SLUTTRAPPORT

for prosjekt ved UiA som har fått tildelt prosjektmidler

i Program for utdanningskvalitet (PRUK) 2023-24

Project: **ChatGPT as teaching and learning assistance**
Project code: PRUK-07/23

Dato for rapportering: 25. januar 2024

Participants:
- Apostolos Spanos, Prosjektleder, Institutt for religion, filosofi og historie
- Alexandra Lazareva, Institutt for pedagogikk.
- Christian Walter Petter Omlin, Institutt for informasjons- og kommunikasjonsteknologi.
- Sondre Vindbo, MA i historie, UiA.
- Michael Aase, filosofistudent, UiA.
- Sondre Netteland, MA-student, UiB.
- Marthe Bøhmer, MA-student, UiB.

Deliverables of the project

There were no deviations from the original plan of the project. The main aim of the project was to design and test concrete ways in which ChatGPT can be used as a teacher and student assistant in the course "HI-139: Introduction to historical consciousness" (BA in History, 10 ECTS). The project was designed as a pilot project, and our aim was to design ChatGPT-related activities and methods of teaching and learning that might be used in other courses, not only in history but in any course that includes similar teaching and learning strategies.

The main deliverable of the project is an ad hoc designed application (APIs) and a website, through which the students used ChatGPT in various tasks of the course. The website is available at https://gpt.uia.no:5555/.

The design of applications was related to Bloom's taxonomy of learning outcomes (revised by Anderson and Krathwohl in 2001), which includes six educational objectives (remembering, understanding, applying, analyzing, evaluating and creating) and four types of knowledge (factual, conceptual, procedural and metacognitive). The use of ChatGPT was based on all six educational objectives and related to all four types of knowledge.

Additional deliverables (not financed by the project) were dissemination activities, listed at the end of this report.

Budget

The original budget, presented in the following table, was followed in the realization of the project:

Project management (30 hours)	13 000
Design and implementation of ChatGPT activities, dissemination (250 hours)	117 000
Student designers (100 hours)	30 000
Student advisors (100 hours)	30 000
Total	**190 000**

Experience

The experience from this project is twofold: the first part is related to realizing the project itself, the second is related to the interdisciplinary work that made the project possible.

Working with colleagues from pedagogics and AI improved my understanding of using educational technology in the classroom. Of equal importance was the combination of Bloom's taxonomy to AI-assisted educational technology.

Using our web application in classroom was stimulating both for me and the students. Most students were enthusiastic with this dimension of the project, something that was reflected in the evaluation of the course. They meant that using ChatGPT as a learning assistant gave them an extra motivation and made learning more interesting. Let me know that one of the main aims of the project was to introduce the students to the critical use of LLMs, something that was made clear from the beginning to the end of the semester (the student registered that they learned mostly by correcting ChatGPT).

Two members of the group, Alexandra Lazareva and Sondre Vindbo, interviwed seven of the students that used the ChatGPT application in the course. The interviews showed that: (1) Students became more comfortable in using AI tools because they learned how ChatGPT works and what potential mistakes it may make. (2) Students have also developed their critical abilities towards what they are reading, and the value of being reflective at all stages of learning became apparent. In general, during the project, students got more involved and aware about how their learning process works by reflecting and relating their process to the different stages in Bloom's taxonomy. (3) Students managed to complete some tasks quicker than before because it was easier to get started with a task through brainstorming with ChatGPT. At the same time, ChatGPT helped students in their creative processes too. Students pinpointed that it helped to build good collaboration among the people in the group when the group members worked together with ChatGPT, discovering its weak sides, and discussing how to move on with the task at hand. The ideas generated by ChatGPT were often used as a starting point for student discussions. (4) the students learned that prompt engineering is the art in using chatbots. Asking the right questions is essential for ChatGPT to function as good learning assistant.

Formidlingsaktiviteter

1) 3. mars 2023: UiA ledersamling, Fevik hotell, presentasjon av Apostolos.

2) 14. juni 2023: Fagdag institutt for norsk og mediefag, presentasjon av Apostolos.

3) 15. juni 2023: Personalseminar institutt for religion, filosofi og historie, presentasjon av Apostolos.

4) August 2023, video forelesning av Apostolos, kurs for HHS- og fakultetansatte, i regi av PULS.

5) 25. august 2023: Digital presentasjon av prosjektet og nettsiden til MA-studenter på Old Dominion University, Virginia, USA.

6) 20 september 2023: Nasjonalt fagorgan for lektorutdanningen og PPU (UiA), presentasjon av Apostolos.

7) 28. september 2023: Workshop Digital Humanities, presentasjon av Apostolos.

8) 30. oktober 2023: Nyheter på UiA, «Lærer historie med ChatGPT» (https://www.uia.no/nyheter/laerer-historie-med-chatgpt).

9) 2. november 2023: «ChatGPT in history teaching», presentasjon av Alexandra Lazareva, på symposiet "AI generations: Staff & Student Innovations Unplugged", University of Worchester.

10) 17.-18. januar 2024: En video-recorded PPT ble presentert i PULS sitt UniPed kurs (Apostolos)

11) 5. mars 2024: Apostolos presenterer resultatene til prosjektet på en UniPed samling.

12) March 2024: Paper «Student experiences with using chatgpt in history classes» blir presentert på 18th annual International Technology, Education and Development Conference (INTED) (Alexandra Lazareva, Sondre Vindbo og Apostolos).

13) Flere papers og andre formidlingsakktiviteter kommer til våren.

Universitetet i Agder, 25. januar 2024

Apostolos Spanos