THE COMMUNITY OF PRACTICE AND OUTDOOR EDUCATION: ESTABLISHING A RELATIONSHIP BETWEEN UNIVERSITIES AND TEACHER TRAINING IN ITALY

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ABSTRACT
Outdoor Education (OE) promotes experiential, interdisciplinary and contextualised learning, but its spread in Italy is hampered by organisational, methodological and cultural difficulties.
This study, conducted with 294 Italian teachers as part of the UNI-T European Teacher Academy project, highlights how Communities of Practice (CoPs) are key tools for professional support, educational innovation and the spread of OE.

KEYWORDS
Outdoor education; communities of practice; Italy; teacher training; environmental education.

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1. Introduction

Outdoor Education (OE) is a well-established teaching methodology that promotes experiential, interdisciplinary and contextualised learning. However, its implementation in the Italian school system is hampered by organisational, methodological and cultural difficulties. This study analyses the role of Communities of Practice (CoPs) in promoting OE through a survey conducted as part of the international UNI-T European Teacher Academy project, which involves five European universities and several schools.

The survey, based on a mixed qualitative-quantitative approach, involved 294 Italian teachers, allowing for the analysis of the structural and organisational specificities that influence the adoption of OE. The analysis of the questionnaires and discussions that emerged in the training workshops highlighted obstacles and opportunities, revealing that, although there is strong interest in OE, limitations remain in terms of resources, training and integration into school curricula. CoPs have proven to be effective tools for creating professional support networks and for educational innovation.

This contribution offers a reflection on the conditions necessary for a more widespread diffusion of OE in the Italian school context, emphasising the key role of CoPs as catalysts for educational change.

2. CIVIS project and community of practice related to Outdoor Education

The UNI-T Academy (eUropeaN cIvic Teacher Academy) project is a pioneering initiative in the European landscape for teacher training, with the aim of responding to the challenges posed by the growing need for internationalisation and pedagogical innovation. Selected as part of the Erasmus+ Teacher Academies programme, the project involves the collaboration of five universities from the CIVIS alliance (Aix-Marseille University, National and Kapodistrian University of Athens, University of Tübingen, Free University of Brussels and Sapienza University of Rome) and a large network of educational partners.

UNI-T Academy stands out for its multidimensional approach, which aims to integrate research, practice and professional training within a shared European framework.

The main objective is to strengthen the European dimension in teacher training through the development of communities of practice (CoPs), a theoretical and operational model based on the work of Etienne Wenger and Jean Lave (2006).

CoPs enable education professionals to develop shared skills through regular interactions, creating collaborative networks geared towards continuous learning and innovation.

The project is divided into four fundamental strategies:

1. The development of hybrid learning modules, based on educational research and active exchange between participants.
2. The creation of webinars and summer schools, aimed at stimulating intercultural dialogue and shared pedagogical reflection.
3. The implementation of transnational action research projects involving teachers and researchers in collaborative activities.
4. The integration of physical and virtual mobility mechanisms, supported by systems for recognising acquired skills.

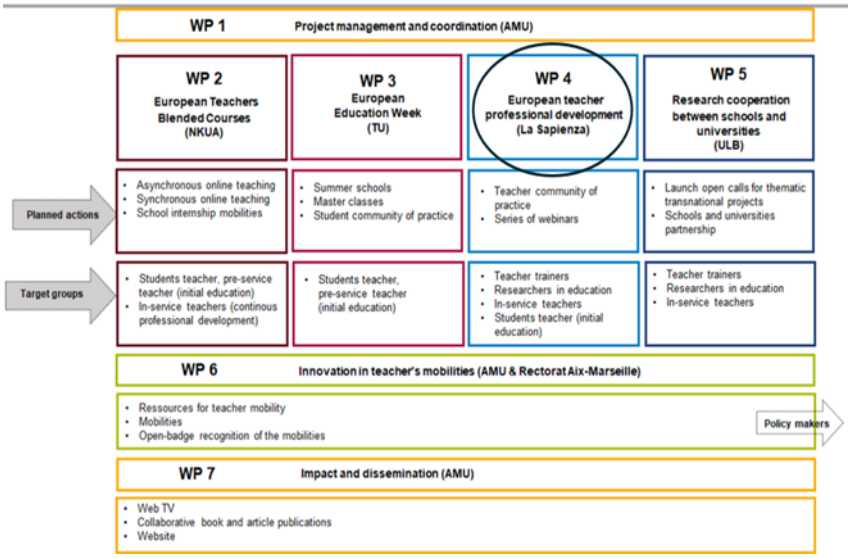


Figure 1. Diagram showing the work package structure of the project

In this article, we focus on Work Package 4 (WP4), which concentrates on the professional development of teachers through participatory training courses.

The UNI-T European Teacher Academy project fits into this framework with the aim of strengthening teacher training through a CoP-based approach. In particular, the survey presented here analyses the role of CoPs in promoting OE in Italy, exploring the perceptions, difficulties and opportunities that emerged from discussions between the teachers involved. This study aims to answer two main questions:

1. What are the main obstacles that teachers encounter in implementing OE?

2. How can CoPs promote the dissemination and consolidation of OE in Italian schools?

Through a critical analysis of the data collected, this contribution aims to provide useful insights for the design of targeted training courses, highlighting the role of CoPs as tools for innovation and professional development for teachers.

3. Outdoor education e suoi benefici nei contesti scolastici

It is necessary to start with a correct definition of OE. Reference will be made to Italian literature and articles, as international literature reflects specific political and educational contexts.

First of all, we specify that defining OE in the school environment is not simply equivalent to leaving the classroom, but that the pedagogical experience must be composed of key elements such as: multidisciplinarity, the possibility of establishing interpersonal relationships and activating relationships with the surrounding environment (Giunti et al. 2023). Activities can be carried out in both natural and urban contexts; therefore, it should be considered a widespread form of education that is not limited to the school building. OE educational programmes offer a wide variety of options, ranging from highly practical and sensory activities to socio-motor and exploratory activities, as well as those with a technological approach, and even more comprehensive programmes similar to those typical of Northern Europe (Antonietti, 2018).

As part of the Uni-T Academy project (https://uni-t-academy.eu/), between October and December 2023, a face-to-face and online conference was held, bringing together teachers of all levels to discuss the topic of OE. The working groups highlighted strengths and weaknesses in the design and implementation of activities within schools. First of all, with regard to school levels, nursery and primary school teachers already have the opportunity to work collaboratively, with hours dedicated to shared planning. In contrast, in lower and upper secondary schools, teachers report a lack of time and space to devote to shared planning, which can also be multidisciplinary. In addition, not everyone feels ready to tackle outdoor teaching activities.

Another critical factor was the unwillingness of families to accept proposals of this kind due to concerns about safety regulations being disregarded both inside and outside the school. Goals to be achieved with students of all ages also emerged, such as their well-being, dialogue and self-expression. The use of the body complements the educational experience and should therefore be an integral part of the proposed curricula. Practical proposals for planning and experimenting with

outdoor activities also emerged: reading and listening everywhere; using games; seizing local opportunities and stories; painting murals, making the space more welcoming, planting flowers and plants, including in pots.
As early as 2022, the benefits in the post-COVID period were reported thanks to the results of the OE experiment conducted in 2021-2022 in some schools in Rome as part of the Ministry of University and Research's FISR 2020 Project. The benefits were significant for pupils, teachers, headteachers and parents. With regard to pupils, there was a significant boost in motivation to study; headteachers and teachers committed to incorporating OE directly into the curriculum; from the parents' point of view, the importance of direct activation for the entire educational community was evident, thanks to the school's ability to reorganise itself independently.

4. Outdoor education and environmental education

Since 2012, the National Curriculum Guidelines (Ministerial Decree 254/2012) have included among their priority objectives the dissemination of awareness that the major problems of the human condition, including environmental degradation, can be addressed and resolved through close collaboration not only between nations but also between disciplines and cultures. Schools must integrate personal and social aspects into the education of children and adolescents, promoting an alliance between disciplines. In this context, OE offers the ideal space to explore and deepen the relationship with nature. Within the National Guidelines, environmental education is included in the objectives of geography, art and image, and technology, but it is a priority above all in physical education, considering both the school and extra-school environment.
References to the internal, external and relational environment are present in all disciplines, as well as in the fields of experience in nursery schools. The roots of this relationship date back to the 18th century with Jean Jacques Rousseau and continue through to Italian experiments from the late 1800s (D'Ascenzo, 2023). The 1955 educational programmes explicitly proposed active, interdisciplinary teaching with activities both inside and outside the school, which teachers such as Giuseppe Tamagnini, Mario Lodi and Bruno Ciari – all members of the Educational Cooperation Movement – put into practice. An important step was taken in 2014 when the Ministry of the Environment, together with the Ministry of Education, Universities and Research (MIUR), issued the Guidelines for Environmental Education (MATT-MIUR, 2014), which include eight educational pathways that are intended as guidelines for the construction of new educational itineraries linked to

living environments. References to the objectives of Agenda 2030 are also present in subsequent ministerial documents from 2018 (MIUR, 2018). They are designed for all school levels. The third community of practice of the Uni-T Academy project (February-April 2024) focused on sustainability. In the first online meeting, teachers explored the topic in its various dimensions (environmental, social, economic, cultural, educational, technological, scientific, political, ethical and territorial). The case studies concerned teacher training and student awareness. In March, the CoP met in Marseille for a three-day practical experience in local schools, experimenting with practical activities first-hand.

In addition to practical considerations and ongoing research aimed at strengthening the close link between OE and environmental education, and how to put it into practice in schools, we report a first virtuous example of a regional law in Puglia dated 21 March 2023, No. 2 (Legge Regionale 21 marzo 2023) which establishes the model of nature-based education in agri-nurseries and agri-kindergartens as an integral part of the regional education system for children aged 0-6, officially recognising its educational purposes. The training of educators is included in the programme funded by the region, promoting exchanges with universities and research institutions. Within the reform of the integrated 0-6 system (Decreto ministeriale 65/2017), this law is pioneering in Italy, with the first integration of systems designed as "non-school" to promote a shared approach between outdoor and indoor education for children aged 0 to 6.

5. Methodological approach to the research

5.1 Research context

This research was conducted as part of the international UNI-T European Teacher Academy project. The survey focused on Outdoor Education (OE) as a teaching methodology and on the ways in which CoPs can promote its integration into Italian school contexts.

The survey followed a mixed qualitative-quantitative approach, involving 294 Italian teachers from different school types and levels, with the following distribution: 11.6% nursery school, 35.4% primary school, 24.8% lower secondary school and 35.4% upper secondary school.

The combination of quantitative (structured questionnaire) and qualitative (discussions within the CoP, workshops and semi-structured interviews) methods made it possible to collect data on both teachers' perceptions and practices and on collaborative dynamics and emerging strategies for the dissemination of OE.

5.2 Survey structure and research phases

The survey was divided into three main phases, carried out between October and December 2023, each aimed at exploring different aspects of OE and promoting an active exchange of experiences and strategies among teachers.

Phase 1: Preliminary data collection and Sharing Workshop (4 October 2023)

The first phase involved the administration of a structured questionnaire to collect quantitative data on existing educational practices and teachers' perceptions and expectations regarding OE. The questionnaire consisted of closed and open questions aimed at: investigating the frequency and methods of use of OE in schools; exploring prior knowledge and skills; identifying perceived obstacles and opportunities for integrating OE into the curriculum; identifying training needs and areas on which to focus the CoP course. The data collected was analysed in order to structure the Sharing Workshop, an online seminar that took place on 4 October 2023. During the meeting, participants compared their experiences, discussed critical issues and began to outline operational strategies to address two case studies selected on the basis of the questionnaire data:

1. Management of school contexts with inadequate outdoor spaces.
2. Development of interdisciplinary activities for OE.

Phase 2: Residential workshop and practical experimentation (26–28 October 2023, Rome)

The second phase represented the experiential moment of the CoP. From 26 to 28 October 2023, a selected group of teachers participated in a residential workshop in Rome, aimed at:

- Directly experimenting with pedagogical approaches based on OE, through practical outdoor activities.
- Collectively designing outdoor teaching modules, considering constraints and opportunities in their respective school contexts.
- Sharing and reflecting on their experiences with colleagues from different school systems and different European countries.

The workshop activities were supplemented with moments of critical reflection and links to educational research, allowing teachers to consolidate the knowledge they had acquired and translate it into strategies that could be implemented in their schools.

Phase 3: Final meeting and analysis of practices (13 December 2023)

In the final phase, on 13 December 2023, an online meeting was held to share the experiences gained. On this occasion, participants:

- Presented the results of the experiments conducted in their schools.
- Discussed the main difficulties encountered in implementing OE.
- Identified strategies to ensure the sustainability and continuity of outdoor practices.

The data collected in this phase was used to build a detailed picture of the obstacles and levers facilitating OE in Italian schools.

5.3 Data collection and analysis tools

The research employed various data collection tools, each designed to capture specific aspects of the teachers' experience:

1. Structured questionnaire (preliminary phase) for quantitative analysis of practices and perceptions.
2. Recordings and transcripts of online and face-to-face meetings, analysed through thematic analysis (Braun & Clarke, 2006).
3. Reports from teachers participating in the residential workshop, used to extract qualitative insights on obstacles and strategies.
4. Virtual Padlets, in which teachers noted down their reflections and ideas.

Thematic analysis was conducted using an inductive-deductive approach (Nowell et al., 2017), combining categories emerging from the data with references to the literature on OE and CoPs.

5.4 Added value of the Community of Practice

Communities of Practice (CoPs) were the methodological focus of the study, serving not only as a data collection tool but also as an environment for training and educational innovation. According to Wenger (1998), CoPs develop through three key components:

1. The domain: an area of shared interest (in this case, OE).
2. The community: the group of teachers who interact regularly to explore the topic.
3. The practice: the set of experiences, tools and strategies developed collectively.

The approach adopted is based on the idea that professional learning emerges through peer interaction, collective reflection and practical experimentation (Lave & Wenger, 1991). In this sense, the CoP played a dual role:

- Research tool, through the collection of qualitative and quantitative data on teachers' experiences.

- Training device, promoting the transfer of knowledge and the construction of shared practices for the OE.

6. Initial research results

The analysis of data collected through the structured questionnaire, discussions within the Community of Practice (CoP) and semi-structured interviews has made it possible to outline a picture of teachers' perceptions and practices in relation to Outdoor Education (OE).

The results highlight a strong interest in this teaching methodology, accompanied, however, by significant organisational, cultural and methodological obstacles. The variability in the experiences reported by teachers suggests that the implementation of OE in Italian schools is not uniform and that there are significant differences based on the school level, the training received and the institutional support available.

The discussion of the results will be divided into four main sections: factors that facilitate the adoption of OE, barriers that limit its application, operational difficulties encountered by teachers, and strategies that emerged from the CoP to promote greater dissemination of the methodology.

6.1 Conditions favourable to the implementation of the OE

Analysis of the responses provided by teachers shows that certain structural and organisational factors play a decisive role in promoting the adoption of OE in schools. Among these, the availability of suitable outdoor spaces is one of the most important conditions, cited by 24.1% of participants as a factor that facilitates the implementation of outdoor activities. In particular, schools with equipped playgrounds, school gardens or green areas in the immediate vicinity are more likely to integrate OE into their daily teaching practices. A further facilitating factor is the inclusion of OE in the school curriculum, indicated as decisive by 19.5% of teachers. The presence of clear guidelines and support from management makes it possible to make OE not a sporadic activity, but a methodology integrated into the curriculum.

Alongside these aspects, 16.8% of teachers highlighted the importance of the pedagogical approach adopted by the educational institution, emphasising how the spread of a teaching culture oriented towards experiential and interdisciplinary learning can facilitate the adoption of strategies based on OE. Finally, the availability of material and infrastructural resources, reported by 15.5% of respondents, is another factor influencing the implementation of this methodology.

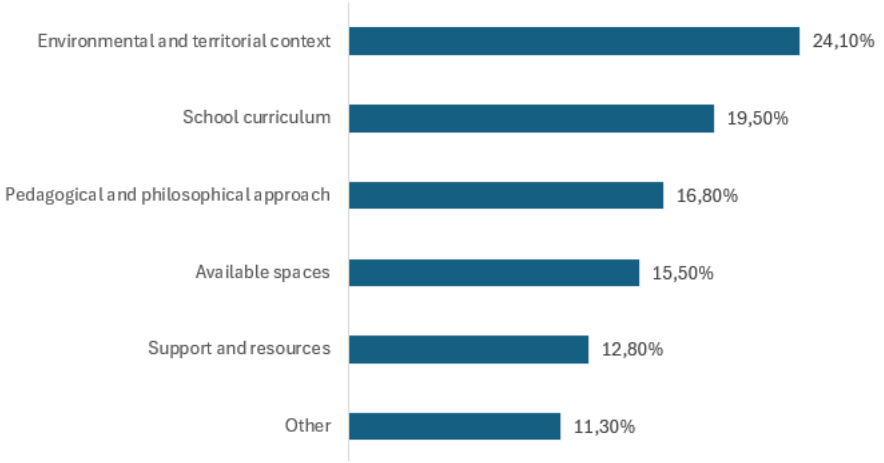


Figure 2. Aspects of the school that promote OE

6.2 Barriers to the spread of OE

Despite the interest shown by teachers, OE faces significant barriers that hinder its systematic application. The main obstacle identified is the lack of knowledge and awareness of this methodology, highlighted by 45.2% of survey participants. Many teachers say they have only a superficial knowledge of OE and have not received specific training, thus limiting their ability to design and implement outdoor activities effectively.

Another significant obstacle is represented by logistical and organisational difficulties, indicated by 41.7% of teachers. The management of outdoor spaces, the need for coordination between teachers and the lack of curricular time to devote to OE emerge as concrete problems that limit the possibility of experimenting with new outdoor educational practices. Added to these critical issues is cultural resistance from colleagues and families (10.7%), who perceive OE as a less rigorous teaching practice than traditional classroom lessons. In particular, some teachers report difficulty in convincing families of the usefulness of OE, especially when it involves activities outside the school building. The need for specific authorisations and the fear of not complying with safety regulations are factors that discourage many teachers from adopting this methodology.

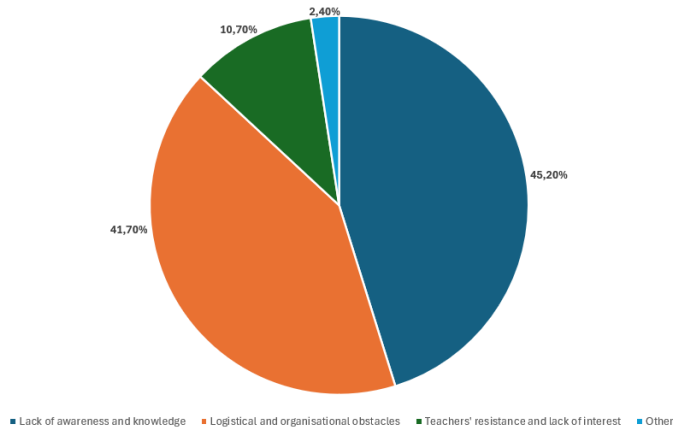


Figure 3. Main obstacles to the implementation of OE

6.3 Operational difficulties encountered by teachers

In addition to general barriers, teachers report specific operational difficulties in managing OE activities. The main critical issue concerns the need for specific training and skills, highlighted by 28.6% of participants.

Many teachers say they are interested in OE, but feel they lack the necessary skills to design outdoor activities effectively. Another problem is the lack of adequate infrastructure, also mentioned by 28.6% of respondents. In many schools, outdoor spaces are not equipped for educational activities or are limited by accessibility and safety constraints. In addition, 15.4% of teachers report a lack of coordination among colleagues as a critical factor: in order to be effective, OE requires interdisciplinary work and shared planning, which is often not possible in Italian schools.

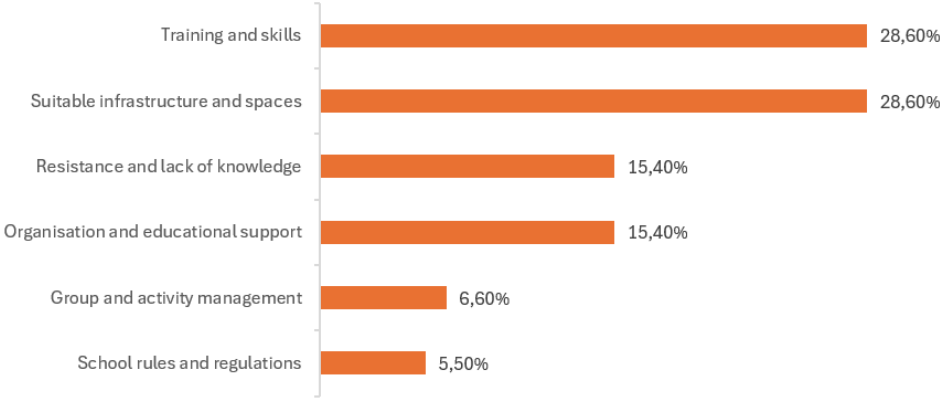


Figure 4. Operational difficulties encountered by teachers

6.4 Strategies emerging from the Community of Practice

Analysis of recordings of online meetings, virtual padlets and reports produced by teachers following the residential workshop in Rome highlighted the complexity and richness of the topics addressed in Outdoor Education (OE). In particular, teachers identified a series of useful strategies for overcoming the difficulties associated with implementing outdoor educational experiences, as well as some obstacles that limit their dissemination.

One of the central aspects that emerged from the discussion concerns the importance of building structured collaborations between schools, local authorities, universities and cultural and naturalistic institutions. The creation of local networks was identified as a fundamental strategy for expanding outdoor learning opportunities and overcoming infrastructural limitations, such as the lack of green spaces within schools (Dyment & Potter, 2015).

As one participant observed: “Collaboration with the local community can also help to overcome any lack of space”. This perspective is supported by studies that highlight how the involvement of local actors can promote the integration of OE into the school curriculum and enrich the educational experience through authentic and contextualised experiences (Mannion et al., 2013).

Another element that emerged concerns the need to introduce a coordination role for OE within educational institutions. Teachers proposed the establishment of a teacher-facilitator, a professional tasked with promoting collaboration among colleagues, supporting the planning of outdoor activities and facilitating communication between the school and the local community. One teacher pointed out: “A facilitator can promote collaboration among teachers, create opportunities for discussion and ensure that what teachers say to each other is interpreted correctly, fostering good communication”. This proposal is reflected in the literature, which emphasises the importance of pedagogical mediators in facilitating the adoption of innovative methodologies and encouraging shared reflection on educational practices (Rickinson et al., 2004; Fägerstam, 2013).

Another aspect considered crucial for the implementation of OE is the continuous training of teaching staff. Participants in the CoP highlighted the need for training courses that integrate both theoretical aspects and practical experience, enabling teachers to acquire methodological skills and operational tools for designing outdoor activities. Recent studies have shown that targeted training is a key factor in the success of OE, as it helps to overcome resistance and uncertainty on the part of teachers and to implement effective teaching strategies (Waite, Bølling & Bentsen, 2015). As pointed out by Dillon et al. (2006), the active involvement of

teachers in immersive OE experiences is essential for a deep understanding of the pedagogical value of this methodology.

Alongside strategies to promote the implementation of OE, teachers identified some recurring difficulties in school practice. However, rather than considering them mere obstacles, they formulated ideas and proposals to take advantage of them or mitigate their effects.

The main critical issues and related solutions that emerged from the discussion among the participants in the CoP are analysed below.

One of the most frequently cited problems concerns the unpredictability of weather conditions, which in some cases is perceived as a limitation to outdoor activities, especially in the winter months. However, some teachers emphasised the importance of adopting a flexible approach, transforming the climate into an educational variable and stimulating greater environmental awareness in students. One teacher stated: “Even rain can be useful. We need to be flexible and use the weather to our advantage”. This perspective is confirmed by studies by Mygind (2009), which highlight how exposure to variable weather conditions can contribute to the development of adaptation and problem-solving skills in students.

A further obstacle concerns cultural resistance, both on the part of some teachers and on the part of families. Mistrust of OE is often linked to fears for student safety and the perception of this methodology as less structured than traditional teaching (Maynard & Waters, 2007). One teacher pointed out: “Parents are very apprehensive and we teachers have to be convincing, we have to make them understand that we are professionals and we know what we are doing”. In this regard, the participants in the CoP identified communication and family involvement as key elements in reducing such resistance. The literature highlights that parental engagement strategies and transparency in educational planning can promote greater acceptance of OE (Ernst, 2014). Finally, one of the most significant difficulties concerns the management of the bureaucratic procedures necessary for the implementation of outdoor activities. Safety regulations, the need for specific authorisations and logistical constraints often hinder the systematic adoption of OE in schools (Rickinson et al., 2004). Teachers suggested addressing these obstacles through greater awareness among educational institutions and the adoption of standardised protocols for managing field trips.

7. Conclusions

Analysis of the data collected highlights a tension between teachers' interest in comparisons with Outdoor Education (OE) and the structural and organisational

difficulties that limit its dissemination. Participation in the Community of Practice (CoP) was a key element in supporting a peer learning process, encouraging the sharing of teaching strategies that can be adapted to different school contexts. However, the research confirms that the goodwill of teachers is not enough to overcome existing barriers: the spread of OE requires systemic interventions supported by targeted educational policies and more structured institutional recognition. The data collected show that the lack of specific knowledge about OE (45.2%) and organisational difficulties (41.7%) are the main critical issues reported by teachers, in line with what is reported in the literature on the subject (Shume & Blatt, 2019). Despite the enthusiasm expressed, the practice of OE remains sporadic: 65% of teachers say they do it less than twice a year and only 8% integrate it regularly into their teaching. This discontinuity reflects the absence of a regulatory framework that would facilitate its systematic integration into the school curriculum, a limitation already highlighted in previous studies (Mannion et al., 2013; Rickinson et al., 2004).

One of the key aspects that emerged from the CoP concerns the need for targeted training that is not limited to the transmission of theoretical knowledge, but also includes immersive experiences and operational tools. Research confirms that active participation in practical courses is essential to consolidate understanding of outdoor methodologies and facilitate their adoption by teachers (Waite, Bølling & Bentsen, 2015). Furthermore, the creation of facilitators within schools has been identified as an effective strategy for promoting coordination between colleagues and interdisciplinary planning (Fägerstam, 2013). At the same time, the need to strengthen family involvement has emerged, as 10.7% of teachers report cultural resistance linked to the perception of OE as a less structured teaching methodology. This aspect echoes the literature on parental engagement in innovative educational processes, which emphasises that the active participation of families is crucial to the success of unconventional teaching practices (Ernst, 2014). A significant finding of the survey is the ability of CoPs to build professional support networks. 78% of the teachers involved stated that they had benefited from discussions with colleagues and had incorporated new ideas into their teaching practice. This confirms the value of CoPs as tools for professional learning and pedagogical innovation, in line with Wenger's theoretical model (1998). However, for these experiences to have a lasting and widespread impact, they need to be supported by school policies that ensure their continuity and integration with other training programmes (Nowell et al., 2017).

The main limitation of this study is the self-selected nature of the sample: the teachers involved in the CoP were already interested in OE, which excludes from

the picture the perceptions of those who do not practise it or do not consider it relevant. This is a common critical issue in CoP-based research (Wenger, 1998) and suggests the need for future studies involving a larger and more diverse sample, including schools where OE is not yet practised or is adopted sporadically. Another limitation concerns the time frame of the research, which did not allow for an assessment of the long-term effects of CoP on the teaching practices of the participants. Future studies could adopt a longitudinal approach, monitoring over time how the knowledge acquired is applied and transformed into daily practice, and assessing whether and how OE can become an integral part of the educational provision of the schools involved.

In light of the results, some strategic guidelines have been outlined to encourage the adoption of OE on a larger scale:

1. Experiential training for teachers, with practical modules that allow them to directly experience OE.
2. Development of strategies for curricular integration, considering the specificities of different school levels.
3. Institutional support and creation of facilitators to promote coordination between teachers and interdisciplinary planning.
4. Awareness-raising initiatives aimed at families to overcome cultural resistance and promote wider adoption of OE.
5. Collaboration networks between schools and the local area to optimise the use of spaces and resources outside the school.

OE cannot be left to the individual initiative of teachers alone, but requires institutional recognition to facilitate its systematic application. Only through a structured, evidence-based approach will it be possible to promote a significant transformation of outdoor education in Italian schools.

Author contributions

This article is the result of joint work between the authors, however the paragraphs 1, 2 and 3 are attributed to Professor Emiliane du Mérac, paragraphs 4 and 5 to Luisa Vianello, paragraph 6 and 7 to Alessandra Natalini.

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