Report on the outcomes of a Short-Term Scientific Mission[1]

Action number: CA22145 - Computational Techniques for Tabletop Games Heritage (GameTable)

Applicant name: Dorela Kaçauni

Details of the STSM

Title: The role of AI in enhancing peer collaboration in gamified learning environments

Start and end date: 23/06/2025 to 27/06/2025

Description of the work carried out during the STSM

Description of the activities carried out during the STSM. Any deviations from the initial working plan shall also be described in this section.

(max. 500 words)

The Short-Term Scientific Mission (STSM) took place from June 23 to June 27, 2025, at Inland Norway University, Hamar, supported by the Associate professor Meisam Taheri. The main goal of this visit was to explore how AI tools can support peer collaboration in gamified learning environments, especially in relation to the preservation and study of tabletop games as cultural heritage.

During the first two days, I focused on reviewing literature related to the use of artificial intelligence in education, game-based learning, and cultural heritage. I studied how AI has been used to simulate gameplay, reconstruct incomplete game rules, and support collaborative learning. This helped me better understand the connection between AI, traditional games, and student engagement.

Based on the findings from the literature, I designed a survey for university students. The survey aimed to collect their views and experiences with AI-supported learning tools, especially in gamified settings. I included questions about their attitudes toward AI, the benefits and challenges they experienced, their motivation to learn with AI tools, and how they felt these tools contributed to the understanding of cultural heritage. The survey also focused on how AI might support collaboration among students during game-based tasks.

Before distributing the survey, I submitted it for ethical approval at the host university and to the assoc. prof. Meisam Taheri.

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Once I received the approval, I shared the survey with a group of students. Their responses were collected and organized for analysis.

On the last two days of the mission, I analyzed the collected data using both qualitative and quantitative methods. I identified key patterns in students' responses, focusing on their perception of AI's educational value. Most students responded positively, expressing that AI tools helped them stay engaged, collaborate more easily with classmates, and better understand traditional games and their cultural context. Some students also pointed out challenges, such as limited access to AI tools or the need for better guidance when using them in learning environments.

All planned phases of the STSM—preparation, survey development, implementation, and analysis—were carried out successfully and on time. There were no major changes or delays in the working plan. The findings provided valuable insight into how AI-powered tools can support both peer learning and interdisciplinary research on cultural heritage. These results will contribute to the broader goals of COST Action CA22145 by offering a practical example of how AI can be integrated into educational settings to promote cultural understanding and collaborative learning.

Overall, the STSM was a successful research visit that strengthened my academic knowledge and practical experience in using AI for gamified learning and interdisciplinary collaboration.

Description of the STSM main achievements and planned follow-up activities

Description and assessment of whether the STSM achieved its planned goals and expected outcomes, including specific contribution to Action objective and deliverables, or publications resulting from the STSM. Agreed plans for future follow-up collaborations shall also be described in this section.

(max. 500 words)

The Short-Term Scientific Mission (STSM) achieved its planned goals and expected outcomes as outlined in the proposal. Its central aim was to explore how AI tools can enhance peer collaboration in gamified learning environments, especially in relation to traditional tabletop games as cultural heritage.

Throughout the mission, I addressed the three research questions proposed in the working plan. A student survey was designed, distributed, and analyzed. It provided meaningful data about students' experiences with AI-supported learning. The survey results revealed that AI tools—particularly generative and feedback systems—positively impacted student engagement, group interaction, and motivation. These findings confirmed that AI can support both collaborative learning and interest in cultural content, thus fulfilling the STSM's expected research outcomes.

The analysis will contribute to several key deliverables of the Action, including insights into how AI fosters collaboration in educational settings and how digital tools can support the study of tabletop games. It also highlighted the importance of involving learners in the design and evaluation of AI tools for education, aligning with interdisciplinary and learner-centered goals of the Cost Action CA22145.

A major outcome of the STSM was the establishment of a strong research collaboration between me and Prof. Meisam Taheri at Inland Norway University. We agreed to co-author two joint publications as a follow-up to the STSM:

1. **"The Educational Impact of AI in Gamified Learning: Benefits, Challenges, and Student Attitudes"** – This paper will report on the findings of the STSM, including survey results, analysis, and pedagogical implications for using AI in game-based education.

2. **"The Side Effects of Using Generative AI in Education: Rethinking Educational Practices in the Age of Automation"** – This second paper will explore the broader implications of generative AI in education, potential risks and limitations, and how educational systems may need to adapt their methods, policies, and curricula.

Both papers aim to contribute to international discussions on AI in education and will be submitted to peer-reviewed journals in the fields of educational technology and digital learning.

Additionally, we plan to continue our collaboration through future joint activities such as Erasmus+ exchanges and COST Action meetings.

In conclusion, the STSM not only fulfilled its planned objectives but also created lasting academic partnerships and concrete research outputs.