

ESERA Early Career Researcher Travel Grants 2025

- Report -

Applicant:

Eleni Botzaki, Department of Primary Education, University of Crete, Greece

Host:

Prof. Jari Lavonen, Department of Education, University of Helsinki, Finland

Dates of visit: 11 - 18 May 2025

Dear ESERA President, Board, and Travel Award Committee,

First of all, I would like to express my sincere gratitude to ESERA for awarding me the Early Career Researcher Travel Award in 2025. This opportunity has been truly valuable, as it allowed me to connect with fellow researchers, exchange ideas, and share methods, perspectives, and aspirations.

My doctoral research, supervised by Prof. Dimitris Stavrou, focuses on exploring how pre-service primary teachers design and develop activities to assess Climate Change (CC) Competencies. The participants in the study were five pre-service primary teachers who conducted their graduate theses in science education, focusing on the development of teaching materials related to the aspects of CC. The study spanned one academic year. At the beginning, participants were introduced to key aspects of climate literacy and formative assessment. Guided by Haris et al. (2019), they are currently designing assessment tools and activities to enhance competency development in their scenarios, which will subsequently be implemented with primary school students. Data has been collected through participants' teaching scenarios (n=5), focusing on assessment activities they developed. Additionally, supplementary data has been collected through a. the audio recording of meetings during the development of teaching scenarios and b. the final reflective interviews. Through the analysis, the first insights highlight systems thinking as a key competency for CC teaching. Furthermore, the participants' choices reveal an emerging pattern that setting criteria for interpreting students' information seems to increase the likelihood of providing feedback. In addition, the lack of planning for providing and using feedback resulted in fewer complete assessment cycles and less support for learning goals, such as competency development.

During my visit, I had the chance to discuss my doctoral work with Prof. Lavonen, highlighting its relevance and possible future directions. These conversations also gave me the opportunity to reflect on its broader significance and applications. We reflected on methodological possibilities that could extend the work in interesting ways, as well as ideas related to the ongoing analysis and the preparation of publications. Prof. Lavonen also drew my attention to certain areas within the data that may be worth exploring further, which

gave me a clearer sense of focus for the next stages. Overall, this interaction provided meaningful feedback and perspectives, helping me to reflect further on both the analysis process and the dissemination of my research. He had also prepared a well-structured and engaging program, which made my stay all the more fruitful.

In detail, I visited the Faculty of Education Sciences and the Faculty of Science, where I met his team members and colleagues. These meetings helped me become familiar with the team's research focus areas and explore different methodologies and ideas. The conversations were inspiring, encouraging me to consider how these approaches could connect with my own research and open possibilities for future collaboration. In addition, I had the opportunity to get to know the university, its facilities, and the way academic life is organized, gaining first-hand experience of how education and research are carried out in a country renowned for its educational system.

Afterward, I also participated in a two-day program in Turku, which combined the Open Science & Impact Festival and the EDUCA Flagship Consortium Meeting. I was invited to join by Prof. Lavonen, and we attended together; along the way, we reflected on the themes of open science, research impact, and the education systems of our countries. In particular, the first day focused on open science and research impact, with inspiring keynote talks, workshops, and a panel discussion that highlighted the importance of openness for collaboration, communication, and societal benefit. The second day offered new perspectives on education, the economy, and AI, as well as insights into EDUCA's role in shaping the future of research and educational development. Overall, the event was very encouraging for reflecting on how research can create a broader impact.

As part of the program, a climate education seminar was organized, bringing together four PhD students, including myself, whose research shares a common focus on climate change. More specifically, it included short presentations from each participant, which I briefly summarize below.

- **“Climate change competence perceptions of Finnish young people”**, by *Janina Taurinen, Doctoral researcher (Institute for Atmospheric and Earth System Research, University of Helsinki)*
- **“Integration of Assessment Strategies in Climate Change Teaching by Pre-Service Primary Teachers”**, by *Eleni Botzaki, Doctoral researcher (Department of Primary Education, University of Crete)*
- **“Narrativity and climate change education”**, by *Emma D'Orto, Doctoral researcher (Department of Physics and Astronomy "Augusto Righi", University of Bologna)*
- **“Challenges in teaching values-based CCE”**, by *Juliana Friedrichsen, Doctoral researcher (Institute for Atmospheric and Earth System Research, University of Helsinki)*

I would like to warmly thank Elisa Vilhunen for proposing and organizing this seminar. It was a valuable opportunity to exchange perspectives on climate change education and to engage in an open discussion on the challenges, research approaches, and future directions in the field. The seminar also highlighted both the diversity and the connections across our doctoral work, helping us identify overlaps, shared themes, and potential links between our

research projects. Apart from the academic part, it was also very interesting to get in touch with other PhD students, to exchange ideas about our research, and to talk about daily challenges and life as a PhD student. I also found it insightful to see how things work in a different context, which, despite some differences, shares many similarities with my own.

I deeply appreciate the opportunity offered by ESERA and the Travel Award Committee to spend time in a different institution during my PhD. I hope this is just the beginning of future collaboration.

Sincerely,

Eleni Botzaki

PhD Student, University of Crete, Greece