

FROM HAEMODIVERSITY TO ECOSYSTEMS: PROMOTING SOCIO-EMOTIONAL EDUCATION THROUGH OUTDOOR EDUCATION

DALL'EMODIVERSITÀ AGLI ECOSISTEMI: PROMUOVERE L'EDUCAZIONE SOCIO-EMOTIVA ATTRAVERSO L'OUTDOOR EDUCATION



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ABSTRACT

This paper examines the interplay between emotional understanding and emodiversity through Outdoor Education (OE), emphasizing how natural environments foster a wide range of emotional experiences. These experiences, in turn, enrich the educational process, supporting the personal and social growth of students. The research highlights the potential of OE in promoting emotional regulation, resilience, and socio-emotional skills, offering unique opportunities to cultivate a diverse emotional ecosystem. Integrating OE with Socio-Emotional Education (SEE) can significantly enhance students' emotional intelligence and overall well-being, providing a holistic educational framework where emotions, learning, and nature are interconnected. The contribution is based on a conceptual review of existing literature, analyzing the evolution of the concepts of emodiversity, OE, and SEE, and suggesting how they can be integrated into educational processes to promote students' emotional development. Through OE, students are exposed to situations that require active emotional management and collaboration with peers, contributing to the creation of an inclusive and resilient learning environment.

L'articolo esamina l'interazione tra la comprensione delle emozioni e l'emodiversità attraverso l'Outdoor Education (OE), sottolineando come gli ambienti naturali favoriscano una vasta gamma di esperienze emotive. Queste esperienze, a loro volta, arricchiscono il processo educativo, supportando la crescita personale e sociale degli studenti. La ricerca evidenzia il potenziale dell'OE nel promuovere la regolazione emotiva, la resilienza e le competenze socio-emotive, offrendo opportunità uniche per coltivare un ecosistema emotivo diversificato. L'integrazione dell'OE con l'Educazione Socio-Emotiva (SEE) può migliorare significativamente l'intelligenza emotiva e il benessere generale degli studenti, fornendo un quadro educativo olistico in cui emozioni, apprendimento e natura si interconnettono. Il contributo si basa su una revisione concettuale della letteratura esistente, analizzando l'evoluzione dei concetti di emodiversità, OE e SEE, e suggerendo come questi possano essere integrati nei processi educativi per favorire lo sviluppo emotivo degli studenti. Attraverso l'OE, gli studenti sono esposti a situazioni che richiedono una gestione attiva delle emozioni e la collaborazione con i pari, contribuendo alla costruzione di un ambiente di apprendimento inclusivo e resiliente.

KEYWORDS

Emodiversity, Outdoor Education, Emotional Intelligence, Socio-emotional Skills, Emotional Regulation
Emodiversità, Educazione all'aria aperta, Intelligenza emotiva, Competenze socio-emotive, Regolazione emotiva

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Introduction

In recent years, Outdoor Education (OE) has aroused growing interest from scientific research, both nationally (Schenetti, 2021; Schenetti, Salvaterra, & Rossini, 2015; Farné & Agostini, 2014; Frabboni & Zucchini, 1985; Giunti et al., 2023) and international. This renewed interest has emerged especially following the reduction in the time children spend outdoors (Louv, 2006) and the recent pandemic emergency, which has highlighted the importance of outdoor education. The literature has highlighted how EO can become an effective tool to promote the personal and social development of individuals and their well-being (Szczepanski, 2008; Lovell, 2021), exploiting the external environment to foster self-discovery, critical thinking and empathy. In particular, many researches have shown how contact with nature has a positive impact on children's emotional well-being, reducing stress and promoting emotional balance (Chawla, 2015).

Outdoor learning stimulates children to interact and collaborate actively, enhancing their communication, problem solving and conflict management skills. As highlighted by Rickinson et al. (2004), OE strengthens self-efficacy, self-confidence and the ability to face and overcome challenges, which are fundamental elements for emotional and social development. In addition, this experiential approach contributes to improving children's ability to self-regulate their emotions, promoting both their overall well-being and the quality of social relationships. However, it not only refines social and relational skills, but also plays a crucial role in the development of emotional regulation. In educational contexts, this skill helps to promote more positive social interactions, reducing aggressive behavior and improving the quality of relationships with teachers and peers. Thus, emotional regulation also strengthens resilience, i.e. the ability to adapt to difficulties and overcome challenges, both at school and in personal life (Garcia-Blanc et al., 2023).

A key element in this process is the role of adults—parents and teachers—who act as role models, guiding children in recognizing and managing emotions and offering them strategies that they internalize and then apply autonomously over time (Thompson & Mayer, 2007). Within these interpretative frameworks, emotional regulation represents, therefore, a fundamental competence that can be developed through emotional education in various contexts, including outdoor ones. The use of outdoor environments in educational contexts, in fact, not only stimulates critical thinking and empathy, but offers new learning spaces that promote relaxation and emotional recovery, contributing to a better emotional balance. Within this vision, OE can become an effective tool to support students in managing emotions, even in stressful situations, improving their ability to deal

with and regulate them, promoting overall well-being and promoting positive social relationships.

The learning environment plays a decisive role in the processes of growth and acquisition of skills. The school context must be a safe and welcoming place, where children and young people can freely express their emotions, without the fear of being judged. A positive school environment, supported by teachers trained in Social-Emotional Education (ESE), in fact, will allow them to grow with greater awareness of themselves and others. The link between OE and ESE is deep and full of potential, as the natural environment, in particular, can offer unique learning contexts in relation to the promotion of an individual's emotional development and personal growth. Nature, in particular, creates unique situations that foster emotional and personal exploration. For example, the variety of external stimuli and the unpredictability of the natural environment present individuals with challenges that require emotional flexibility, critical thinking and resilience and the possibility of experiencing different emotions spontaneously, while developing the ability to recognize, manage and use them constructively and fostering collaboration and communication between peers, core competencies in ESE. At the same time, immersion in nature can help reduce stress by nurturing emotional well-being and thus facilitating deeper and more integrated learning (Tyng et al., 2017). Fertile ground for emotional development, EO can therefore become a powerful ally of teaching in promoting a balanced and authentic emotional growth of students in educational contexts when used by teachers in a relevant and targeted way.

It is also widely recognized that OE stimulates emotional intelligence, i.e. the ability to recognize, understand and manage one's own emotions and those of others. This is because interacting with nature exposes students to contexts in which they have to adapt, solve problems, collaborate, and face challenges (Kuo et al., 2019), activities that require high emotional awareness and good self-regulation skills. In this way, the natural environment becomes not only a space for cognitive learning, but also an ideal context to promote emotional and relational well-being, offering experiences that strengthen both individual and social skills.

This is important as emotional education is also a fundamental component for the development of social and relational skills, as it aims to promote the identification and conscious expression of emotions, paying particular attention to the perspectives of others. In preschool, it is crucial for the development of the ability to establish meaningful and lasting relationships with others and with the surrounding environment (Lozano Lopez, 2018). However, in the field of

education, it has so far received very limited consideration, especially with regard to the way in which teachers are called upon to understand the emotional aspects of teaching and learning and how students develop an "emotional understanding" of each other or of what they learn. Emotional understanding is an intersubjective process, in which one person enters into the experience of another, directly experiencing emotions similar to those experienced by the other individual (Denzin, 1984). Paying attention to teachers' emotional understanding of student learning means supporting the concept of "emodiversity", which refers to a person's ability to experience and recognize a wide range of emotions, both positive and negative, at various levels of intensity and in different situations (Urban-Wojcik et al., 2022; 2021).

This paper aims to explore how emotional understanding and the concept of emodiversity can be enhanced through outdoor learning experiences, in which the stimuli offered by nature promote the development of a wide range of emotions and sensations, thus enriching the educational process and promoting a more complete personal and social growth of students. In this interpretative key, the contribution, in the first part, focuses on the clarification of a series of key concepts (such as, for example, emotional culture, emotional ecosystem, emotional regulation, emotional competence, etc.), which serve to frame the issue of Socio-Emotional Education (SEE) in educational contexts, and, in the second part, on the role of OE (outdoor education) and experiential learning in natural and open contexts and on the effects that these they produce on the socio-emotional education of students, pushing them or not to experience situations that stimulate complex and differentiated emotions.

1. Outdoor Learning and Emodiversity: Cultivating Emotions Through Natural Exploration

Outdoor learning and emodiversity are closely connected, as EO offers a unique context to develop a greater variety of emotional and cognitive experiences, leveraging learning in outdoor environments, which include natural spaces, such as parks, woods or gardens, allowing, in school contexts, all students to explore and live different sensory and emotional experiences compared to teaching carried out exclusively in the classroom. Nature, in the variety of its forms and elements, offers stimuli that can arouse emotions such as amazement, joy, fear and curiosity, expanding the emotional range (emotionality) of students. This variety of emotional experiences, in combination with learning, enriches personal and social development, while nurturing the relationship with the cognitive and motor dimensions.

In such contexts, the OE approach can amplify emodiversity as long as it is appropriately employed, since, through it, students face unexpected challenges (such as changing weather conditions, physical difficulties, etc.) and interact with an environment that is less predictable than that of the classroom. OE offers unique learning opportunities in immersive environments (Asfeldt et al., 2022; Seyedehzahra Mirraimi et al., 2011; Mygind et al., 2019), allowing students to develop their social and emotional skills through authentic and engaging experiences. This approach fosters deep engagement with what students learn (Ofsted, 2008; Blackwell, 2015; Easler, 2015), with positive effects on the internalization of experience (Craig, 2007) and on the acquisition of real-life knowledge (Gress & Hall, 2017).

Bransford et al. (2005) state, in fact, that, in order for authentic learning to occur, it is necessary that the environments used are rich in stimuli and include numerous opportunities for social connection, direct contact with the environment and its exploration. Such experiences can enrich students' ability to recognize and manage their emotions, leading them to create their own solid emotional culture (Natalini, 2022), which can give rise to emotional ecosystems, which favorably affect their formation and the development of emotional skills and vice versa.

The idea is, therefore, to promote learning and emodiversity through intense sensory, cognitive and social outdoor educational experiences. Interaction with nature, challenges and collaboration offer learners unique opportunities to develop a wider range of emotional responses, improve their awareness and emotional regulation and thus promote their mental and physical well-being. Outdoor education becomes, in this perspective, a powerful tool for the development of students' social-emotional skills capable of shaping the emotional ecosystem (Quoidbach et al. 2014) and the educational ecosystem as a whole. Therefore, students and teachers with good emotional regulation skills will create more balanced and less conflictual environments, thus fostering a more serene, positive and inclusive emotional ecosystem.

The school can also support emotional well-being through outdoor activities, group games, and other experiences that strengthen resilience and emotional self-efficacy, as shown by research on OE. In addition, it is crucial to train teachers to become positive models of emotional regulation, helping students internalize effective strategies for dealing with different emotional challenges. In this way, the school environment can truly transform into a healthy emotional ecosystem, where students not only achieve mastery goals and learn new content, but also develop the social-emotional skills necessary to face life with awareness, empathy and resilience.

2. Outdoor Education (OE) and Socio-Emotional Learning: A Path to Holistic Growth

Numerous studies show that exposure to nature significantly reduces stress and anxiety levels, promoting a beneficial effect on emotional regulation. This helps students better manage complex emotions such as frustration, anger, or sadness. One of the key benefits offered by the natural environment is precisely the improvement of mental well-being in children, thanks to the reduction of stress and the increase in the absorption of vitamin D. The latter, essential for the regulation of emotions, plays a crucial role in the prevention of depressive and anxious states, as it contributes to the production of serotonin, the hormone of happiness (Park Academy Childcare, 2017.). In this way, contact with nature not only promotes physical health, but also emotional and mental balance, facilitating more serene and conscious learning. It is configured as a real natural support for emotional well-being, which creates an ideal environment for learning and a balanced connection between body, mind and emotions.

Physical activities carried out outdoors – such as walks, team games or explorations – not only improve physical well-being, but also facilitate greater awareness of one's emotional reactions and strengthen emotional resilience. Therefore, enabling students at school to participate in these activities, especially in natural settings, also helps to enhance self-esteem and self-confidence, improving emotional self-efficacy, i.e. the ability to effectively manage one's emotions even in the face of difficulties. Therefore, overcoming challenges such as climbing, orienteering, or participating in a camp gives students a strong sense of personal accomplishment, helping to build confidence in their abilities.

These experiences allow you to deal with complex situations that require adaptation, resilience and self-control, fundamental skills for emotional development. Emdiversity, in this context, plays a crucial role: the ability to experience a varied range of emotions prevents negative emotional states – such as acute stress, anger or sadness – from taking over and dominating the emotional ecosystem. For example, prolonged sadness might evolve into depression, but the combination of sadness and anger – while unpleasant – could help avoid a complete withdrawal from your surroundings. A similar logic applies to positive emotions: humans tend to adapt quickly to repeated positive emotional experiences (Frederick & Loewenstein, 1999), but a variety of positive experiences may be more resistant to this adaptation process and maintain their beneficial impact for longer. Through alternating different emotional experiences, individuals learn to balance their reactions and respond more flexibly and adaptively to challenges, thus promoting more stable emotional well-being and

greater resilience in the long term.

From a social point of view, outdoor group activities nurture collaboration, communication and collective problem solving, developing empathy, active listening and the ability to manage other people's emotions. These shared experiences in nature tend to foster greater group cohesion and strengthen mutual trust, thus improving students' social and relational skills, as well as leadership skills (Rubat Du M rac, 2015; Frame, 2017).

The natural environment offers a less structured space than the traditional classroom, in which students can freely explore, imagine and create, encouraging emotional expression, as the freedom of movement and action allows students to better explore their emotions as well. Nature therefore asserts itself as a safe place to experience emotions and reflect on them. Focusing on the OE-EE combination at school means fostering an emotional connection of the student with nature, developing a sense of respect and care for the environment (Kuo et al., 2019), helping to strengthen the sense of belonging and ecological sensitivity and positively influencing the emotional well-being of students.

It is well known that the natural environment often presents unexpected events and situations that require flexibility and adaptation. Emotional flexibility (Bonanno & Burton, 2013; Fujimura & Okanoya, 2012) refers to the ability to experience and express a range of emotions appropriately and to adapt emotional responses as needed in different situations. This involves effectively managing and adapting emotions to new experiences, changes or challenges. This is a central aspect of emotional intelligence and resilience, which allows you to navigate uncertainty and the positive and negative moments of life more easily. This exposure to uncertainty stimulates, in turn, the ability to tolerate complex emotions such as uncertainty, fear or anxiety. Managing these emotions in a real, non-artificial context, such as nature, strengthens resilience (Mygind et al., 2019; Blackwell, 2015).

OE provides an ideal environment for cultivating emotional education. Interaction with nature and outdoor activities stimulate emotional intelligence, psychophysical well-being, emotion regulation and social skills. These factors make outdoor learning an effective and necessary element for students' emotional development, fostering holistic growth that goes beyond school skills.

Emotional education through outdoor activities not only facilitates more effective management of emotions in children, but also contributes to the development of soft skills, which are increasingly required in the contemporary socio-economic context. These skills include self-awareness, or the ability to recognize and understand one's emotional states, and self-discipline, which is necessary to

regulate one's behavior appropriately. In addition, outdoor experiences promote the ability to work in a team, to resolve conflicts constructively and to exercise leadership, understood as the ability to lead and motivate others. These skills are critical not only for individual success, but also for effective functioning in collaborative and dynamic environments, making them crucial for meeting the challenges of the modern world. Having emotional intelligence (Brackett & Katulak, 2007; Goleman, 1996). well-developed allows children to relate to others effectively, helping to create a climate of collaboration and mutual respect, both in the school environment and in the future work environment, through the *leadership capacity of students* (Rubat Du Merac, 2015), understood as the ability to guide and inspire others, which in turn involves other skills, and effective *communication and cohesion among students* (Xiaoming et al., 2023) due to the possibility of greater peer interaction (Hartle, 1994) and *self-confidence, responsibility, self-esteem, autonomy and self-efficacy* (Seyedehzahra Mirrahi et al., 2011; Rickinson et al., 2004).

In the Recommendation of the European Council on Key Competences for Lifelong Learning (2018), which revised and updated the previous 2006 version on key competences, eight key competences are recognised, many of which include aspects related to emotional and socio-relational competences and, in particular, personal, social competence and the ability to learn to learn, which concerns the ability to manage oneself, express your feelings and build positive social relationships.

Here the importance of cognitive, social and emotional skills is emphasized, including the ability to cooperate, to establish positive interpersonal relationships, to manage emotions, to develop empathy and to resolve conflicts. These skills are crucial for balanced growth and emotional well-being. Emotional education, therefore, is not only crucial for personal development, but is also essential for professional and social success, as it prepares individuals to face complex contexts with greater confidence and resilience. It prepares individuals to manage complex situations with greater confidence, resilience and adaptability, providing the tools necessary to effectively navigate dynamic and interconnected contexts.

In an increasingly complex and interconnected world, the development of emotional and social skills is an educational priority. The OECD (2019) identified social-emotional skills as fundamental for social progress, highlighting how they influence important outcomes in the lives of individuals, from the ability to work with others to the management of emotions. The OECD (2019) identified that individuals need meta-cognitive and social-emotional skills to be competent workers and engaged citizens. These skills, defined as "life skills" by the WHO, are

essential to face daily challenges and to govern relations with the rest of the world. Emotional education, therefore, is not simply a complement to education, but a fundamental component for the development of balanced, empathetic individuals who are able to contribute positively to society. Investing in emotional education programs in schools means training future generations so that they are prepared to successfully face the emotional, relational and professional challenges they will encounter throughout their lives. This type of education provides them with indispensable tools to navigate a complex and interconnected world, while promoting personal and social well-being.

Benefits of Outdoor Education on Emotional and Social Development	
<i>Development of emotional intelligence</i>	Outdoor education stimulates emotional intelligence, i.e. the ability to recognize, understand and manage one's own emotions and those of others. Interacting with nature creates situations where students must adapt, solve problems, collaborate, and face challenges, all of which require awareness and emotional control.
<i>Stress reduction and emotional regulation</i>	Numerous studies show that exposure to nature reduces stress and anxiety levels. The natural environment has a calming effect, which facilitates emotional regulation, allowing students to better manage emotions such as frustration, anger or sadness. This natural support for emotional well-being creates a space conducive to learning.
<i>Connection between body, mind and emotions</i>	Outdoor education fosters a holistic approach that connects body, mind, and emotions. Physical activities carried out outdoors – such as walking, team games or explorations – not only stimulate physical well-being, but help to better recognize and understand one's emotional reactions and strengthen emotional resilience.
<i>Promotion of self-esteem and confidence</i>	Participating in outdoor activities, especially in natural environments, can boost self-esteem and self-confidence. Overcoming challenges such as climbing, orienteering or camping stimulates a sense of personal fulfillment that improves emotional self-efficacy, i.e. the belief that you can effectively manage your emotions even in the face of difficulties.
<i>Development of relationships and social skills</i>	Outdoor education often involves group activities, where students must collaborate, communicate, and solve problems together. These contexts promote empathy, active listening and the ability to manage the emotions of others, thus strengthening social and relational skills. Shared experiences in nature tend to foster greater group cohesion and mutual trust.
<i>Creativity and freedom of expression</i>	The natural environment provides a less structured space than the traditional classroom, where students can freely explore, imagine, and create. This promotes emotional expression, as freedom of movement and action allows students to better explore their emotions as well. Nature becomes a safe place to experience emotions and reflect on them.
<i>Environmental Care and Awareness</i>	Outdoor education also fosters an emotional connection with nature, developing a sense of respect and care for the environment. This emotional connection to the natural world can contribute to a sense of belonging and ecological sensitivity, positively influencing students' emotional well-being.
<i>Dealing with uncertainty and complexity</i>	The natural environment often presents unforeseen events and situations that require flexibility and adaptation. This exposure to uncertainty stimulates the ability to tolerate complex emotions such as uncertainty, fear, or anxiety. Managing these emotions in a real, non-artificial context, such as nature, strengthens emotional resilience.

Table 1. *Benefits of Outdoor Education on Emotional and Social Development*

3. Research

On the basis of the above, a *Conceptual Review* has been employed, which is a type of literature review that focuses on the exploration and evolution of concepts and theories in a given field of research. Unlike systematic reviews that aim to synthesize empirical results, the *Conceptual Review* aims to examine how certain concepts have been defined, applied, and modified over time within the academic literature, highlighting their intersections and their integration in the educational field.

This type of review is particularly useful for clarifying terms, theoreticians or approaches that are used differently in various studies and for developing a deeper understanding of a concept or phenomenon. In this case, the focus is on the relationship between emodiversity, OE and EEA, three concepts that, although distinct, appear closely interconnected with reference to the socio-emotional development of students. The conceptual review aims to analyze how these concepts have been defined, applied and modified over time within the literature, highlighting their intersections and the evolution of theoretical thinking regarding their integration into the educational field.

Objectives of the Conceptual Review:

1. *explore the evolution of concepts:* analyze how the concepts of emodiversity, OE, and EEA have evolved over time, how they have been defined and applied in different studies, and how their practical applications have transformed. In particular, how hemodiversity (the variety and complexity of emotions) is integrated into OE contexts and how the latter favors the development of social-emotional skills;
2. *identify the different interpretations:* recognize the interpretative variants of the concepts in question, highlighting the differences in the definitions and theories proposed by different authors, how, for example, the different studies interpret the EEA and its impact on the emotional development of students and how the OE contributes to developing emotional awareness and self-regulation;
3. *Synthesize theoretical thinking:* provide a synthesis of the theories and models linking emodiversity, OE, and EEA, seeking to clarify how these concepts interact, influence each other, and how they can be integrated into a broader educational framework.

Procedure

1. *Definition of the research objective:* the first step was to clarify the concepts to be explored: emodiversity, OE and EEA. The aim was to understand how each concept has been treated in the literature, how it has evolved over time and how it has interconnected with the other two terms with respect to the emotional and social development of students. In particular, we explored how hemodiversity (which concerns the variability of emotions) can be developed and managed through OE practices and how these influence the EEA.
2. *Source selection:* The source selection focused on articles, volumes, and research reports that covered the concepts of emodiversity, OE, and EEA. The

research focused on studies that explored these issues also from a theoretical point of view, trying to understand how they were defined and developed, as well as on empirical research that focused on specific data or results. Particular attention was paid to works that discussed the relationship between the three terms and their integration into education processes.

3. *Analysis and synthesis of definitions*: in this phase the various definitions and theories related to the concepts of emodiversity, OE and EEA have been examined. Studies were selected and analyzed to identify the different meanings and meanings attributed to each concept, their practical applications and the interconnections between the concepts themselves. Attempts were made to identify common trends, as well as divergences in definitions, especially in relation to how emodiversity was applied in outdoor educational settings.
 4. *Identification of gaps and contradictions*: the review also focused on identifying any gaps or contradictions present in the literature. For example, identifying any significant differences in how emodiversity is developed or applied in OE or in the ways in which social-emotional education is integrated in these contexts. The research also aimed to highlight the lack of studies exploring how these concepts are interconnected or applied in educational settings.
 5. *Synthesis and proposal of a conceptual framework*: at the end of the analysis process, the Conceptual Review offered a synthesis of existing concepts, theories and practices, proposing an updated conceptual framework that shows how emodiversity, Outdoor education and social-emotional education interconnect. The present study has tried to provide a synthetic interpretative framework and to highlight the potential of integrating these concepts into educational processes, suggesting how to develop socio-emotional skills in students by exploiting the natural environment as an educational tool.
- In questo contesto i vantaggi di una Conceptual Review risiedono, in primo luogo, nella possibilità di chiarire i concetti e di fornire definizioni chiare e precise di concetti complessi come emodiversità, OE e educazione socio-emotiva, facilitando una comprensione condivisa di come questi concetti possano essere applicati nell'educazione. In secondo luogo, vi è la possibilità di avviare una riflessione teorica, promuovendo una riflessione critica e teorica sull'evoluzione dei concetti e delle pratiche educative, con particolare attenzione alle connessioni tra emozioni, apprendimento all'aperto e competenze sociali e di come ognuno di questi elementi gioca un ruolo cruciale nel promuovere lo sviluppo emotivo e sociale degli studenti, in particolare in contesti educativi dinamici e coinvolgenti come quelli dell'educazione all'aperto. In terzo luogo, la Conceptual Review dà la possibilità di uno sviluppo

teorico nel settore, aiutando a sviluppare nuovi modelli teorici e pratiche che combinano l'emodiversità con l'OE e la SEE, creando un quadro educativo olistico per il benessere e lo sviluppo emotivo degli studenti.

As far as limitations are concerned, it should be noted that the Conceptual Review presents a certain interpretative subjectivity. The selection of sources and the interpretation of concepts can in fact be affected by the theoretical inclinations of the researcher, which can reduce the objectivity of the review. In addition, the review focuses mainly on theoretical and definitional aspects, being less useful in practical contexts that require concrete empirical evidence. This limited focus on theory means that revision may not always provide sufficient practical support for real-world applications.

Overview of key concepts emerging in the Conceptual Review				
Dimensions	Emerging concepts	Explanation	Authors	Spiegazione e autori (legame con l'OE)
Hemodiversity and emotional development	emotional awareness	the ability to recognize and distinguish the different emotions experienced, fundamental for both hemodiversity and the socio-emotional development of students	Horta Reis da Silva, 2022; King & Frondozo, 2021; Wilson-Mendenhall & Dunne, 2021; Tugade, Fredrickson, & Barrett, 2004; Barrett, 2004; Barrett, 1998; Barrett et al., 2000; Barrett, 1998; 2004; Barrett et al., 2001; Feldman, 1995; Lane & Schwartz, 1987	OE has a recognized significant impact on the development of social-emotional skills, the ability to recognize and regulate emotions, for the variety of stimuli that require adaptation, management of emotions such as frustration or joy, and collaboration with peers, for the internalization of learning, the emotional and social growth of students (e.g., Mann, 2022; Thompson & Thompson, 2007)
	emotional granularity	the ability to recognize the nuances between similar emotions, a key skill that helps develop a more varied and rich emotional life	King & Frondozo, 2021; Wilson-Mendenhall & Dunne, 2021; Ong et al., 2018; Smidt & Suvak, 2015; Schwarz, 1990; Barrett et al., 2001; Feldman, 1995; Tugade, Fredrickson, & Barrett, 2004	In OE, the connection with nature stimulates resilience, self-confidence and emotional balance, laying the foundation for lasting social-emotional development.
	emotional regulation and self-regulation	the ability to manage difficult emotions such as frustration, anger or sadness, reinforced by emodiversity	Quoidbach et al., 2014; Fedeli, 2014; King & Frondozo, 2021; Werner-Seidler et al., 2018; Pekrun, 2006; Pekrun et al., 2011; Ong et al., 2018; Smidt & Suvak, 2015; Schwarz, 1990	OE has been shown to impact the reduction of stress, anxiety, frustration, and negative emotions, while promoting psychological well-being and helping students better manage their emotions (e.g., Weeland et al., 2019; Markevych et al., 2017; Sprague & et al. 2022)
Emodiversity in educational settings	emotional learning	teaching students to recognize, understand, and manage a wide range of emotions through specific programs	Quoidbach et al., 2014; King & Frondozo, 2021; Pekrun, 2006; Pekrun et al., 2011; Collaborative for Academic, Social, and Emotional Learning, 2013; Albrecht, 2006	OE has a significant impact on the development of social-emotional skills and on the improvement of the ability to recognize, manage and regulate emotions, promoting emodiversity (e.g., Coe, 2017; Assaf, El Agha, & Raya, 2023)) and ensure adequate socio-emotional development through specific programmes (e.g., Price, 2019; Opper et al., 2014; Thorburn & Marshall,

				2014)
	differentiated approach to teaching	personalizing emotional education according to individual differences (gender, age) to develop emotional diversity more effectively	Ganotice, Datu, & King, 2016; Gruber et., 2013	OE, through experiences in natural contexts, stimulates the development of social-emotional skills, fostering a wide range of skills necessary for balanced growth. Outdoor activities, such as unstructured play, explorations or physical challenges (e.g. climbing or orientation), provide students with real contexts to test themselves and manage new, often unpredictable situations. These experiences encourage collaboration and active listening, key elements for the development of empathy and the ability to build positive relationships.
	positive climate and safe environment for emotional expression	creating inclusive and protected school contexts, where students can explore and express their emotions without fear of judgment	Grossmann et al., 2019;; Paunonen & Ashton, 2001 ; Becker et al., (2017) ; Natalini, 2024; Natalini & Orecchio, 2022	OE is a pedagogical methodology that uses outdoor spaces as learning environments, promoting the development of students' social, cognitive and emotional skills. This educational approach is particularly effective in creating inclusive and protected school contexts, where students can explore and express their emotions without fear of judgment (e.g., McCree, Cutting, & Sherwin, 2018)
<i>Emotion education and social competence</i>	empathy and interpersonal relationships	encourage the development of social skills, such as active listening and the management of other people's emotions, through collaboration and the sharing of emotional experiences	Durlak, Weissberg, & Pachan, 2010; Catalano et al., 2004; Lucangeli, 2019; Fredrickson, 2013	OE fosters intrapersonal and interpersonal relationships, risk-taking, and contact with nature (e.g., Hattie, 1997; Kane & Kane, 2011; Cooley, Burns, & Cumming, 2016)
	Collaboration and problem-solving	working in a team and facing collective challenges allows you to develop social-emotional skills and resilience and to collaborate to solve problems	Linnenbrink, 2006; bin Mohd Yasim, 2010; Cooley et al., 2016	OE promotes cooperative activities and games, teamwork and communication skills, which are essential for building positive social relationships, also increasing positive adaptation skills (Kuo, 2001) and protecting children and adolescents from emotional impacts related to stressful life events (Wells and Evans, 2003; Chawla et al., 2014), increasing the ability to solve problems (Chow, Truong et al., 2016; Kochanowski & Carr, 2014)
	emotional resilience	experiencing and managing a range of emotions helps children overcome difficulties without being overwhelmed by negative emotional states, adapt and recover from challenges and failures, and deal with difficult situations in outdoor learning settings or through shared experiences to strengthen the ability to overcome emotional obstacles	Ganotice, Datu e King, 2016; Pekrun et al., 2002; Schwarz & Clore, 2003; Garcia-Peinado, 2024	OE fosters resilience through exposure to situations in which children have to deal with the unexpected, manage stress and adapt to new contexts. It stimulates self-esteem and self-confidence, allowing students to overcome physical and cognitive challenges, such as climbing or orientation, gaining a sense of personal fulfillment. Contact with nature is also associated with

				improved adaptive skills and the ability to experience a wider range of emotions, helping to build lasting resilience. promotes autonomy and risk-taking, which are critical for developing emotion management skills in situations of uncertainty. Natural environments provide a safe space to explore these emotions autonomously, fostering greater tolerance towards uncertainty and anxiety (e.g., (e.g., Kuo et al., 2019; Booth & Neill, 2017; Berger & Lahad, 2010))
<i>Role of the school in hemodiversity</i>	teacher training	preparing teachers to be positive role models of emotional regulation, so as to guide students in the emotional learning process	Linnenbrink-Garcia et al., 2011; Pekrun et al., 2017; Gross, 2008	OE presupposes that teachers are prepared to use OE to enhance social and emotional learning outcomes (e.g., Harris, 2015; Subocz, 2022).
	varied learning experiences	preparing teachers to recognize and manage the variety of students' emotional experiences is essential to effectively guide them in the emotional learning process; Developing a sensitivity to emodiversity allows teachers to adapt their educational strategies, facilitating an inclusive environment where each student can explore and understand their emotions in a safe and constructive way.	Ouweneel, Le Blanc, & Schaufeli, 2011; Rowe & Fitness, 2018; Smidt & Suvak, 2015	Through diverse OE experiences, students are exposed to a diverse range of emotional situations, from challenges that require perseverance and resilience, to moments of wonder and discovery related to connecting with nature. (e.g., Miller, 2022)
	Integration of emotional education into the curriculum	x	Dusenbury et al., 2020; Hymel et al., 2017; lanes, 2007; 2011	OE experiences not only broaden children's emotional repertoire, but also help them develop better emotional awareness and greater capacity for self-regulation (e.g., Quay, 2016; Gray, 2018; 2019; Passy et al., 2019; Marchant et al., 2019) Ryan & Gray, 1993.

Table 2. *Outcomes of the key concepts of the Conceptual Review*

The table presents a complex and articulated picture of the importance of haemodiversity in the educational context, highlighting the various emotional aspects and skills needed to promote a school environment that favours the socio-emotional development of students. Each category proposed in the table highlights a specific area on which schools and teachers can work to integrate emotional education into daily teaching and promote conscious management of emotions.

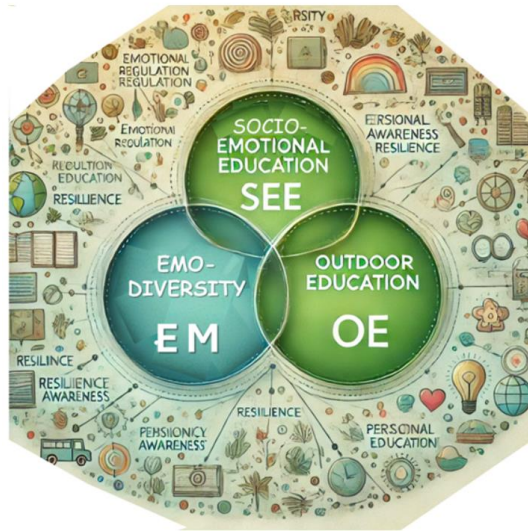


Figure 1. *Emodiversity, Socio-Emotional Education and Outdoor Education*

A. *Emodiversity and emotional development*

The first three items, which concern emotional awareness, emotional granularity and emotional self-regulation, are all fundamental skills for the socio-emotional development of students. They refer to key skills that help students recognize, understand, and manage emotions effectively. Emotional awareness is the foundation of any other emotional skill, as it allows individuals to identify their emotions and understand how they influence behavior and decisions. Emotional granularity, which involves the ability to distinguish between similar emotions, allows for greater nuance in interpreting one's own emotions and those of others, leading to a richer and more varied emotional life. Finally, emotional self-regulation is crucial for managing difficult emotions (such as frustration, anger and sadness), and is enhanced by the recognition and understanding of different emotions.

B. *Emodiversity in educational settings*

The section on emodiversity in educational settings reflects the importance of implementing strategies that foster an environment in which emotions can be recognized and managed in a positive way. Emotional learning is one of the central aspects, as it allows students to acquire practical tools to recognize, understand and regulate emotions. Specific educational programs can be implemented to develop these emotional skills. The differentiated approach to teaching, which

recognises individual differences between students (e.g., based on gender or age), is crucial to allow each student to develop their own emodiversity more effectively, as emotions can manifest in different ways depending on personal experiences. The safe environment for emotional expression is essential to create a space where students feel free to express their emotions without fear of being judged, promoting an inclusive and protected school climate.

C. Emotion education and social competence

Emotion education is closely linked to social competence, as managing one's own and others' emotions is crucial for positive social interactions. Empathy and interpersonal relationships are essential to foster understanding of others' emotions, promoting social skills such as active listening and conflict management. Finally, collaboration and problem-solving are skills that are developed through teamwork and facing emotional challenges together. These collective moments are opportunities to learn emotional resilience, which consists of knowing how to adapt and overcome obstacles, particularly in practical learning contexts such as outdoor learning.

D. Role of the school in hemodiversity

The role of the school is crucial in promoting emodiversity among students. Teacher training is a key aspect, as teachers must be prepared not only to manage their emotions, but also to guide students in the emotional learning process. Teachers need to be role models of emotional regulation, demonstrating how to recognize and manage emotions in a healthy way. The introduction of varied learning experiences and emotional education practices can enrich the school experience, making students learn about emodiversity through practical and interactive activities. Finally, the integration of emotional education into the curriculum represents an important step in connecting emotional skills with traditional disciplines, creating an educational path that not only develops cognitive skills, but also socio-emotional skills, for a balanced and harmonious growth of students.

The table highlights how emodiversity, which includes awareness and management of emotions, can be integrated into school education to improve students' emotional and social well-being. Creating safe, differentiated and inclusive learning environments is key to developing a generation of learners who are not only academically competent, but also emotionally intelligent, capable of interacting positively with others and facing life's challenges with resilience. The role of the school and teachers in this process is decisive in guiding students

towards a complete education, which promotes both the cognitive and emotional aspects.

1. *Hemodiversity: an evolving concept*

It emerges from the Conceptual Review that emodiversity is an evolving concept and that it refers to the variety and nuance of emotions that individuals can experience and recognize. It is based on the idea that emotions are not static entities, but are fluid, complex and multiple, and that emotional awareness (the ability to recognize and differentiate emotions) and emotional granularity (the ability to distinguish between similar emotions) are fundamental skills. In the Conceptual Review, hemodiversity emerges as a concept that not only recognizes the emotional complexity of individuals (Ong et al., 2018; Quidbach et al., 2014), but also promotes a model of education that helps students explore, manage and value their emotions. Schools that embrace emodiversity aim to create safe and inclusive environments where students can freely express their emotions, thus developing emotional self-awareness and emotional self-regulation skills.

2. *Outdoor Education: an ideal context for emodiversity*

Outdoor Education (OE) is an educational approach that uses the external environment as a learning context. In this context, students' emotions are often stimulated in a more intense and visceral way than in other educational environments, as interaction with the natural environment and engagement in practical activities (such as hiking, outdoor sports, group activities) elicit immediate emotional responses. OE offers a unique opportunity to explore emodiversity as it encourages students to experience different emotions such as fear, excitement, frustration, and joy in an unstructured environment.

The Conceptual Review suggests that outdoor education fosters emotional awareness and emotion regulation, as hands-on outdoor experiences often require students to reflect on their emotions, acknowledging and addressing them directly. In particular, Outdoor learning supports the development of emotional granularity, as the emotions felt in challenging situations (e.g., during sports or group activities in nature) are more nuanced and complex, requiring greater awareness to be understood.

3. *Social-Emotional Education: the connection between emotions and social skills*

Social-emotional education (SEE) focuses on developing students' emotional and social skills, such as self-awareness, self-control, empathy, interpersonal skills, and problem-solving. The Conceptual Review highlights that when these skills are developed along with emotion, students are better able to manage their emotions effectively and interact positively with others.

In this context, OE provides a dynamic environment in which students can directly apply the social-emotional skills learned in the classroom. Outdoor activities allow students to have experiences that promote collaboration, communication and conflict resolution in real time, thus contributing to the development of emotional resilience. Social-emotional education is particularly useful in OE, as it stimulates students to confront emotional challenges that require self-regulation and cooperation, strengthening their ability to adapt to unexpected situations and overcome emotional obstacles.

4. Integration of concepts: a holistic educational approach

The Conceptual Review suggests that the integration of emodiversity, OE and social-emotional education can constitute a holistic and innovative educational approach. Emotional education, supported by hands-on experiences in natural settings, helps students develop a more complete and nuanced view of their emotions and use this awareness to build stronger interpersonal relationships and better manage conflicts.

In this framework, the differentiated approach to teaching, which takes into account different individual characteristics (such as gender, age and cultural context), is crucial. OE and social-emotional education are mutually enriching, as OE not only stimulates the recognition and management of emotions, but also provides a practical and engaging context to apply social-emotional skills, while social-emotional education provides the theoretical foundation and skills needed to address emotional challenges.

In summary, a Conceptual Review, which explores the relationship between emodiversity, OE and social-emotional education, reveals how these concepts are closely interconnected. The integration of hemodiversity into education, facilitated by practical outdoor experiences, offers unique opportunities for students' social-emotional development. Social-emotional education, supported by OE, helps develop essential emotional and social skills, promoting a more inclusive and resilient learning environment. This holistic approach, which combines emotional awareness, self-regulation, and social-emotional skills, can significantly improve students' well-being and prepare them to face the emotional challenges of everyday life.

4. Summary of the relationship between OE and emodiversity, emotional skills, emotional development

The relationship between emotional skills and EO is increasingly the subject of attention in the field of education. OE, or outdoor education, is a pedagogical approach that uses the external environment, natural and otherwise, in continuity

with the internal one to promote learning through direct and practical experiences. This approach not only develops physical and cognitive skills, but proves to be extremely effective in fostering the development of emotional and social skills, including self-awareness, self-regulation (Weeland et al., 2019), empathy (Ceylan, 2018°; 2018b) and cooperation (Mygind, 2009).

OE offers children and adolescents the opportunity to immerse themselves in experiences that require not only cognitive skills, but also active management of emotions. Contact with nature and the challenges posed by the external environment stimulate emotional learning in unique ways. For example, activities such as hiking, camping, or outdoor group challenges require participants to deal with unpredictable situations, thus developing their ability to self-regulate emotions and manage stress.

The natural context, in fact, has a calming effect that facilitates the regulation of emotions, reducing anxiety and stress levels. Scientific studies show that spending time outdoors improves mood, increases alertness, and promotes relaxation (Park Academy Childcare, 2017). These effects contribute not only to psychophysical well-being, but also to the creation of a favorable environment for emotional learning, starting from some central dimensions indicated below.

First, an emotional connection with nature is a powerful predictor of children's caring behavior toward it (Otto & Pensini, 2017). One of the most significant effects of OE is the increase in children's emotional intelligence, i.e. the ability to recognize, understand and manage their own emotions and those of others. Exposure to nature, in fact, encourages children to explore their emotions in a safe and stimulating environment, allowing them to confront physical and social challenges in a healthy and constructive way.

In particular, OE helps to develop key skills such as:

- *Self-awareness*: In a natural environment, children become more aware of their emotions and their effects on behavior. Activities such as overcoming natural obstacles or teamwork help them recognize their strengths and weaknesses;
- *Self-regulation*: Nature presents situations that require patience, resilience, and stress management. Children learn to manage negative emotions such as frustration or fear, thus improving their ability to stay focused and calm in difficult situations;
- *Empathy and social skills*: OE encourages cooperation and teamwork, as many outdoor activities require mutual support and collaboration. This fosters the development of empathy and understanding of the feelings

and needs of others.



Figure 2. Summary scheme generated from the analysis of the literature on the role of OE in promoting socio-emotional development

EO is not limited to strengthening individual emotional skills, but also has a significant impact on social skills. Activities such as team building and outdoor group challenges promote collaboration, communication, and conflict resolution. Working together to achieve common goals in a natural setting requires participants to trust each other, improving group cohesion and mutual respect. In particular, OE would seem to favor several aspects related to team building, such as: the ability to listen, effective communication, conflict management and the ability to work together to achieve common goals and collaboration and cooperation (bin Mohd Yasim, 2010; Yasim et al., 2017; Nikbay Arslantaş & Bavli, 2024; McGuinness, 2018; Rafferty, 2024; Boileau, Dabaja & Harwood, 2021; Cutting, 2015; Cooley et al., 2016; Goldy and Piff, 2020; Uhls et al., 2014; Lochridge, 2021; Santos et al., 2017; Molyneux, Zeni & Oberle, 2023) through games or experiential activities (Swarbrick, Eastwood & Tutton, 2004) or through group activities (Blackwell, 2015; White, 2012; Chapman, 2020; Dyson, 1994) and challenging activities (Cutting, 2015) and the wider environment (Clipa, O., & Cîmpan, 2020). Children through OE learn to have patience, be tolerant, help and take responsibility for others, know what is allowed and what is not allowed, and peacefully resolve nonviolent conflicts (Clipa & Cîmpan, 2020; Gilligan & Downes, 2022). Children, therefore, learn to manage conflicts (Aasen, Grindheim & Waters, 2009; Wheeler, 2004), so much so that according to research, a greater number of children were involved in more conflict events in indoor environments ($n=7$) than in the external environment ($n=3$). This difference can be due to a variety of internal factors such as limited resources (e.g. magnetic light tiles), available space, natural lighting, noise level (Pic, 2020).

Studies have shown that outdoor play and activities in nature increase self-efficacy and self-confidence, creating an environment where children can experiment with leadership roles and improve their problem-solving skills (Frame, 2017). The direct experience with nature also promotes a greater awareness of the surrounding environment, teaching children respect for nature and for others.

OE also promotes self-regulation, as it allows for the management of emotions

(McGuinness, 2018; Rafferty, 2024; Boileau, Elizabeth, Dabaja & Harwood, 2021; Pires, 2023; Clarke, Morreale, Field, Hussein & Barry, 2015; Chapman, 2020) and by comparing himself with others, the child learns strategies to regulate emotions after understanding them (Ricii & Maggi, 2022). It helps children develop strong emotional, social and ecological intelligences (Burdette & Whitaker, 2005; Gedzune, 2015; Orr, 1992, 2004; Mirrahmi, 2011). However, the positive effects of OE on emotional development are not limited to childhood. The emotional skills acquired through outdoor education contribute to long-term psychological well-being, as they prepare children to face the challenges of adult life with greater resilience and self-regulation skills. In addition, strengthening social and emotional skills through OE also has a positive impact on academic performance and interpersonal relationships (Denham & Brown, 2010; Denham, 2001). The performance of outdoor activities or even outdoor games, especially in natural environments, according to numerous researches, has an extremely positive impact on our well-being (Gill 2014; Mayer et al. 2009; Wilson 1986), increasing motivation, allowing emotional regulation, resilience, protection from disease, and reparative abilities and stress reduction, which have a direct impact on health and well-being (Allan et al. 2020; Flouri et al., 2023).

Play is a fundamental element in the emotional development of children. Through play, children process complex emotions and situations, learning to manage both positive and negative feelings. Group play, in particular, offers numerous opportunities to negotiate roles, share and develop empathy. Piaget (1932; 1973) observed that play allows children to explore different points of view and experience different emotions, fostering emotional awareness. Outdoor activities such as free play allow children to explore their physical and social skills, as well as improve emotional self-regulation, which is necessary to cope with the challenges of daily life (Pellegrini et al., 2007). Risky play, such as climbing a tree or exploring new environments, can also improve resilience and self-esteem. Overcoming the challenges posed by play helps children become more confident in their abilities and develop a greater sense of personal effectiveness. This type of experience can reduce aggression and foster prosocial behaviors, such as cooperation and peaceful conflict resolution (Bundy et al., 2009). Another central aspect of OE is free outdoor play, which allows children to explore the world spontaneously and learn through direct experience. Outdoor play fosters the development of emotional and social skills, including the ability to self-regulate emotions, communicate with others, and resolve conflicts constructively (Assaf & El Agha Kasbah, 2023). During free play, children face situations that require them to make autonomous decisions and negotiate with peers. This process helps develop

leadership skills, self-confidence, and resilience, all of which are essential components of emotional skills. In addition, outdoor play encourages creativity and freedom of expression, allowing children to experiment and discover their potential in an environment that fosters emotional well-being.

These aspects are fundamental, especially if we consider that emotional education also plays an essential role in social inclusion. Learning emotional skills, in fact, helps children to understand and respect diversity, to build empathic relationships and to actively participate in social life. In multicultural contexts, the development of empathy and social awareness is crucial to promote inclusion and mutual respect (Germinaro et al., 2022). In particular, emotional education can support children from difficult or disadvantaged backgrounds, helping them to overcome trauma or personal challenges. When children learn to recognize and manage their emotions, they develop a greater ability to cope with stressful situations and interact positively with others, regardless of their social or cultural backgrounds. The introduction of Social Emotional Learning (SEL) programs in schools can therefore reduce social inequalities, promoting a culture of inclusion and mutual respect. The management of emotions and the development of relational skills allow all students to feel part of a school community that values diversity and promotes collective well-being. Outdoor learning and outdoor education are particularly effective in including different learning and emotional styles. Students who may struggle in a traditional school setting can find in the natural environment a place to thrive emotionally, further enriching their emotional experience. Outdoor activities often adapt to various needs, promoting a hemodiversity that reflects individual differences.

Pollin and Retzlaff-Fürst (2021) examined the extent to which biology lessons in school gardens (compared to classroom, every other week) influenced social and emotional behaviors. Over a period of 10 weeks, 11-12-year-old students were responsible for both their own plant and the bed of the group to which they were assigned. Observational data indicated that students showed more prosocial behaviors (Pirchio et al., 2021) conducted a school OEE program with 9-11-year-old students in a nature reserve for four visits once a month, and self-report questionnaires showed that the program had positive outcomes on psycho-physical well-being, on the connection with nature and prosocial behavior compared to a control group. OE, therefore, seems to play a role in the development of prosocial behaviors, understood as voluntary actions that aim to help or benefit others without expecting a reward, but also empathy, defined as the ability to understand and share the emotions of others, as indicated by teachers and parents (Ceylan, 2018). In fact, activities in nature, especially those

involving working with animals or caring for plants, promote a sense of responsibility and respect for living beings in children. This connection with nature can extend to interpersonal relationships, fostering the development of prosocial behaviors, which include actions such as helping, sharing, and collaborating, and is enhanced by group experiences that require cooperation and mutual support. Children who participate in outdoor activities often develop a greater sense of solidarity and compassion, learning to respond to the needs of others in an altruistic way (Cheng & Monroe, 2012). Prosocial behavior is strongly influenced by life experiences and social interactions. Through emotional education, children learn to recognize and respond to the needs of others, developing a sense of social and moral responsibility. Positive interactions, such as those with nature and animals, can stimulate the development of prosocial behaviors, promoting more balanced and respectful relationships (Cheng & Monroe, 2012).

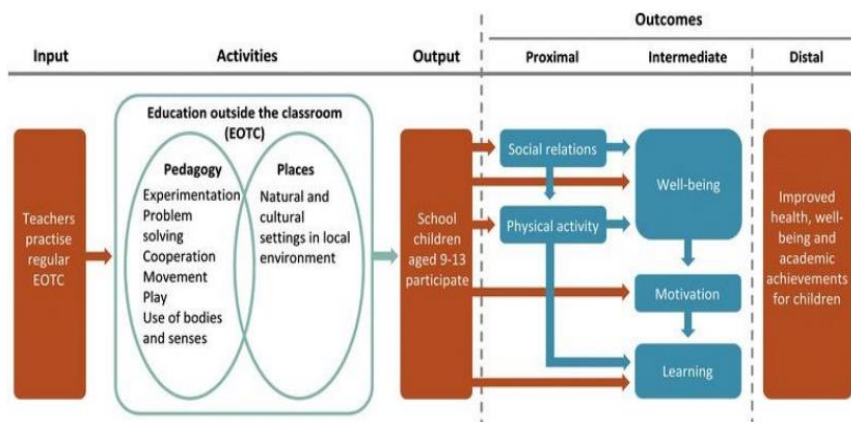


Figure 3. Chart depicting the potential effects of outdoor education (Nielsen et al., 2016)

OE often includes moments of reflection, where students can process the emotions experienced during outdoor experiences. These moments of emotional awareness are crucial for recognizing and understanding various emotions, thus promoting the development of emodiversity. Nature provides a quiet, non-judgmental space where students can explore their emotions safely and deeply. In OE, therefore, there is a less structured environment perceived by students as less judgmental, which allows a greater sense of freedom even in the expression of emotions, as well as the presence of moments of sharing and comparison through methodologies such as, for example, *circle time*. This educational approach, in addition, involves group activities that require collaboration and communication. In these situations, students experience social emotions such as empathy, trust,

and cooperation, expanding their ability to recognize and manage not only their own emotions, but also those of others. These experiences improve emotional and social skills, promoting emotional growth that is reflected in greater emotionality. In OE, this is encouraged by the use of group, collaborative and cooperative activities and, in general, of active methodologies, which allow emotional education from childhood, which leads to benefits that extend well beyond school age. Individuals who develop solid emotional intelligence during childhood and adolescence, in fact, tend to show higher levels of psychological well-being, healthier social relationships and greater stress management skills throughout adult life. Studies show that emotionally intelligent people are more likely to achieve career success as they can successfully navigate interpersonal relationships, work as a team, and stay calm under pressure. In addition, emotional regulation is closely linked to the prevention of mental health problems, such as anxiety and depression (Bisquerra, 2011). Outdoor activities often present physical or mental challenges that students face, such as walking a challenging trail or working in groups to solve a problem. These situations prompt students to confront emotions such as fear, anxiety, determination, and satisfaction, expanding their range of emotional responses. Addressing these challenges increases self-confidence and emotional management skills, making students more resilient (Blackwell, 2015).

Conclusions

Outdoor Education represents a powerful educational approach for the development of emotional and social skills in students, who, through contact with nature and practical experiences, learn to manage their emotions, collaborate with others and develop empathy. These skills not only improve emotional well-being, but prepare children to become more aware, resilient adults and able to face life's challenges with balance and confidence. In an era in which emotional well-being is increasingly recognized as a key factor for personal and professional success, OE is configured as an educational tool of great value, capable of promoting the integral development of the individual.

In conclusion, emotional education represents a fundamental pillar for the integral development of children, which not only promotes emotional regulation and personal well-being, but also contributes to the construction of social skills essential for living and working in a complex and interconnected world. Emotional education, in fact, promotes the development of personal skills, such as self-regulation and self-awareness, and also improves the ability to interact with

others, promoting a positive school environment and more effective social relationships. Through emotional education, children acquire essential tools to face life's challenges and build a future based on empathy, collaboration and personal well-being. Therefore, learning emotions, empathy and conflict management is not only useful for the school context, but has long-term positive repercussions on well-being and personal and professional fulfillment. Adults, as role models and guides, play a vital role in this process, creating safe and supportive environments for learning emotions. The implementation of emotional education programs in schools, combined with outdoor education, which encourages the free expression of emotions, can therefore make a significant difference in forming future generations who are more empathetic, resilient and able to face life's challenges with emotional balance and confidence.

OE, in fact, allows unique learning opportunities for students in an immersive, less structured and rich context and implies experiential learning and the performance of group and challenging activities, as well as the use of active methodologies and greater freedom to move, express and interact with peers, not eliminating the possibility of feeling negative emotions, but offering opportunities to face them and express them freely. Teachers and students also have the opportunity to implement different skills, including transversal ones, different from those that are required in an internal environment, so both students and teachers have the opportunity to realize and discover new skills and new aspects of the class group. An environment, therefore, the one used in OE, which helps to relax, to be freer and to feel less judged, in which mood improves (Roe & Aspinall, 2011) and learning takes place through experiential activities and fun (Lavie Alon & Tal, 2015) and playful ways of working and in which students and teachers can familiarize themselves and express their emotions through the use of natural objects (Mancini & Trombini, 2017; Bisquerra, 2011), shapes, colors (Chistolini, 2016) or even sounds of nature. Outdoor spaces where outdoor yoga activities and oral storytelling can be carried out, which are important to help students articulate their emotions (Blackwell, 2015), and it is possible to create outdoor emotions spaces where children can take refuge to reflect and be alone (Bisquerra, 2011). Scientific studies show that teachers and parents seem to be aware that outdoor education is an effective means of social-emotional learning (Larrea, Muela & Imaz, 2024; Lohr et al., 2020), highlighting the importance of the role that this educational approach plays in the development of skills related to the socio-emotional dimension at school.

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