



## Executive Report on ChatGPT Discussions

This report consists of sections that give brief information about ChatGPT, its advantages, disadvantages, and strategies for integration as a learning tool into the higher education context.

### 1. What is ChatGPT?

ChatGPT, released by the artificial intelligence (AI) firm OpenAI based in San Francisco, California, is a powerful chatbot that creates surprisingly intelligent-sounding text in response to user prompts. It is based on Generative Pre-trained Transformer 3 (a.k.a GPT 3), an autoregressive language model that uses deep learning to produce human-like text (Inside Higher Ed, 2022). AI type of GPTs are known in the field as large language models or LLM, and are fed hundreds of billions of words in the form of books, conversations and web articles, from which it builds a model, based on statistical probability, of the words and sentences that tend to follow whatever text came before (The Guardian, 2023). Similarly, ChatGPT creates texts in a dialogic format by trawling through billions of words of training data and learning how words and phrases relate to each other (Nature, 2022). The bot also makes it possible to answer follow-up questions, admit its mistakes, challenge incorrect premises, and reject inappropriate requests (The Guardian, 2023). With ChatGPT and other similar AI tools it is now becoming increasingly difficult to distinguish between a student's own work and work they have generated using AI technology (Kent, 2023). Experts state that it is now almost impossible to make the assignments AI-proof (The Chronicle of Higher Education, 2023) which concern higher education professionals. In line with this, "Nature" has conducted a poll to discover how widespread the concerns about academic integrity in academic institutions are, however the results have not been announced yet.

Since banning AI tools does not seem a permanent solution, higher education professionals need to rethink their approach to assessment considering the advances in AI technology. One of the ideas that emerged in this respect involves making writing assignments as a synchronous exercise by returning paper and pencil in-class writing or using lock-down browser technology in online writing (Lindsay, 2023). Another perspective is thinking of the assignments as a practice of learning as well as an evaluation of it (Lindsay, 2023). Therefore, many strategies are suggested to improve the practice of learning with the incorporation of ChatGPT and other similar AI tools. In this regard, there is a need for developing students' AI literacy to use technology responsibly and critically. Therefore, instructors should discuss with students about the ethical implications of using ChatGPT, in what ways it can be a learning tool and what its limitations are in the course and within the discipline.

It is noteworthy to indicate that all the insight and information we have provided here so far about ChatGPT is limited to the higher education professionals' experiences and opinions published in a format of blogs, website articles synthesized with KOLT's professional opinions. The topic is very recent, popular, and debate is still evolving at the moment, thus the peer reviewed articles and/or extensive research products on this matter have not been published yet. Therefore, we



highly recommend the instructors and faculty members to be cautious and critical before making any major changes in their teaching practices in response to ChatGPT or other AI tools.

## 2. Advantages & Disadvantages & Deficiencies & Concerns

### Advantages

- Gives instructors the opportunity to revise the assessment strategies in their courses
- Encourages instructors to think about what is truly original and be critical about student work
- ChatGPT and other AI tools can provide assistance in creating lesson plans, presentations, and other materials, can help faculty to grade student work, and even assist them in creating their syllabus, quizzes and exams. It can also help educators to evaluate student progress and provide personalized feedback (Atlas, 2023).
- Chat GPT can provide feedback to improve clarity and coherence of the writing that could be helpful especially for non-native students struggling with writing (Atlas, 2023).
- Chat GPT and other AI tools can provide an outline for research papers and generate ideas for the items in the outline. It can scaffold students to organize their thoughts and expand the ideas with evidence from literature.
- ChatGPT and other AI tools can be used in a variety of ways, including writing assistance, language learning, research, and administration (Atlas, 2023).

### Disadvantages

- Increases the chances of cheating and plagiarism
- Might create the risk that students uncritically accept incorrect information
- Decreases the students' development of writing skills

### Deficiencies

- AI tools are still having difficulties responding to visual input, therefore using visuals might be a temporarily solution
- AI tools cannot do long-horizon planning yet, lack common sense knowledge, don't have access to the most recent information (e.g., if trained on text until 2022, it will not know the world of today). It is known that they are still not good at processing long texts such as long documents. Usually, the responses are non-deterministic, meaning that you can ask the same question and get a different answer each time.

### Concerns

- *Reliability*: ChatGPT doesn't check whether the information provided is true or false. But it is known that some bots add citations.
- *Copyright issue*: The AI is trained on a huge sample of texts taken from the internet, generally without explicit permission from the authors of the material used.



### 3. Ways to Integrate ChatGPT into Courses as a Learning Tool

ChatGPT can be considered as a powerful learning tool if it is facilitated appropriately.

#### Pedagogical Responses and Challenges

##### What could be done as a response to that?

- Revise your learning objectives to be clear on what students should be able to do and what knowledge and skills they need to develop to give the decision of how to revise assessment for students' learning (Watkins, 2022).
- Revise the written assessments to prioritize critical thinking or reasoning that ChatGPT can't yet do, which will encourage students to think for themselves more, rather than to try and answer essay prompts (Nature, 2022).
- Try to shift to different types of assignments and assessments such as multimedia assignments, making students produce a podcast or video instead of writing a paper, or creating a mind map/ concept map to demonstrate interconnections between ideas and concepts.
- Try to include presentations and group projects to ensure that students have a deep understanding of the material
- Try to create fewer writing assignments, but build in more feedback and revision to the ones you keep
- Engage students in a conversation about why and how they write, sometimes using these AI tools
- Flip your teaching so that seminal pieces of work are done in class
- Ask students to write about topics of genuine interest to them, in which their voices come through and their opinions are valued
- Ask students to find a solution for a challenge in your discipline or a question with no single answer. In the research process, students can benefit from AI tools.
- Try to create authentic assessments
- Let the students to take ownership over every step of the learning experience
- Try to use these tools to generate counterarguments and helping students brainstorm on these outcomes
- Ask students to reflect on ChatGPT output as verifying the correctness of statements with use of reliable resources, offering alternative perspectives, and improving the argument of the output.
- Brief students on AI tools' limitations, capabilities, benefits and disadvantages
- Create learning communities or campus wide experience sharing opportunities to provide professional guidance for instructors and departments. (KOLT started a



crowdsourcing to provide a platform for you to share their experiences with Chat GPT and other AI tools. Please feel free to add your examples and experiences with ChatGPT in the following document:

- <https://drive.google.com/drive/folders/1kzj4t6qAeUrxIHcTbbe6gCkuw9RNEjEE?usp=sharing>

You can also follow external crowdsourcing sites about ChatGPT:

- <https://docs.google.com/document/d/1V1drRG1XIWTBrEwgGqd-cCySUB12JrcoamB5i16-Ezw/edit#heading=h.y7v1xxluoxbv>
- <https://docs.google.com/document/d/1m4e2VAIWBzXoteYSGvCO1eTf6GQIOsrjltOJvod0h6g/edit#heading=h.sc09s7ot25zw>
- Write a policy or include an AI code of conduct in your syllabus for using ChatGPT to clarify how to make reference to ChatGPT when they use it
- Direct students to disclose any use of Chat GPT and other AI tools in the acknowledgement section or equivalent (Atlas, 2023), especially when teaching graduate level courses.
- While advising master or PhD thesis, ask students to share incomplete versions and drafts of their works in a regular manner to follow their thought processes.

## Challenges

- If instructors switch to oral presentations, writing in class only, or writing by hand, that could be a challenge for students with learning disabilities.
- Developing students' AI literacy skills in a way that leads to promoting use of AI technology as a learning tool instead of producing outputs on their behalf.
- Adapting syllabus and curriculum to incorporate AI technology in higher education might require additional time, effort, and support
- Thesis and dissertations are becoming more challenging in terms of reliability

## ChatGPT as a Teaching Material: Using “Prompts”

When using ChatGPT to generate text, Atlas (2023) provided the following general principles in order to get the most accurate and relevant results:

- Choose your words carefully
- Define the conversation with purpose and focus
- Be specific and concise
- Provide context
- Ask for more information
- Keep the conversation on-track
  - You can use Chat GPT to generate ideas for teaching strategies that cater to the full range of abilities in your classroom. You could input the following prompt into Chat GPT: *"Create a list of 5 teaching strategies that could be used to engage and challenge students of different ability levels in a lesson on [concept being taught]."*
  - You can use Chat GPT to encourage students to self-assess, reflect, and monitor their work by asking it to generate self-assessment tools, such as rubrics or



checklists, that help students evaluate their own work. You could input the following prompt into Chat GPT: *"Create a rubric that students can use to self-assess their work on [assignment or task]."*

- You can use ChatGPT to provide students with detailed and specific feedback about what they need to do to achieve growth as a learner to generate feedback that is tailored to each student's needs and goals. You could input the following prompt into Chat GPT: *"Generate specific and actionable steps that a student with the above submitted essay/work can take to improve their performance in [subject/task]."*
- You can use ChatGPT to generate annotated work samples that show the features of novice, proficient, and very proficient work and ask students to analyze and discuss these samples. Input the prompt: *"Generate an annotated work sample for a persuasive writing task that compares a novice essay to a proficient essay."*
- You can use ChatGPT to understand and grade student essays, providing teachers with an efficient and accurate way to assess student writing by using the following prompt: *"Please grade this student essay on the topic of 'The impact of technology on education'."(Atlas, 2023)*

#### **4. Will ChatGPT Replace Human Teachers and Professors?**

Atlas (2023) points out that even though ChatGPT and other language models are advanced tools that can assist in teaching and learning, they cannot replace the unique abilities and skills of human educators. He emphasizes that ChatGPT and other language models are based on complex algorithms that are trained on vast amounts of data. These algorithms can understand and generate natural language, but they lack the ability to understand the context and nuances of a particular subject or field. He also stated that these tools also lack the ability to provide feedback and guidance to students, or to create personalized learning experiences. Similar response was also given by ChatGPT itself when it is asked about the integration of ChatGPT into higher education courses, it provided the following statement: *"It's important to note that while ChatGPT can provide valuable support in these areas, it is not a substitute for human teachers and instructors, and should be used to supplement, not replace, traditional educational methods."*



## 5. ChatGPT Examples

We asked ChatGPT “*How can we integrate ChatGPT into higher education courses effectively?*” and here is the answer it provided:



There are several ways to integrate ChatGPT into higher education courses effectively:



1. As a teaching assistant: ChatGPT can be used as a virtual teaching assistant to provide students with instant answers to their questions and to provide additional resources and explanations.
2. As a language model: ChatGPT can be used as a language model to assist students in writing and language-related tasks, such as grammar and spelling checks, text generation, and summarization.
3. As a personal tutor: ChatGPT can be integrated into personalized learning environments to provide students with tailored feedback and support based on their performance and learning needs.
4. As a research assistant: ChatGPT can be used as a research assistant to help students with literature review, data collection, and analysis.

It's important to note that while ChatGPT can provide valuable support in these areas, it is not a substitute for human teachers and instructors, and should be used to supplement, not replace, traditional educational methods.



[ChatGPT Jan 30 Version](#). Free Research Preview. Our goal is to make AI systems more natural and safe to interact with. Your feedback will help us improve.



We asked ChatGPT “*what would be the challenges of ChatGPT in higher education courses?*” and here is the answer it provided:



There are several challenges associated with using ChatGPT in higher education courses, including:



1. Accuracy and reliability: ChatGPT is trained on large amounts of text data, but it may still make mistakes and provide incorrect information, so it is important to verify its answers before relying on them.
2. Lack of context: ChatGPT may struggle to understand the context and nuances of a particular educational setting or subject, leading to incorrect answers or misunderstandings.
3. Ethical concerns: ChatGPT's reliance on large amounts of personal data raises ethical concerns around data privacy and the potential for misuse or abuse of that data.
4. Limitations in creativity and critical thinking: ChatGPT is designed to answer questions and provide information, but it may not be able to facilitate creative and critical thinking, which are important skills in higher education.
5. Resistance to change: There may be resistance to using ChatGPT among educators and students, who may be concerned about the implications for job security and the quality of education.

To mitigate these challenges, it's important to use ChatGPT in a responsible and transparent manner, and to clearly communicate its limitations and limitations to students and educators.

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