

OUTDOOR EDUCATION AS AN INNOVATIVE PEDAGOGICAL PRACTICE: ENHANCING EXPERIENTIAL LEARNING, STUDENT ENGAGEMENT, AND SUSTAINABLE DEVELOPMENT COMPETENCIES

Tabitha-Bernadet PASINSZKY,
Mămăruța Preschool from Arad
torkostabitha@yahoo.com

Henrietta TORKOS, PhD.,
Aurel Vlaicu University of Arad
torkos_henriette@yahoo.com

Abstract: *Outdoor education has increasingly been recognized as an innovative pedagogical practice capable of extending learning beyond the conventional classroom and connecting curriculum content with authentic, real-world contexts. This article examines the contribution of outdoor education to experiential learning, student engagement, and the development of competencies associated with sustainable development. Grounded in experiential and student-centred learning perspectives, the paper argues that outdoor educational activities can support active participation, reflective thinking, collaborative problem-solving, environmental awareness, and responsible civic action. By engaging students directly with natural, social, and community environments, outdoor education creates meaningful opportunities for observation, inquiry, practice, and reflection, thereby strengthening the link between theoretical knowledge and lived experience. The article also highlights the relevance of outdoor education for Education for Sustainable Development, particularly through its potential to cultivate systems thinking, anticipatory thinking, critical reflection, cooperation, and action-oriented learning. The discussion suggests that outdoor education should not be understood merely as an extracurricular activity, but as a structured pedagogical approach that can enhance learning quality, motivation, inclusion, and sustainability-oriented competence formation. The paper concludes that integrating outdoor education into formal educational practice may contribute to more holistic, participatory, and transformative learning experiences, while also preparing students to respond more*

responsibly to contemporary ecological and social challenges.

Keywords: *outdoor education; experiential learning; student engagement; innovative pedagogy; Education for Sustainable Development; sustainability competencies; active learning; environmental awareness.*

Introduction

Contemporary education is increasingly expected to move beyond the transmission of disciplinary knowledge and to support the development of complex competencies that enable learners to participate actively, responsibly, and critically in society. In this context, pedagogical innovation is not limited to the use of digital tools or new instructional materials, but also involves rethinking the spaces, methods, and experiences through which learning takes place. Outdoor education represents one such pedagogical approach, as it extends learning beyond the conventional classroom and uses natural, social, and community environments as meaningful contexts for educational activity. (Priest, 1986; Gruenewald, 2003)

Outdoor education is closely connected with experiential learning theory, according to which learning is produced through the transformation of experience into knowledge (Kolb, 1984). This perspective emphasizes the active role of the learner and the importance of concrete experience, reflection, conceptualization, and application in the learning process. Similarly, Dewey (1938) argued that education should be grounded in experience, while also requiring purposeful organization and reflection in order to become genuinely educative. From this perspective, outdoor education should not be understood as a simple recreational activity, but as a structured pedagogical practice that connects direct experience with observation, inquiry, dialogue, and reflective thinking.

Research on learning outside the classroom suggests that outdoor educational experiences can support cognitive, affective, social, and behavioural dimensions of learning when they are well planned, adequately integrated into the curriculum, and followed by meaningful reflection (Dillon et al., 2006; Rickinson et al., 2004). Beames et al. (2012) also emphasize that learning outside the classroom can provide opportunities for students to engage with real-world environments, apply knowledge in authentic situations, and develop stronger connections between school learning and everyday life. Therefore, outdoor education can contribute to a more holistic understanding of

learning, in which knowledge is not separated from place, action, emotion, and social interaction.

Student engagement is another important dimension of outdoor education. Engagement is commonly conceptualized as a multidimensional construct that includes behavioural, emotional, and cognitive components (Fredricks et al., 2004). Outdoor learning environments may strengthen these dimensions by encouraging active participation, curiosity, collaboration, exploration, and problem-solving. When students interact directly with concrete phenomena and real-life situations, they are more likely to perceive learning as relevant and meaningful. In this sense, outdoor education can increase motivation and participation by transforming students from passive recipients of information into active participants in the construction of knowledge.

Outdoor education is also relevant to Education for Sustainable Development, which aims to empower learners to make informed decisions and take responsible actions for environmental integrity, economic viability, and a just society (UNESCO, 2017). Sustainability education requires pedagogical approaches that help students understand interdependence, complexity, uncertainty, and long-term consequences. Wiek et al. (2011) identify key sustainability competencies such as systems-thinking competence, anticipatory competence, normative competence, strategic competence, and interpersonal competence. Outdoor education can support these competencies by placing learners in direct contact with ecological and social realities and by encouraging them to analyse problems, reflect on values, cooperate with others, and consider responsible forms of action.

The aim of this article is to examine outdoor education as an innovative pedagogical practice that enhances experiential learning, student engagement, and sustainable development competencies. Its specific contribution lies in bringing together three complementary perspectives that are often discussed separately: experiential learning theory, student engagement, and Education for Sustainable Development. By integrating these perspectives, the article proposes a conceptual understanding of outdoor education as a curriculum-connected and competence-oriented approach rather than as an occasional extracurricular activity. This perspective highlights the pedagogical value of outdoor learning for creating active, meaningful, and transformative educational experiences that prepare students to respond responsibly to contemporary environmental and social challenges.

Methodological Approach

This article is designed as a conceptual and theoretical analysis of outdoor education as an innovative pedagogical practice. It does not present empirical research based on participants, instruments, or statistical data. Instead, it synthesises and discusses relevant theoretical and scholarly literature in order to clarify how outdoor education can contribute to experiential learning, student engagement, and the development of sustainable development competencies.

The analysis is based on selected academic and institutional sources that are directly relevant to the central concepts of the article. Experiential learning is examined through the educational perspectives of Dewey (1938) and Kolb (1984), while outdoor learning is discussed in relation to research and theoretical contributions by Rickinson et al. (2004), Dillon et al. (2006), and Beames et al. (2012). Student engagement is approached through the multidimensional framework proposed by Fredricks et al. (2004), and motivational aspects are supported by Ryan and Deci's (2000) self-determination theory. The sustainability dimension is grounded in UNESCO's framework for Education for Sustainable Development and in Wiek et al.'s (2011) model of key sustainability competencies.

The discussion is organised around three analytical dimensions: outdoor education as a form of experiential learning, outdoor education as a means of enhancing student engagement, and outdoor education as a pedagogical context for developing sustainable development competencies. This structure allows the article to connect pedagogical theory with educational practice and to identify the conditions under which outdoor education can function as a meaningful, curriculum-connected, and competence-oriented approach. (Bocoş, 2019)

Theoretical Framework

The theoretical framework of this article is built around three interconnected educational perspectives: experiential learning theory, student engagement theory, and Education for Sustainable Development. These perspectives provide the conceptual basis for understanding outdoor education not merely as an alternative learning location, but as a pedagogical practice capable of transforming how students experience, interpret, and apply knowledge.

First, outdoor education can be theoretically grounded in experiential learning. Dewey (1938) argued that experience plays a central role in education, but he also emphasized that not every experience is automatically educative. For an experience to contribute to learning, it must be structured, meaningful, and connected to reflection. Kolb (1984) later developed experiential learning as a cyclical process

through which knowledge is created by transforming experience. His model includes concrete experience, reflective observation, abstract conceptualization, and active experimentation. From this perspective, outdoor education becomes valuable when students are not only exposed to outdoor environments, but are also guided to observe, question, reflect, conceptualize, and apply what they learn. (Roberts, 2012)

Second, outdoor education is connected to constructivist and student-centred approaches to learning. Learning outside the classroom encourages students to interact directly with natural, social, and cultural environments, allowing them to construct meaning through active participation and situated experience. Beames, Higgins, and Nicol (2012) argue that learning outside the classroom can connect school knowledge with real-world contexts, making learning more relevant and authentic. In this sense, outdoor education shifts the role of the learner from passive recipient of information to active participant in the learning process. It also shifts the role of the teacher from transmitter of knowledge to facilitator, guide, and designer of meaningful learning experiences.

Third, outdoor education can be examined through the concept of student engagement. Fredricks, Blumenfeld, and Paris (2004) describe engagement as a multidimensional construct that includes behavioural, emotional, and cognitive dimensions. Behavioural engagement refers to participation in academic and learning activities; emotional engagement involves interest, motivation, and affective connection; and cognitive engagement refers to investment in understanding, problem-solving, and self-regulated learning. Outdoor education can support all three dimensions. Students are behaviourally engaged through direct participation in tasks, emotionally engaged through curiosity and connection with place, and cognitively engaged through inquiry, interpretation, and problem-solving in authentic contexts.

Finally, outdoor education is strongly related to Education for Sustainable Development. UNESCO (2017) defines Education for Sustainable Development as an approach that empowers learners to make informed decisions and take responsible action for environmental integrity, economic viability, and a just society. This requires pedagogies that go beyond factual knowledge and support the development of values, skills, attitudes, and competencies. Wiek, Withycombe, and Redman (2011) identify key sustainability competencies, including systems-thinking competence, anticipatory competence, normative competence, strategic competence, and interpersonal competence. Outdoor education can contribute to these competencies by helping students understand the interdependence

between ecological, social, and economic systems and by encouraging cooperation, critical reflection, and responsible action.

Therefore, the theoretical framework of this article positions outdoor education at the intersection of experiential learning, student engagement, and sustainability-oriented competence development. It is understood as an innovative pedagogical practice because it reorganizes the relationship between learner, teacher, curriculum, and environment. By connecting direct experience with reflection, participation, and sustainability challenges, outdoor education offers a framework for more meaningful, active, and transformative learning.

Outdoor Education and Experiential Learning

Outdoor education is closely aligned with experiential learning because it places students in direct contact with concrete situations, natural environments, social contexts, and real-world problems. Instead of learning only through verbal explanation or textbook-based instruction, students are encouraged to observe, investigate, act, collaborate, and reflect. This makes outdoor education particularly relevant for learning processes that require active participation and the connection of theoretical knowledge with practical experience.

Experiential learning theory emphasizes that knowledge is created through the transformation of experience (Kolb, 1984). In Kolb's model, learning involves a cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation. Outdoor education can support this cycle in a natural and pedagogically meaningful way. For example, students may begin with direct observation of a natural phenomenon, reflect on what they have noticed, connect their observations with scientific or social concepts, and then apply their understanding through a practical task, discussion, or problem-solving activity. In this way, the outdoor environment becomes not only a physical space, but also a learning resource.

The importance of reflection is central to this process. Dewey (1938) argued that experience becomes educational only when it is connected to continuity, interaction, and reflective thought. Outdoor activities that lack clear learning objectives or follow-up reflection may remain isolated experiences. However, when they are carefully planned and integrated into the curriculum, they can encourage students to make connections between prior knowledge, direct experience, and new understanding. Therefore, the pedagogical value of outdoor education depends not simply on taking students outside, but on designing meaningful learning situations before, during, and after the outdoor activity.

Research on outdoor learning has shown that experiences outside the classroom can contribute to students' knowledge, attitudes, social skills, and personal development when they are well structured and connected to educational goals (Dillon et al., 2006; Rickinson et al., 2004). Outdoor contexts can make abstract concepts more visible and accessible because students encounter them through concrete examples. In science education, for instance, students can study biodiversity, ecosystems, weather, soil, or pollution directly in the environment. In social sciences and humanities, they can explore community spaces, cultural heritage, local history, and civic issues. Such experiences can deepen understanding by situating learning within authentic contexts. (Roberts, 2012)

Outdoor education also supports inquiry-based and problem-based learning. Students may be invited to formulate questions, collect data, compare observations, interpret evidence, and propose solutions to real problems. These processes are consistent with experiential learning because they require learners to move between action and reflection. Beames, Higgins, and Nicol (2012) argue that learning outside the classroom can create opportunities for students to engage with real places and authentic challenges, strengthening the relationship between curriculum content and lived experience. As a result, outdoor education may help students understand that knowledge is not only something to be memorized, but something to be used, tested, and revised in relation to real situations.

Another important aspect of outdoor experiential learning is the integration of cognitive, emotional, social, and physical dimensions of education. Outdoor learning often involves movement, sensory perception, cooperation, and emotional connection with place. These dimensions can enrich learning because students engage with content through multiple forms of experience. Such an approach may be especially valuable for learners who are less responsive to traditional classroom instruction, as it offers alternative pathways for participation and understanding.

Overall, outdoor education enhances experiential learning by transforming the environment into an active component of the educational process. It supports learning through direct experience, observation, inquiry, reflection, and application. When outdoor activities are purposefully designed and connected to curricular aims, they can help students develop deeper understanding, practical skills, collaborative abilities, and a stronger sense of connection between knowledge and the world in which they live.

Outdoor Education and Student Engagement

Student engagement is a central concern in contemporary education because it is closely related to participation, motivation, persistence, and meaningful learning. In educational research, engagement is commonly understood as a multidimensional construct that includes behavioural, emotional, and cognitive dimensions (Fredricks et al., 2004). Behavioural engagement refers to students' participation in learning activities, emotional engagement refers to interest, motivation, and affective connection, while cognitive engagement involves investment in understanding, self-regulation, and the use of deeper learning strategies. Outdoor education can contribute to all these dimensions by creating learning situations that are active, authentic, and connected to students' direct experience.

Outdoor education supports behavioural engagement because it requires students to participate actively in observation, exploration, inquiry, collaboration, and practical tasks. Unlike traditional classroom activities that may sometimes position students as passive recipients of information, outdoor learning environments invite students to move, investigate, ask questions, and interact with their surroundings. Research on outdoor learning suggests that well-planned experiences outside the classroom can support students' learning, social development, attitudes, and behaviour, particularly when they are integrated into the curriculum and connected to clear educational aims (Dillon et al., 2006; Hattie et al., 1997; Rickinson et al., 2004).

Emotional engagement may also be strengthened through outdoor education. Learning in natural or community-based environments can stimulate curiosity, enjoyment, and a sense of relevance. Students often perceive outdoor activities as more meaningful because they are connected to real places, visible phenomena, and concrete problems. Beames, Higgins, and Nicol (2012) argue that learning outside the classroom can help connect school learning with lived experience, thereby increasing the authenticity of the educational process. This connection between learning and real life may enhance students' motivation and their emotional relationship with the subject matter. (Chawla, 2015)

Cognitive engagement is developed when students are challenged to think critically, interpret evidence, solve problems, and transfer knowledge to new contexts. Outdoor education can encourage this form of engagement by placing learners in situations that require inquiry and decision-making. For example, students may analyse environmental conditions, compare observations, identify causes and consequences, or propose solutions to local sustainability problems. Such tasks require more than factual recall; they involve interpretation, reasoning, collaboration, and reflection. In this way, outdoor education

can support deeper forms of learning by encouraging students to use knowledge actively and purposefully.

Outdoor education is also relevant to student engagement because it can foster autonomy and agency. When students participate in field-based inquiry, community exploration, or environmental projects, they are often required to make choices, assume roles, collaborate with peers, and take responsibility for aspects of the learning process. These experiences can contribute to a stronger sense of ownership over learning. According to Ryan and Deci's (2000) self-determination theory, motivation is supported when learners experience autonomy, competence, and relatedness. Outdoor education can provide conditions for these psychological needs by allowing students to act independently, develop practical competence, and work collaboratively in meaningful contexts.

Another important dimension of engagement is the social nature of outdoor learning. Outdoor education frequently involves group tasks, peer discussion, shared problem-solving, and cooperation. These social interactions can support communication, responsibility, and interpersonal learning. They may also help create a more inclusive learning environment by offering diverse ways for students to participate, including physical, observational, practical, verbal, and reflective forms of engagement. Therefore, outdoor education can be especially useful for broadening participation and recognizing different learner strengths.

Overall, outdoor education enhances student engagement by making learning more active, relevant, collaborative, and meaningful. It supports behavioural engagement through participation, emotional engagement through motivation and connection to place, and cognitive engagement through inquiry, reflection, and problem-solving. When integrated thoughtfully into educational practice, outdoor education can transform engagement from simple attendance or task completion into active involvement in learning and responsible participation in real-world contexts.

Outdoor Education and Sustainable Development Competencies

Outdoor education has a strong connection with Education for Sustainable Development because it allows students to encounter environmental, social, and community issues in direct and meaningful ways. Education for Sustainable Development aims to empower learners to make informed decisions and take responsible actions for environmental integrity, economic viability, and a just society, both for present and future generations (UNESCO, 2017). This aim requires more than the acquisition of factual knowledge. It requires pedagogical

approaches that help students understand complexity, reflect on values, cooperate with others, and participate in problem-solving processes.

Sustainable development competencies refer to the knowledge, skills, attitudes, and values that enable learners to understand sustainability challenges and contribute to their resolution. Wiek, Withycombe, and Redman (2011) identify five key competencies for sustainability: systems-thinking competence, anticipatory competence, normative competence, strategic competence, and interpersonal competence. These competencies are relevant because sustainability problems are complex, interdisciplinary, and value-laden. They cannot be addressed only through memorization or isolated disciplinary knowledge, but require learners to analyse relationships, imagine possible futures, evaluate ethical dimensions, develop strategies, and collaborate with others. (Barth et al., 2007)

Outdoor education can support systems-thinking competence by helping students observe the interdependence between natural, social, and economic systems. For example, activities related to biodiversity, water quality, waste management, urban green spaces, or local community planning can help learners understand how human actions influence ecological processes and how environmental conditions affect social well-being. Through direct observation and inquiry, students can move from abstract descriptions of sustainability to concrete understanding of relationships, causes, consequences, and feedback loops.

Outdoor education can also contribute to anticipatory competence, which involves the ability to understand and evaluate possible future scenarios (Wiek et al., 2011). When students investigate environmental changes, local risks, or community challenges, they can be encouraged to think about long-term consequences and alternative futures. For instance, outdoor learning tasks may ask students to consider how land use, pollution, climate-related risks, or biodiversity loss could affect their community over time. Such activities strengthen the capacity to connect present actions with future outcomes.

Normative competence is developed when students reflect on values, responsibilities, and ethical principles related to sustainability. UNESCO (2017) emphasizes that Education for Sustainable Development involves not only cognitive learning, but also socio-emotional and behavioural learning. Outdoor education can create opportunities for students to discuss questions of responsibility, justice, care for nature, intergenerational equity, and community well-being. These discussions are more meaningful when they are connected to real places and real problems that students can observe and analyse directly.

Strategic competence refers to the ability to design and implement actions that support sustainability (Wiek et al., 2011). Outdoor education can promote this competence through project-based activities, environmental investigations, school garden projects, conservation actions, recycling initiatives, community mapping, or local problem-solving tasks. These activities help students understand that sustainability is not only a theoretical concept, but also a practical field of action. Students learn to identify problems, plan interventions, cooperate with others, and evaluate possible solutions.

Interpersonal competence is also central to sustainability learning. Sustainability challenges require communication, cooperation, negotiation, and collective decision-making. Outdoor education frequently involves group work, peer learning, shared observation, and collaborative problem-solving. These forms of learning can develop students' ability to listen, communicate, respect different perspectives, and work with others toward common goals. In this way, outdoor education contributes not only to environmental awareness, but also to democratic participation and social responsibility.

The connection between outdoor education and sustainability competencies is also supported by broader research on environmental and sustainability education. Tilbury (2011) argues that Education for Sustainable Development requires learning processes that are participatory, action-oriented, reflective, and transformative. Outdoor education can provide such learning conditions when it is intentionally planned and connected to curriculum objectives. By engaging students with real environments and real sustainability challenges, it encourages them to connect knowledge with values, reflection with action, and individual learning with collective responsibility.

Overall, outdoor education can play an important role in developing sustainable development competencies. It supports systems thinking through direct observation of interdependence, anticipatory thinking through reflection on future consequences, normative competence through ethical discussion, strategic competence through action-oriented projects, and interpersonal competence through collaboration. Therefore, outdoor education represents a valuable pedagogical approach for Education for Sustainable Development, particularly because it transforms sustainability from an abstract curricular topic into a lived, situated, and participatory learning experience.

Pedagogical Implications

The integration of outdoor education into formal educational practice requires intentional planning, clear learning objectives, and alignment with curriculum outcomes. Outdoor education should not be reduced to

occasional field trips or recreational activities, but should be designed as a structured pedagogical process that connects preparation, direct experience, reflection, and application. In this sense, outdoor education is most effective when it is embedded within a broader instructional sequence rather than treated as an isolated event. (Albulescu & Catalano, 2019; Bocoş, 2019)

A first pedagogical implication concerns the role of the teacher as a designer and facilitator of learning experiences. In outdoor education, the teacher's role extends beyond transmitting information. The teacher organizes learning situations, prepares students for observation and inquiry, guides interaction with the environment, supports collaboration, and facilitates reflection. This role is consistent with experiential learning theory, which emphasizes the transformation of concrete experience into knowledge through reflection, conceptualization, and experimentation (Kolb, 1984). Therefore, teachers need to plan not only what students will do outdoors, but also how students will interpret, discuss, and apply the experience afterwards.

A second implication concerns curriculum integration. Outdoor education should be connected to disciplinary and interdisciplinary learning aims. Beames, Higgins, and Nicol (2012) emphasize that learning outside the classroom can strengthen the relationship between school knowledge and real-world contexts. This means that outdoor activities should be explicitly linked to curricular themes such as environmental science, geography, biology, civic education, physical education, local history, language education, or sustainability education. For example, a lesson on ecosystems can include field observation of biodiversity; a civic education lesson can include investigation of public spaces; and a sustainability lesson can include analysis of waste management or green infrastructure in the local community. (Pânişoară, 2015)

A third implication relates to the structure of outdoor learning activities. Effective outdoor education should include three stages: preparation, outdoor experience, and post-activity reflection. During the preparation stage, students should receive clear learning objectives, safety instructions, observation tools, guiding questions, and relevant theoretical concepts. During the outdoor experience, students should engage in active tasks such as observation, data collection, mapping, interviewing, photographing, classifying, comparing, or problem-solving. During the reflection stage, students should analyse their findings, connect them with theoretical knowledge, discuss implications, and consider possible actions. This structure is consistent

with the idea that experience becomes educational when it is organized and reflected upon (Dewey, 1938).

A fourth implication concerns assessment. Outdoor education requires assessment methods that capture not only factual knowledge, but also skills, attitudes, collaboration, reflection, and competence development. Traditional tests may be insufficient for evaluating the complexity of outdoor learning. Teachers may use reflective journals, observation grids, portfolios, group presentations, inquiry reports, concept maps, project outcomes, or self-assessment tools. These forms of assessment are particularly relevant for Education for Sustainable Development, which involves cognitive, socio-emotional, and behavioural learning dimensions (UNESCO, 2017).

A fifth implication concerns inclusion and differentiated learning. Outdoor education can provide multiple ways for students to participate, including physical activity, observation, discussion, drawing, mapping, photography, practical tasks, and verbal or written reflection. This diversity of learning modes may support students with different learning preferences and abilities. However, inclusion must be planned carefully. Teachers need to consider accessibility, safety, group organization, students' physical needs, emotional comfort, and possible barriers related to disability, socioeconomic status, language, or prior experience. Outdoor education should be designed to expand participation, not to exclude students who may face practical or personal limitations. (Ardoin et al., 2018)

A sixth implication concerns the development of sustainability-oriented learning. Outdoor education can be used to help students understand local manifestations of global sustainability challenges. UNESCO (2017) emphasizes that Education for Sustainable Development should empower learners to make informed decisions and take responsible action. Therefore, teachers can design outdoor activities around real problems such as biodiversity loss, pollution, climate adaptation, sustainable mobility, waste reduction, water use, food systems, or community well-being. Such activities can help students connect scientific knowledge, ethical reflection, cooperation, and practical action.

Finally, outdoor education requires institutional support. Teachers need time, training, resources, administrative flexibility, and clear safety procedures in order to implement outdoor learning effectively. Without such support, outdoor education may remain occasional and dependent on individual teacher initiative. Schools and educational institutions should therefore encourage outdoor learning through curriculum planning, partnerships with local communities, teacher professional

development, and recognition of outdoor education as a legitimate pedagogical practice. (Dughi, 2020)

Overall, the pedagogical implications of outdoor education show that its value depends on intentional design. When outdoor education is planned, curriculum-connected, inclusive, reflective, and competence-oriented, it can support experiential learning, student engagement, and sustainable development competencies. Its successful implementation requires both teacher agency and institutional commitment.

Challenges and Limitations

Although outdoor education has significant pedagogical potential, its implementation in formal educational contexts is accompanied by several challenges and limitations. These challenges do not reduce the educational value of outdoor learning, but they show that successful implementation requires careful planning, institutional support, teacher preparation, and appropriate risk management.

One of the main challenges concerns safety and risk management. Outdoor learning takes place in environments that may be less predictable than the classroom, and this can create concerns related to supervision, accidents, weather conditions, transportation, terrain, or students' health needs. However, risk should not be understood only as a reason to avoid outdoor education. Beames, Higgins, and Nicol (2012) argue that learning outside the classroom requires appropriate preparation and responsible planning, including attention to place, activity design, group management, and safety procedures. When risks are assessed and managed carefully, outdoor education can remain both educationally valuable and responsible.

A second limitation is related to teacher preparation. Many teachers may recognize the value of outdoor education but feel insufficiently prepared to organize outdoor learning activities. Effective outdoor education requires pedagogical, organizational, and reflective competencies. Teachers must be able to connect outdoor experiences with curricular objectives, facilitate inquiry, manage groups outside the classroom, ensure student safety, and guide post-activity reflection. Dillon et al. (2006) note that the benefits of outdoor learning depend significantly on the quality of planning, teaching, and follow-up. Therefore, teacher education and professional development are essential for supporting effective outdoor practice.

Curriculum pressure is another important challenge. In many educational systems, teachers face dense curricula, standardized assessments, and limited instructional time. These pressures may lead to the perception that outdoor education is an additional activity rather than an integral part of learning. However, outdoor education can be

aligned with curriculum goals when it is planned as a method for teaching required content rather than as an extracurricular supplement. Rickinson et al. (2004) emphasize that outdoor learning is most effective when it is clearly connected to educational aims and integrated into broader learning sequences.

Assessment also represents a limitation. Outdoor education often develops complex outcomes such as collaboration, inquiry skills, environmental awareness, reflection, motivation, and sustainability competencies. These outcomes can be difficult to measure through traditional written tests. As Education for Sustainable Development involves cognitive, socio-emotional, and behavioural learning dimensions, assessment methods need to be broad enough to capture knowledge, skills, values, and action-oriented learning (UNESCO, 2017). This requires teachers to use alternative assessment strategies such as reflective journals, portfolios, observation grids, group projects, presentations, and self-assessment.

Another challenge concerns accessibility and inclusion. Outdoor education may unintentionally exclude some students if activities are not designed with diverse needs in mind. Students with disabilities, health concerns, limited financial resources, anxiety about unfamiliar environments, or restricted access to suitable equipment may face barriers to participation. For this reason, outdoor education must be planned inclusively. Accessibility, transportation, physical effort, cost, cultural sensitivity, and emotional safety should be considered before implementation. Inclusive outdoor education requires flexible participation modes and adaptations that allow all students to contribute meaningfully. (Dughi & Bold, 2025)

Environmental and logistical factors also influence implementation. Weather conditions, lack of appropriate outdoor spaces, limited school resources, transportation difficulties, administrative procedures, and insufficient time can all restrict outdoor learning opportunities. These constraints are especially relevant in schools that lack access to green areas or community partnerships. However, outdoor education does not always require distant natural settings. School yards, local parks, streets, cultural sites, community spaces, and nearby environments can also become valuable learning contexts when used pedagogically.

Finally, there is a risk of superficial implementation. Outdoor education can lose its pedagogical value if it is reduced to recreation, entertainment, or unstructured time outside. Dewey (1938) emphasized that experience becomes educational only when it is organized, meaningful, and connected to reflection. Therefore, outdoor education requires more than physical relocation from the classroom to an outdoor space. It must include clear objectives, purposeful activity,

student inquiry, guided reflection, and links to broader learning outcomes.

Overall, the challenges of outdoor education include safety concerns, teacher preparation, curriculum constraints, assessment difficulties, accessibility issues, logistical barriers, and the risk of superficial practice. Addressing these challenges requires systematic planning, institutional support, and pedagogical clarity. When these conditions are met, outdoor education can function as a rigorous and innovative pedagogical practice rather than an occasional or marginal activity.

Conclusions

Outdoor education can be understood as an innovative pedagogical practice because it reconfigures the relationship between learner, teacher, curriculum, and environment. By moving learning beyond the conventional classroom, it creates opportunities for students to engage directly with natural, social, and community contexts and to connect theoretical knowledge with lived experience.

The analysis developed in this article shows that outdoor education supports experiential learning when direct experience is combined with observation, inquiry, reflection, conceptualisation, and application. Its pedagogical value therefore depends not only on the outdoor setting itself, but also on the intentional design of learning activities before, during, and after the outdoor experience. In this sense, outdoor education should be approached as a structured and curriculum-connected practice rather than as a recreational or occasional activity. (Dughi et al, 2025)

Outdoor education also contributes to student engagement by encouraging active participation, curiosity, collaboration, and problem-solving. It can support behavioural engagement through direct involvement in learning tasks, emotional engagement through motivation and connection to place, and cognitive engagement through inquiry and reflective thinking. These dimensions make outdoor education particularly relevant for learning processes that aim to increase students' autonomy, agency, and meaningful participation.

At the same time, outdoor education offers a valuable context for Education for Sustainable Development. By engaging learners with real environmental and community issues, it can support the development of sustainability competencies such as systems thinking, anticipatory thinking, ethical reflection, strategic action, and interpersonal cooperation. These competencies are essential for preparing students to understand complex sustainability challenges and to participate responsibly in social and ecological transformation.

However, the successful implementation of outdoor education requires careful attention to teacher preparation, safety, accessibility,

assessment, curriculum integration, and institutional support. Without these conditions, outdoor learning may remain fragmented or superficial. When these challenges are addressed, outdoor education can become a rigorous and meaningful pedagogical strategy that contributes to more holistic, participatory, and sustainability-oriented education.

In conclusion, integrating outdoor education into formal educational practice can strengthen the connection between knowledge, experience, and responsible action. It offers schools and educators a practical way to support active learning, student engagement, and competence development in relation to contemporary environmental and social challenges.

References

- Albulescu, I., & Catalano, H. (2019). *Sinteze de pedagogia învățământului preșcolar: Ghid pentru pregătirea examenelor de titularizare, definitivat și gradul didactic II*. Didactica Publishing House.
- Beames, S., Higgins, P., & Nicol, R. (2012). *Learning outside the classroom: Theory and guidelines for practice*. Routledge. <https://doi.org/10.4324/9780203816011>
- Bocoș, M.-D. (2019). *Teoria și metodologia instruirii, teoria și metodologia evaluării: Repere și instrumente didactice pentru formarea profesorilor*. Paralela 45.
- Dewey, J. (1938). *Experience and education*. Macmillan.
- Dillon, J., Rickinson, M., Teamey, K., Morris, M., Choi, M. Y., Sanders, D., & Benefield, P. (2006). The value of outdoor learning: Evidence from research in the UK and elsewhere. *School Science Review*, 87(320), 107-111.
- Dughi, D., Paul, B. P., & Grindeanu, B. (2025). Innovative approaches to stimulating interest in reading. *Journal Plus Education*, 37(1), 531-543.
- Dughi, D., & Bold, I. (2022). Language teaching and emotional intelligence developing at preschool age, through fairy tales and stories. *Journal Plus Education*, 31(2), 83-96.
- Dughi, D. (2020). Mentoring in lifelong learning for teachers-example of good practice. *Educația Plus*, 26(1), 247-253.
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59-109. <https://doi.org/10.3102/00346543074001059>
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.

- Pânișoară, I.-O. (2015). Profesorul de succes: 59 de principii de pedagogie practică (Ed. a 2-a). Polirom.
- Rickinson, M., Dillon, J., Teamey, K., Morris, M., Choi, M. Y., Sanders, D., & Benefield, P. (2004). A review of research on outdoor learning. National Foundation for Educational Research and King's College London.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Tilbury, D. (2011). Education for sustainable development: An expert review of processes and learning. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000191442>
- UNESCO. (2017). Education for Sustainable Development Goals: Learning objectives. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000247444>
- Wiek, A., Withycombe, L., & Redman, C. L. (2011). Key competencies in sustainability: A reference framework for academic program development. *Sustainability Science*, 6(2), 203-218. <https://doi.org/10.1007/s11625-011-0132-6>
- Ardoin, N. M., Bowers, A. W., Roth, N. W., & Holthuis, N. (2018). Environmental education and K-12 student outcomes: A review and analysis of research. *The Journal of Environmental Education*, 49(1), 1-17. <https://doi.org/10.1080/00958964.2017.1366155>
- Barth, M., Godemann, J., Rieckmann, M., & Stoltenberg, U. (2007). Developing key competencies for sustainable development in higher education. *International Journal of Sustainability in Higher Education*, 8(4), 416-430. <https://doi.org/10.1108/14676370710823582>
- Chawla, L. (2015). Benefits of nature contact for children. *Journal of Planning Literature*, 30(4), 433-452. <https://doi.org/10.1177/0885412215595441>
- Gruenewald, D. A. (2003). Foundations of place: A multidisciplinary framework for place-conscious education. *American Educational Research Journal*, 40(3), 619-654. <https://doi.org/10.3102/00028312040003619>
- Hattie, J., Marsh, H. W., Neill, J. T., & Richards, G. E. (1997). Adventure education and Outward Bound: Out-of-class experiences that make a lasting difference. *Review of Educational Research*, 67(1), 43-87. <https://doi.org/10.3102/00346543067001043>

- Priest, S. (1986). Redefining outdoor education: A matter of many relationships. *The Journal of Environmental Education*, 17(3), 13-15. <https://doi.org/10.1080/00958964.1986.9941413>
- Roberts, J. W. (2012). *Beyond learning by doing: Theoretical currents in experiential education*. Routledge. <https://doi.org/10.4324/9780203848081>