

STRENGTHENING TEACHER EDUCATION THROUGH OUTDOOR AND SOCIO-EMOTIONAL LEARNING

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ABSTRACT

The present study reports the evaluation outcomes of the second Learning and Teaching Training (LTT) event organised within the framework of the Erasmus+ project Outdoor Adventure Education through Physical Education (OutAdvEd). The event aimed to enhance the pedagogical competencies of pre- and in-service educators in Outdoor Adventure Education (OAE), with a particular emphasis on fostering social and emotional learning (SEL).

A total of 9 in-service (45.33 ± 5.01 years) and 13 pre-service educators (23.38 ± 2.76 years) from partner institutions participated. Most in-service educators were experienced university-level teachers, while the majority of pre-service educators were undergraduates in physical education (PE) teacher education programs. They engaged in a structured program comprising five teaching units. Quantitative and qualitative data were collected via adapted evaluation tools.

Overall, all participants reported high levels of satisfaction. They indicated that they gained new knowledge and pedagogical insights, with 100% affirming that they would recommend the event to peers. The teaching units were positively rated in terms of clarity, pedagogical value, skill development, and alignment with professional learning goals.

Qualitative findings highlighted several strengths of the LTT event, including the creation of a positive group climate, diverse and engaging activities. However, challenges were identified, including insufficient time for reflection and a limited linkage between theory and practice in some activities. Safety concerns related to climbing equipment were also noted. Recommendations for future iterations include enhancing theoretical-practical integration, expanding outdoor components, and increasing opportunities for structured reflection.

In conclusion, the LTT event effectively contributed to participants' professional development and demonstrated the pedagogical potential of OAE to advance SEL within PE. The findings offer evidence to support the integration of OAE into teacher education curricula and underscore the value of transnational collaborative learning experiences in fostering innovative pedagogical practices.

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Cite this article as:

Adamakis, M., Popeska, B.,

Lemling, A. (2025).

Strengthening teacher education through outdoor and socio-emotional learning.

Proceeding book of the 4th

International Scientific Congress

"Applied Sports Sciences", 2025, Sofia.

pp. 428 - 434.

<https://doi.org/10.37393/ICASS2025/67>

Keywords: *Outdoor Adventure Education, Physical Education Teacher Education, Professional Development, Experiential Learning, OutAdvEd Erasmus+ project.*

INTRODUCTION

Outdoor Adventure Education (OAE) integrated into Physical Education (PE) has increasingly been recognized for its role in promoting students' holistic development, extending beyond physical skills to enhancing social, emotional, and environmental competencies (Down et al., 2024; Mann et al., 2022; Vasilaki et al., 2025). Well-designed OAE programs integrated within PE consistently foster autonomy, self-efficacy (Tyne et al., 2024; Yang et al., 2025), resilience (Down et al., 2024; Shellman & Hill, 2027), and social connectedness (Vasilaki et al., 2025). These key elements of OAE align closely with the core competencies of Social and Emotional Learn-

ing (SEL)—self-awareness, self-management, social awareness, relationship skills, and responsible decision-making—which contribute to creating inclusive and emotionally supportive learning environments in PE (Brown et al., 2025; Sindiani et al., 2025).

Despite growing evidence of OAE's potential to advance SEL, there remains a need for targeted professional development that equips educators to effectively integrate these approaches within PE curricula. The Erasmus+ project Outdoor Adventure Education through Physical Education (OutAdvEd) was established to bridge this gap (i.e., OAE and SEL with PE), fostering youth

social and emotional development via innovative, context-sensitive pedagogies (OutAdvEd Project, 2025). This international collaboration brought together higher education institutions from Luxembourg, Greece, the Czech Republic, Spain, Finland, and the European Physical Education Association (EUPEA).¹ OutAdvEd encompassed a variety of collaborative, research-informed activities aimed at developing an OAE curriculum framework and relevant resources for the PE and OAE curriculum model for Youth Social and Emotional Learning.

One of the central learning and professional development formats within OutAdvEd were the Learning, Teaching, and Training (LTT) events, which serve as transnational platforms for piloting curricula, exchanging best practices, and enhancing educator competencies in OAE and SEL. The LTT events emphasize experiential and reflective pedagogies that support active participation and the development of critical reflective skills among pre-service and in-service educators (Patton, Parker & Pratt, 2013; Mesquita et al., 2015). These events address the urgent need to prepare educators with the knowledge and skills to implement OAE and SEL in ways that foster holistic youth development.

Participant reflection and evaluation are particularly valuable in such events, offering insights into the practical relevance, pedagogical value, and areas for improvement of the materials and methods presented. Many studies have confirmed the importance of collaborative work in reflective skills development and deeper examination of those which contribute to improving reflective skills and how teachers develop reflection in collaborative settings. Therefore, LTT events are important to encourage both in-service and pre-service educators to reflect and transform their knowledge into personally grounded understanding.

Aims and Objectives

Considering the importance of LTT events, this study presents the evaluation outcomes of the second LTT event organized within the OutAdvEd framework in Seville, Spain. The event was designed to support the professional development of both pre-service and in-service educators by immersing them in a structured five-unit program

centered on OAE and SEL integration. By reporting participants' satisfaction levels, perceived knowledge gains, and areas for improvement, this study contributes empirical evidence to the growing literature on OAE as a vehicle for SEL in PE contexts.

METHODOLOGY

Participants

A total of 9 in-service (3 males, 6 females; 45.33±5.01 years) and 13 pre-service educators (4 males, 9 females; 23.38±2.76 years) participated in the LTT event in Seville, Spain. Most in-service educators (77.8%) were currently working at Third-Level Initial Teacher Education Institutions (i.e., Universities), with an average teaching experience of 18.57 ± 6.83 years. Only 44.4% have recently led or have led an OAE training/course in the past. On the other hand, most pre-service educators were at the bachelor's degree level (61.5%), following a specialist Physical Education (PE) teacher education programme (53.9%). In comparison, 30.8% followed a generalist teacher education programme, and the remaining 15.3% a generalist teacher education programme with PE specialization.

Procedures

The purpose of this evaluation was to collect and analyse data related to the OAE programme implemented during the LTT event in Seville, Spain. The focus was placed on both the implementation of the LTT event and the perceived quality and relevance of the developed teaching units. All educators completed the post-LTT event, the instruments developed for this specific purpose. The final aim of this evaluation process was to provide insights into the strengths and weaknesses of the event and the teaching units, identify areas for improvement, and support informed decisions (e.g., planning, design, development, and delivery) regarding the future implementation of these teaching units.

Instruments

Specifically designed questionnaires were administered to both target groups: pre-service and in-service educators. The evaluation instruments were based on established instruments developed in previous Erasmus+ projects (e.g., PRIME PETE, EduPASS) and were adapted to suit the context and objectives of the current project (Adamakis

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et al., 2023; Adamakis & EduPASS Project Partners, 2024). These relied on the Kirkpatrick Model (Kirkpatrick & Kirkpatrick, 2006), which is a widely used framework that includes four levels of evaluation: reaction, learning, behaviour, and results. The instruments included Likert-scale questionnaires and four open-ended questions, assessing organizational aspects, content delivery, learning outcomes, overall satisfaction, and statements about the event's implementation and feasibility.

Data analysis

Quantitative data collected from Likert-scale questionnaire items were analysed using descriptive statistics (means, standard deviations, percentages) to assess participants' satisfaction, perceived learning outcomes, and attitudes towards the LTT event and its teaching units. Statistical analyses were conducted with IBM SPSS version 29.0 (IBM SPSS Corp., Armonk, NY, USA). Additionally, qualitative data from open-ended questions were subjected to thematic content analysis. Responses were systematically coded to identify recurrent themes regarding strengths, challenges, and suggestions for improvement of the event and teaching units. Integration of quantitative and qualitative findings facilitated a comprehensive evaluation of the LTT event's effectiveness and informed recommendations for future iterations.

RESULTS

LTT event

Regarding the LTT event, in most of the items, the in-service educators answered that they agreed and/or rather agreed. For example, a cumulative percentage of 100.0% of the educators agreed (77.8%) and rather agreed (22.2%) that the event was adequately and logically structured, the event was well designed, and the teaching enabled them to achieve the learning outcomes. Interestingly, the educators also agreed (100.0% cumulative of rather agree and agree) that they were able to improve their knowledge and skills during this event, and they were able to learn something new related to their teaching practice.

The open-ended questions, positive comments/feedback regarding the LTT event were the following: (1) The event fostered a strong group atmosphere, emphasizing emotional work and creating a safe, confident environment. (2) Participants appreciated the variety of activities, including reflection sessions, sports, and team dynamics, particularly the one activity (i.e., MasterChef) and

nighttime dynamics. (3) The event's organization and the enthusiasm of the facilitators were highly praised. (4) The use of different spaces (indoor, park, outdoor) and the adaptability of activities to challenge all participants were highlighted. On the other hand, the main challenges mentioned were that some activities did not clearly link theory to practice, which confused participants, as well as the high temperature during the outdoor activities, particularly sport climbing. Additionally, participants felt that there was not enough time or suitable materials to familiarize themselves with the OAE framework.

Similar to the in-service educators, in most items, pre-service educators also answered that they agreed and/or rather agreed. For example, 100.0% of the pre-service educators agreed that the materials and resources were well prepared, 100.0% agreed that the event was well designed, adequately and logically structured, and a cumulative percentage of 100.0% of them rather agreed (15.4%) and agreed (84.6%) that the content was presented in a clear and understandable way.

Based on the perspective of pre-service educators' open-ended questions, it was evident that the event was successful. Participants mentioned that they enjoyed the opportunity to meet and connect with people from different countries, which helped build trust and expand their perspectives on teaching methods. In general, the event was well-organized, starting with ice-breaking activities and ending with reflection sessions that helped give meaning to the experience. The international networking, learning new teaching methods, and experiencing the content firsthand were highlighted as key positive aspects. Lastly, pre-service educators appreciated the creative and diverse activities, including those that helped them to know each other better, work together, and reflect on their emotions.

Nevertheless, several participants noted that the event's schedule was intense, leaving them with little free time. Some wished for more time to rest and reflect between sessions. In addition, there was a desire for more adventure activities in the natural environment, such as treetop adventures or orienteering. Some pre-service educators found specific explanations, especially in English, to be unclear, and they wished for more detailed guidance, particularly regarding climbing techniques. Finally, a handful of pre-service educators mentioned discomfort with specific activities, such as climbing games that involved close physical contact, or found safety equipment, like helmets, to be inadequate.

Teaching units

Regarding the implementation of the teaching units, all in-service educators were either satisfied or very satisfied with the various elements of

the teaching units taught (i.e., 80.0% cumulative or higher), and there were low “very dissatisfied” answers for most items (i.e., < 4.0%). All detailed results are presented in Table 1.

Table 1. Descriptive statistics of the educators’ teaching unit evaluation form items

Items	Percentage (%)					M (SD)
	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied	
1. The delivery of the teaching unit (e.g., lectures, practical sessions, group discussions, sharing of ideas and experiences, etc.).	3.6	3.6	10.7	28.6	53.6	4.25 (1.04)
2. The pedagogical approaches presented.	3.7	3.7	18.5	25.9	48.1	4.11 (1.09)
3. The content of the teaching unit.	3.6	0.0	17.9	28.6	50.0	4.21 (1.00)
4. The clarity of the teaching unit content.	3.6	0.0	7.1	42.9	46.4	4.29 (0.90)
5. The balance between theory and practice.	3.6	7.1	25.0	14.3	50.0	4.00 (1.19)
6. The appropriateness of the assignments.	3.8	0.0	11.5	26.9	57.7	4.35 (0.98)
7. The explanation of the assessment criteria.	12.0	4.0	20.0	20.0	40.0	3.76 (1.36)
8. The assessment methods effectiveness in identifying educators’ strengths and areas for future development.	7.7	7.7	23.1	26.9	34.6	3.73 (1.25)
9. The communication of the learning outcomes and assessment model.	3.7	3.7	14.8	40.7	37.0	4.04 (1.02)
10. The collaboration through shared knowledge with peers.	3.6	0.0	7.1	28.6	60.7	4.43 (0.92)
11. The overall workload (achievable, realistic, adequate).	3.6	0.0	3.6	39.3	53.6	4.39 (0.86)
12. The relevance of the teaching unit in raising educators’ professional development (knowledge and practice).	3.6	3.6	3.6	42.9	46.4	4.25 (0.97)
13. The transferability of the lessons learnt in the teaching unit to practice.	3.6	3.6	3.6	39.3	50.0	4.29 (0.98)
14. The development of new skills and/or teaching strategies due to this teaching unit.	3.6	3.6	7.1	32.1	53.6	4.29 (1.01)
15. The increase of my motivation to learn due to this teaching unit.	3.6	3.6	7.1	42.9	42.9	4.18 (0.98)
16. The overall knowledge gained by the teaching unit.	3.7	3.7	7.4	40.7	44.4	4.19 (1.00)
17. My overall satisfaction with the teaching unit.	3.7	3.7	7.4	37.0	48.1	4.22 (1.01)
18. I would recommend this teaching unit to other educators.	0.0	0.0	6.9	27.6	65.5	4.59 (0.63)

The majority of the pre-service educators were also satisfied or very satisfied with these aspects includ-

ed in the survey (i.e., 90.0% cumulative or higher). All detailed results are presented in Table 2.

Table 2. Descriptive statistics of the students' teaching unit evaluation form items

Items	Percentage (%)					M (SD)
	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied	
1. The delivery of the teaching unit (e.g., lectures, practical sessions, group discussions, sharing of ideas and experiences, etc.).	0.0	0.0	2.8	16.9	80.3	4.77 (0.48)
2. The pedagogical approaches presented.	0.0	0.0	4.3	23.2	72.5	4.68 (0.56)
3. The content of the teaching unit.	0.0	0.0	1.4	15.7	82.9	4.81 (0.43)
4. The clarity of the teaching unit content.	0.0	0.0	2.9	20.0	77.7	4.74 (0.50)
5. The balance between theory and practice.	0.0	0.0	5.9	20.6	73.5	4.68 (0.58)
6. The appropriateness of the assignments.	0.0	1.4	2.9	14.3	81.4	4.76 (0.58)
7. The explanation of the assessment criteria.	0.0	0.0	9.0	26.9	64.2	4.55 (0.66)
8. The assessment methods effectiveness in identifying my strengths and areas for future development.	0.0	0.0	10.3	29.4	60.3	4.50 (0.68)
9. The communication of the learning outcomes and assessment model.	0.0	1.5	9.0	23.9	65.7	4.54 (0.73)
10. The collaboration through shared knowledge with peers.	0.0	0.0	1.4	11.4	87.1	4.86 (0.39)
11. The overall workload (achievable, realistic, adequate).	0.0	0.0	1.4	11.6	87.0	4.86 (0.39)
12. The relevance of the teaching unit in raising my professional development (knowledge and practice).	0.0	1.4	1.4	21.4	75.7	4.71 (0.57)
13. The transferability of the lessons learnt in the teaching unit to practice.	0.0	1.4	1.4	15.7	81.4	4.77 (0.54)
14. The development of new skills and/or teaching strategies due to this teaching unit.	0.0	0.0	7.1	17.1	75.7	4.69 (0.60)
15. The increase of my motivation to learn due to this teaching unit.	0.0	1.4	4.3	13.0	81.2	4.74 (0.61)
16. The overall knowledge gained by the teaching unit.	0.0	0.0	2.9	18.8	78.3	4.75 (0.50)
17. My overall satisfaction with the teaching unit.	0.0	1.4	0.0	14.5	84.1	4.81 (0.49)
18. I would recommend this teaching unit to PE teachers.	0.0	1.4	11.3	22.5	64.8	4.51 (0.75)

DISCUSSION

This study evaluated the Erasmus+ LTT event in Seville, focusing on its effectiveness in advancing OAE competencies among international pre-service and in-service educators. Results indicate high satisfaction and positive perceptions of professional development, particularly regarding the novel introduction to OAE concepts and the emphasis on SEL. Participants valued the experiential and reflective pedagogies, diverse learning environments, and opportunities for cross-cultural exchange, suggesting these elements resonate well with contemporary pedagogical theories that advocate for holistic learner development encompassing cognitive, physical, and socio-emotional domains (Patton et al., 2013; Mesquita et al., 2015).

However, critical reflection reveals underlying challenges linked to program design and contextu-

al constraints. The limited integration between theory and practice in some activities appears linked to both time constraints and the complexity of bridging abstract SEL competencies with concrete outdoor experiences. This disconnects potentially affected participant comprehension and could undermine deeper learning if left unaddressed. Additionally, the intense schedule reduced opportunities for meaningful reflection, an essential process for consolidating experiential learning and developing reflective teaching practice (Mesquita et al., 2015).

Safety concerns, particularly regarding climbing equipment, underscore the necessity for rigorous and context-specific safety protocols in OAE settings, which directly influence participant confidence and the overall learning environment. These challenges highlight the practical difficulties of implementing innovative interdisciplinary

programs within the constraints of short-term training events and emphasize the need for careful program design that balances rigor with participant well-being.

Given the relatively small and heterogeneous sample, predominantly comprising university-level educators and physical education students, caution is advised when generalizing findings. The short-term nature of the evaluation also limits insight into the long-term impacts on teaching behavior and student outcomes, which are critical for assessing the sustained effectiveness of professional development.

Theoretically, this study contributes to the expanding literature advocating for the integration of SEL within Outdoor and Physical Education by demonstrating practical avenues for embedding these competencies via collaborative, experiential learning. However, stronger alignment with broader teacher education policies and frameworks would benefit the transferability and scalability of such initiatives. Specifically, linking findings to policy discussions on teacher professional standards, curriculum reform, and the promotion of emotional and intercultural competencies could deepen the implications for stakeholders in teacher education.

Future research should adopt longitudinal designs and larger samples to assess the durability of learning gains and their translation into classroom practice. Moreover, exploring differentiated approaches that accommodate varying educator expertise and cultural contexts can enhance equity and inclusivity in OAE professional development.

CONCLUSION

The Erasmus+ LTT event in Seville presents a promising, innovative model for advancing OAE and SEL competencies through experiential, cross-cultural professional development. While outcomes indicate expanded knowledge and enriched pedagogical approaches, the study's limitations warrant cautious optimism.

By integrating critical insights and aligning with broader teacher education policy frameworks, this model can meaningfully inform future transnational initiatives in outdoor and adventure education. Addressing logistical, pedagogical, and policy-related factors through iterative refinement is crucial for maximizing its effectiveness and sustainability across diverse educational contexts.

Acknowledgments

The authors would like to acknowledge the Erasmus+ programme "Outdoor Adventure Education through Physical Education – OutAdvEd", funded by the European Commission, for enabling international cooperation and academic exchange. Reference: 2022-1-LU01-KA220-25 HED-000088846.

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Design: Slavka Asenova, Svetla Kostova

Publisher: Scientific Publishing House NSA Press

ISBN (Online): 978-954-718-803-7