

ISSUE #18

February 2023

DEAN'S DIGEST

ChatGPT – here I come

“ChatGPT has the potential to revolutionize the way we think about education and universities. With its ability to provide instant, comprehensive, and tailored responses, it can help bridge the gap between traditional teaching methods and the needs of dynamic and constantly evolving world”

ChatGPT

As you may have noticed, AI-based technologies like ChatGPT are disrupting learning institutions on a global scale. Most universities are alarmed by AI chatbots, which started a heated debate in the media and at universities on the ethical and practical implications of AI technologies like ChatGPT on screening, teaching, learning, and examinations. Right now, there are more questions than answers on how to embrace this technology and how to revamp our teaching.

What is ChatGPT?

[ChatGPT](#) (OpenAI) is a pattern recognition tool based on huge amounts of generated historical text. It can engage in a dialogue with the user, challenge incorrect premises, admit its mistakes, and reject inappropriate requests. In a teaching context, it can quickly read textbooks, articles, from links and voice-based media from speech-recognition apps like Whisper. It can succinctly provide summaries, answer exam questions and tests, make problem formulations, structure and write projects and other assignments, make exam questions, multiple choice tests, and provide feedback, etc. It can even transfer knowledge and methods from one context and apply onto another and assess the likelihood of AI created contents.

However, the answers may also be wrong and biased, and the suggestions not useful, and, unfortunately the chatbot still suffers from knowledge overconfidence as it does not automatically assess the chances of giving correct answers. But the chatbot software is learning and developing rapidly from its users' data and behavior, who are signing up at an exponential pace. Similar bots will also be offered by competitors like Google, Meta and Tencent. We will therefore have to continually assess the bright and dark sides of such AI technology for students and teachers.

How are Danish Universities approaching ChatGPT?

Some universities have quickly forbidden the use of ChatGPT at exams, but at different levels. A general acknowledgement is that this technology cannot be stopped by a ban. DoE and representatives of the other seven Danish universities recently discussed how ChatGPT may impact our educations and exams and what we should do about it. Danish universities will continue to share our knowledge and considerations on the use of ChatGPT and involve other learning institutions (every 6. Danish high school student uses ChatGPT), and the ministry when needed. Soon, we will decide if there will be some collective action at the university level and what the short-term and long-term moves will be, such as testing the applicability of the existing exam rules and how to adapt teaching and learning to the AI reality.

How is ITU approaching ChatGPT?

ITU will not ban chatbots at all exams as it depends on the context and because we do not yet have an overview of the challenges and opportunities of this technology in general and at course level. The existing exam rules apply until other rules have been announced, but ChatGPT seems to be more than an aid; rather it can be compared to letting another person (or robot) answer your assignment questions and that is cheating. Since assignments and exam requirements are clear on cheating and plagiarism, individual assignments, projects, and exams, must be conducted by the student by herself or himself, not by any other human or robot. However, it is nearly impossible to prevent students from using ChatGPT when preparing, so this may call for new ways of assessment and learning.

To learn more about the impact of ChatGPT on how we teach and examine at ITU, the Education group and Heads of Department briefly discussed it at their December 2022 meeting and at our February 2023 meeting. The process has started at department level: ITU professors Stefan Heinrich and Thore Husfeldt presented their insights at a CS department meeting January 17, followed by a dialogue with faculty. DD will host a panel talk with ITU professors Thore Husfeldt, Martin Pichlmair, and Dean of Education Pernille Rydén at the department meeting March 1. At the BIT faculty meeting March 7, ITU professors Thore Husfeldt and Dean of Education, Pernille Rydén, will present and discuss this matter with faculty.

In the longer term, ITU students will probably have to learn how to pick, use, evaluate, and develop the AI bots, so we must discuss what new competencies students and faculty must develop and how future teaching, learning and research will take place. *Short term*, we will try to be as transparent as possible about what we will do and why we do it. At the same time, let's stay both curious and critical when we discuss the various questions that this AI tool is creating, e.g.:

- How can we be sure we use it in a way that makes us smarter?
- How do we redefine cheating to fit this new reality? (calculator/PC use was cheating once)
- Will ChatGPT use encourage more critical and creative thinking?
- How can we make sure AI tools help *all* students What should we stop doing to leave time and space for developing AI proficiency?

Yes, I asked the bot to write the opening quote, but we will not ask it these questions 😊

Pernille Rydén (pryd@itu.dk), Dean of Education, ITU

Wanna know more?

<https://mashable.com/article/what-is-chatgpt>

UNESCO report: <https://www.unesco.org/en/digital-education/artificial-intelligence>

<https://jyllands-posten.dk/indland/ECE14878732/universiteter-forbyder-brugen-af-den-omstridte-chatrobot-chatgpt/>

<https://www.dr.dk/nyheder/indland/chatrobot-giver-hovedbrud-paa-universiteterne-cbs-vil-tillade-den-paa-sigt>

<https://www.computerworld.dk/art/281187/dansk-universitet-indfoerer-restriktioner-mod-chatgpt-det-er-snyd>

<https://ny.chalkbeat.org/2023/1/3/23537987/nyc-schools-ban-chatgpt-writing-artificial-intelligence>

<https://www.youtube.com/watch?v=fgjoF97gdjQ>

<https://chatgptonline.net>

<https://www.unite.ai/generative-vs-discriminative-machine-learning-models/>

<https://insight.infomedia.dk/MO/11664/e967a20d>

<https://www.theguardian.com/technology/2022/dec/05/what-is-ai-chatbot-phenomenon-chatgpt-and-could-it-replace-humans>

A Review of Artificial Intelligence (AI) in Education from 2010 to 2020:

<https://www.hindawi.com/journals/complexity/2021/8812542/>

Artificial Intelligence Meets IS Researchers: Can It Replace Us?

<https://aisel.aisnet.org/cais/vol47/iss1/48/>

<https://www.ndtv.com/feature/chatgpt-passes-us-medical-licensing-exam-elon-musk-says-3738128>