The Eternal Technological Dream

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Abstract

The activity entitled The eternal technological dream begins with an exploration of Greek myths, focusing on "artificial" figures and sources from Greek literature. For high school students, it can be both fascinating and intellectually stimulating to uncover how the foundational principles of technology behind Artificial Intelligence trace their origins to ancient Greek civilization. This means that students delve into the stories and characters from ancient Greek mythology, particularly those that involve created or artificial beings, such as robots or automatons, which were imagined by the Greeks long before modern technology.
During the activity students have to use both paper and digital materials and the support of generative AI to create collaborative work using a variety of resources, including printed and digital content, to learning Greek myths and AI, and complete a final problem-solving task (edugame/eduescape). Generative AI has been integrated by providing prompts and suggestions, helping students to think creatively and working together. The final task was an educational game such as eduescape activity (a mythical nightmare) to apply what students have learned. The dream and the nightmare can be a metaphor for the technology development and in particular Artificial Intelligence: dreaming is beautiful... but people must consciously use technology in order not to be dominated by it.

Keywords: *Artificial Intelligence (AI), digital citizenship, Greek, technology, student engagement*

1. Introduction

The activity *The eternal technological dream* has been managed by the teacher of Ancient Greek (Language and Literature) and Civic Education to a high school (liceo classico) fourth year students. The didactic-technological proposal stems from the constant thought that "current events are heirs of Greek civilization" from which the motto "Graeci docent" was born in the past. The specific topic addresses the knowledge of "artificial" and fantastical creatures of Greek myth that are related to the current myth of Artificial Intelligence (AI) [5]. The work has been developed through the following steps:

- four Greek myths exploration: artificial figures and their creators (e.g. Talos, Pandora, Hefestus, Daedalus) [8,12,13,17] and sources of Greek literature [1] (Hesiod, Plato, Apollonius Rhodius, Apollodorus, Pausanias etc.);
- generative AI exploration: prompts and related data control, policy and reliability of generators [9,10,11,18,19];
- hyperdoc and a shared board (Padlet);
- profiles creation of artificial mythical figures [9,10,11,18,19];
- images and short videos creation [9,10,11,18,19];
- brief programming [16] about a current artificial figure (e.g. what code does an AI generator suggest to us, what instructions could we give to artificial figure act etc.);
- edugame/eduescape and solutions to be debated in team.

2. *Context*

The activity has been dedicated to high school fourth year students: they can use devices connected to the network (only for teaching/learning) and explore digital resources [8, 12, 13, 17] indicated by the classroom teacher.
The time frame has been 5 hours: around 4 hours have been dedicated to the specific study activity [8, 12, 13, 17], works co-creation and formative assessment, 1 hour in active learning mode with team escape.
During homework activity, students have to consult materials (previously prepared by the teacher) with preparatory home readings and videos in *flipped lesson mode* [5] with annotations on digital cards.

The classroom activity was a collaborative work [5] and the formative assessment was a PanQuiz [15] aimed to knowledge; skills and competences have been practiced in active mode through the team edugame in which the teams have discussed the possible solutions.

3. Learning Goals

Prerequisites: Greek myth and literature, basic computer concepts and use of the Internet knowledge.
Goals: to know Greek civilization, identify the links with the current technology, develop personal point of view and discuss with the group members.
The motivational work goal is to combine Greek Literature - Civic Education, Digital Citizenship and Technology, demonstrating that current realities such as AI are born from ancient myths that imply careful reflection from a global education perspective: it is necessary for students to approach AI [5] with awareness and critical spirit to correctly address the issues related to it, such as ethics, safety, transparency, sustainability, fairness, etc.
Skills and Competences: knowing how to explore, compare and detect transdisciplinary information, knowing technology basic elements to ensure its conscious and correct use; knowing how to "detect" what is hidden behind the Net and in particular the AI world.
Global aim: skills and critical thinking development.

4. Methodology, Evaluation and Monitoring

The teacher has always supported the importance of actively involving students in teaching/learning, especially with gamification, as well as different methodologies [4] that are considered suitable for training contexts, and has documented their application and development over time. Also in the realization of this teaching/learning proposal, methodologies [4](tested for a long time) have been practiced and have proved to be satisfactory by an educational view point.
The activities have been developed in active mode aimed to co-create the knowledge and therefore the active involvement of students through the most innovative methodologies with the technology application to teaching/learning, in particular flipped learning, collaborative learning, debate, gamification and constructivist thinking [4].
The evaluation process integrates Greek Culture, Civic Education and Digital Citizenship, fostering a holistic approach. Monitoring has been conducted consistently throughout classroom activities under the teacher's guidance [7].
To final evaluation these elements have been considered with the evaluation grid:

- hyperdoc and collaborative board (padlet)
- panquiz
- eduescape and microdebate
- self-assessment of the working groups.

5. Integration of AI

Students' curiosity dealing with characters from Greek myth can be satisfied through generative AI [5] tools aimed to give consistency to mythological figures, to dialogue with them, to give briefly them “reality” while understanding what is behind the latest AI generation [5] and its ancient roots. The students active involvement as co-creators, with the teacher guidance, stimulates creativity and highlight the critical spirit in young minds.
There are many webapps whose great potential can be exploited to combine teaching and technology, to generate text, images, audio and video in educational activities, but it is important to check the presence of fundamental characteristics that can guarantee safety such as free, no sign up, unlimited, intuitive tools.

6. Outcomes of the Experience

The educational path has begun with the eternal technological dream of going beyond human mind limits, by creating something higher, and ended with a mythical nightmare from which students need to escape by exploiting the knowledge, skills and competences acquired until now. It has explored a world of fantastic creatures, forged by Gods such as Hephaestus and/or wise men such as Daedalus, programmed to perform predefined actions such as Talos or Pandora, which do not differ so much from current robots, whose life is regulated by Artificial Intelligence.

All the work has been documented through the shared Padlet board available online at the shortened url: https://tinyurl.com/mr2982nz and figure 1 shows an overview of the dedicated Padlet

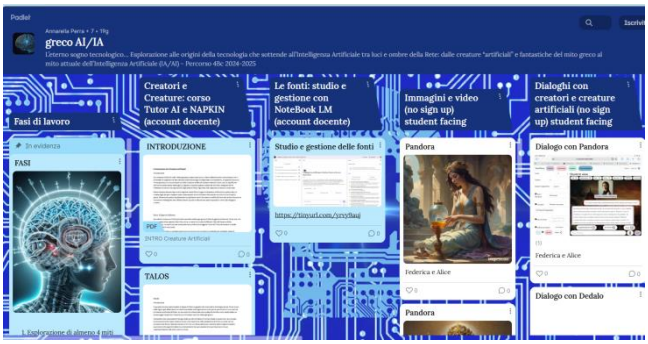

Fig. 1. The eternal tehcnological dream Padlet

By summarizing what has been achieved by integrating the generative AI into experience:

Teacher facing

- an hyperdoc creation and sharing in Classroom (Google Workspace of the school);
- a shared board in Padlet to develop and document students work;
- materials preparation and brief introduction of the course with the first elements of AI and Greek myth (with Tutor AI, NoteBookLM and Napkin webapp) [8,12,13,17];
- a general test creation (PanQuiz webapp) [15];
- final edugame/eduescape creation (Google Slides, different clues webapps etc.) to be debated as a team (microdebate);
- proposal for further study on AI and Greek myth: hypothesis and brief programming of an artificial figure (Python on line) [16].

Students facing

- 4 Greek myths exploration, especially artificial figures and their creators: Talos, Pandora, Hephaestus and Daedalus, through Greek literature sources [1] on materials provided by the teacher [8,12,13,17];
- the generative AI tools exploration through the prompts writing and related control (data, policy and reliability of generators) [9,10,11,18,19];
- textual profiles creation of artificial mythical figures;
- images and short videos creation;
- dialogues creations with creators and mythical creatures;
- general test (multiple choice questions) PanQuiz [15];
- final eduescape *Mythical nightmare* (active learning/competence: 20 obstacles (puzzles, clues, ciphers, formulas, questions, problems, etc.) to overcome in 1 hour and team microdebate;
- students reflections on work.

All students obtained a high score in the quiz (knowledge) and demonstrated that they know how to work in collaborative mode [4] by practicing the skills for the final eduescape (active learning) to came out of the "mythical nightmare" in 1 hour.
In figure 2 some clues of the eduescape storyboard.

Fig. 2. Some clues of the eduescape storyboard

7. Conclusions

The educational experience has been appreciated by the students who were intrigued by Artificial Intelligence since they were able to interact in a conscious way, for tools and processing, and they were always the "protagonists" of the full course. The teacher's coaching aimed to boost the student's creativity by increasing the group work that students have proved through the prompts definition, through the images and videos creation, as they considered them more relevant and coherent, through the critical spirit by managing the informations and dialogues with artificial creatures. During the final eduescape the team spirit has been strengthened: the different learning styles and different intelligences [2, 3] cooperated with great synergy and harmony to solve problems. In conclusion, I would hope that the eternal technological dream can increasingly contribute to humanity's progress and never turn into a real nightmare from which to escape [6]!

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Web Apps:
[8] AI Studio Google, https://aistudio.google.com/
[9] Deep AI video, https://deepai.org/video
[10] HeyGen, https://app.heygen.com/
[11] Magic Studio, https://magicstudio.com/ai-art-generator/
[12] Napkin, https://www.napkin.ai/
[13] NotebookLM, https://notebooklm.google.com/
[14] Padlet, http://padlet.com/
[15] PanQuiz, https://app.panquiz.com/
[16] Python, on line https://www.online-python.com/
[17] Tutor AI, https://tutorai.me/create-course
[18] Vidnoz, https://www.vidnoz.com/
[19] Your Story, https://www.yourstory.education/