embracing AI for the future of TLA at SU.** We offer some suggestions, as shared by countless teaching academics and thought leaders in South Africa and abroad.

Some suggestions:

→ Reconsider what it means to be human – what can we do that AI can't?

We are social beings: Cultivate social connections and access to knowledge networks.

We have the skill of interpretation: Emphasize critical thinking, reading and reasoning.

We can apply knowledge to real life and problem-solve in context.

→ Emphasise **academic integrity** in class, within faculties, and on an institutional level.

 ✓ Ensure students know where to find additional guidance and support regarding sound academic research practices, such as the SU library and the Language Centre.
 ✓ Discuss AI tools such as ChatGPT with your students and clearly communicate the proper and improper use thereof within your class and context.

→ **Rethink** where **T&L** takes place:
 ✓ Consider the flipped classroom approach and move passive student learning moments (like teaching content) outside of the classroom.
 ✓ Use face-to-face contact time for active learning and engagement with concepts.

→ Adapt the **learning outcomes** of modules, align them with the above critical human skills and equip students with these skills during contact sessions.

→ Redesign **assessment**: Focus on measuring and assessing the adapted learning outcomes and the skills listed above.

 ✓ Assess less, ungrade. Use less summative, high-stakes assessments and focus on formative, process-oriented assignments instead.

 ✓ Avoid 'vulnerable' assessments and instead develop creative alternatives like presentations, oral exams, critical reading exercises, text discussions, etc.

 ✓ Focus on content, building arguments, working with sources, and editing writing instead of using filler essays to assess knowledge.

→ Make a **mind shift**. The use of AI in HE-TLA is comparable to the introduction of a calculator in a maths class – it simplifies the otherwise difficult calculation process, but it still requires human competence to get to the right answer.

TLA examples and practices:

SOURCES

AI writing detection: a losing battle worth fighting for.

A sneak preview of Turnitin's AI writing and ChatGPT detection capability.

Will ChatGPT Change the Way You Teach?

AI and the future of undergraduate writing.

ChatGPT and the rise of AI writers: how should higher education respond?

Update your course syllabus for ChatGPT.

Why I'm not scared of ChatGPT.

The brilliance and weirdness of ChatGPT.

A college student created an app that can tell whether AI wrote an essay.

Would ChatGPT get a Wharton MBA?

Autocomplete: coming to terms with our new textual culture.

ChatGPT: the death and rebirth of writing. (Podcast)

Tackling ChatGPT head-on: a student assignment
Dr. Morton Ann Gernsbacher; Vilas Research Professor and the Sir Frederic C. Bartlett Professor of Psychology at the University of Wisconsin.

Example of a ChatGPT policy to add to module frameworks
Prof Chris Marsicano; Assistant Professor of Educational Studies and Public Policy at Davidson College.

Writing assignment and ChatGPT: teaching philosophy and other subjects
Prof Julia Staffel; Philosophy, University of Colorado Boulder

ChatGPT advice academics can use now
Multiple HE practitioners

Alarmed by AI chatbots, Universities start revamping how they teach
Multiple HE practitioners

So, you want to use ChatGPT in the classroom this semester?

Ben Swift: Australian National University

All my classes suddenly became AI classes

Ethan Mollick: Wharton School fo the University of Pennsylvania.

ChatGPT and AI Composition Tools

Centre for Teaching and Learning: Washington University in St.Louis

Support details

Please contact:

→ The **CLT advisors** for guidance on meaningfully incorporating learning technologies in your TLA practices.
→ Your faculty's **CTL advisor** for rethinking TLA strategies to enhance student learning and uphold academic integrity.
→ Your **faculty librarian**.