

ChatGPT in Education – Let's Think Step by Step

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1. Introduction

BACKGROUND

- OpenAI released ChatGPT at 30 Nov. 2022
- Extensive discussions about possible applications
- ChatGPT has the potential to transform education

RESEARCH QUESTIONS

1. Are **prerequisites** fulfilled for the use of ChatGPT in the field of education and which **restrictions** must be followed? [Q1]
2. How can ChatGPT be **practically integrated** in educational settings for learners and lecturers? [Q2]
3. How effective are current **detection mechanisms** in academic writing? [Q3]

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2. Prerequisites for the Use of ChatGPT [Q1] – Legal Framework

PERSONAL ACCESS (*Free/Pro*)



Age restriction



Free and paid accounts



Data is collected and processed by OpenAI



User owns input and output data

BUSINESS ACCESS (*API/Enterprise*)



GDPR & DPA compliant






High security, privacy and performance



Enterprise features like user management, SSO, etc.

2. Prerequisites for the Use of ChatGPT [Q1] – Legal Framework

PERSONAL ACCESS (*Free/Pro*)

-  Students write prompts on a paper
-  Students use teacher access ~*grey area*
-  Students use their personal access

BUSINESS ACCESS (*API/Enterprise*)

-  **Institutions offer access for each student and lecturer**

2. Prerequisites for the Use of ChatGPT [Q1] – *Teacher Survey*

SURVEY

- Polak, Schiavo, Zancanaro / 2022
- 135 teachers

RESULTS



Positive Will factor



Basic level of digital skills but low AI-related



Development of digital skills among teachers

3. ChatGPT for Learners and Lecturers [Q2] – *Learners*

SCHOOL



Ethical awareness and fundamental skills



“Co-Pilot”, “Find-the-Mistake”, “Group-Puzzle”, “Checklist”

Expertengruppe „Buch“



- Nehmt das Stichwortverzeichnis zuhilfe.
- Recherchiert in den vorgegebenen Büchern ggf. weiter, wenn euch Begriffe und Formulierungen unbekannt sind.

Expertengruppe „Internetrecherche“



- Verwendet eine Suchmaschine eurer Wahl.
- Verzichtet auf Wikipedia.
- Gebt euch nicht mit den erstbesten Ergebnissen zufrieden.
- Notiert die Quellen eurer Informationen.

Expertengruppe „ChatGPT“



- Stellt dem Chat die Fragestellung.
- Formuliert die Antwort altersgerecht um.
- Klärt die Fachbegriffe.
- Lasst euch die Informationsquellen auflisten.

Group-Puzzle

<https://www.friedrich-verlag.de/kuenstliche-intelligenz-in-der-schule-chatgpt-und-co-im-unterricht>

3. ChatGPT for Learners and Lecturers [Q2] – Learners

UNIVERSITY



Structured, creative and critical thinking



“Co-Pilot” for learning, writing, coding, research, etc.



Prompt engineering is a skill of the future



Ask the teacher about the rules for using ChatGPT

Anatomy of a
ChatGPT Mega-Prompt

Simulate Persona

Task

Steps to complete task

Context / Constraints

Goal

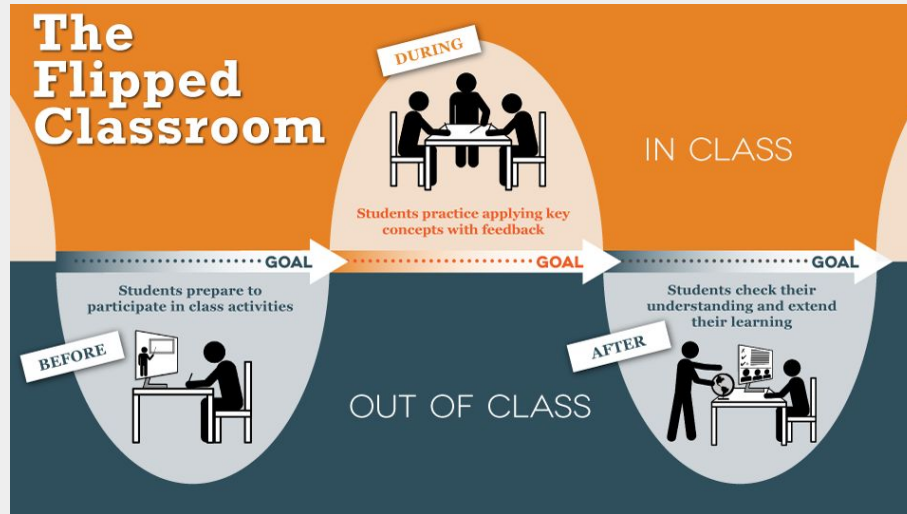
Format Output

Aufbau eines ChatGPT Mega-Prompt (© Rob Lennon 2023, @thatroblennon/Twitter)

3. ChatGPT for Learners and Lecturers [Q2] – Lecturers

TEACHING

- 👤 Encourage students to use ChatGPT
- 👤 “Co-Pilot” for creating lecture ideas and lesson plans
- 👤 “Flipped classroom”



[https://ctl.utexas.edu/sites/default/files/flippedgraphic\(web960px\).png](https://ctl.utexas.edu/sites/default/files/flippedgraphic(web960px).png)

3. ChatGPT for Learners and Lecturers [Q2] – Lecturers

ASSESSMENT



Offloading → More complex questions



Rules and guidelines for ChatGPT



Innovate assessment formats *e.g. presentation*



Supervision Process *e.g. reflection report or conversation log*



Rethink evaluation criteria *e.g. contributions, research questions*

4. Detecting ChatGPT-generated Academic Writing [Q3]

CHECKGPT

- Liu, Yao, Li, Luo / 2023

CHARACTERISTICS

- **ChatGPT is/(was) designed as a chat interface simulating human conversation**
- Conversation: subjective, personal, emotional
- Academic Writing: formal, objective, highly specialized topic

TASKS (150.000 samples per task)

- GPT-written full abstract [T1]
- GPT-completed abstract [T2]
- GPT-polished abstract [T3]
- (Human written)

4. Detecting ChatGPT-generated Academic Writing [Q3]

RESULTS

- ✗ Humans
- ✗ ZeroGPT, GPTZero, OpenAI Classifier
- ✓ **CheckGPT**

Ø	CheckGPT	ZeroGPT	GPTZero	OpenAI Classifier	Human
T1	99,96%	76,03%	42.53%	71,23%	43.81%
T2	98,68%	32,56%	22,23%	38,23%	-
T3	98,64%	10,23%	8.1%	5,53%	37.5%

(Zeyan et al., 7 Jun 2023)

5. Take Aways

- 🌸 Need for accessible, secure access for lecturers and learners
 - 🌸 Teachers need to be trained in AI-related tools
 - 🌸 Encourage to use AI-tools like ChatGPT
 - 🌸 Many available resources and application scenarios
 - 🌸 ChatGPT as a supplement brings advantages
 - 🌸 Respect the rules: CheckGPT can still uncover cheating
- 🌱 ChatGPT Enterprise meets the requirements *and will transform education*

6. Discussion – Pingo 797270

<https://pingo.coactum.de/797270>



<https://www.tha.de/ChatGPT-fuer-Studierende.html>



<https://hochschulkiste.de>