

# Outdoor Encounters in Nature as a Promoter for Environmental Consciousness of Primary School Students from their Teachers' Perspectives

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## Abstract

With the growing environmental concern, outdoor education has been looked at recently as one of the instruments that provoke environmental consciousness in an attempt to alleviate the ecological crises. The outdoor natural places are evidenced to have numerous affordances for children, one of which is raising their environmental consciousness, but what is the formula required for attaining this? This study aimed at exploring how outdoor activities in nature reinforce the young students' environmental consciousness, from their teachers' perspectives. Thirteen primary school Swedish teachers from five national and international primary schools in Sweden were recruited conveniently as a representative sample for this thesis study. Data was collected through qualitative semi-structured interviews, then analyzed using the hermeneutic thematic analysis. The study findings showed the perceived affordances of outdoor education in regard to environmentalism, and the factors of the optimum implementation of outdoor activities in natural settings. The teachers' accounts manifested that outdoor encounters in nature allow experiential learning and enhance the young students' environmental consciousness in terms of their ecological literacy, connectedness to nature, appreciation for nature, positive attitudes toward nature, and prospective pro-environmental behaviour. Moreover, the teachers highlighted the necessity of pedagogical guidance accompanying the outdoor activities in nature, in terms of clear environment-oriented curriculum goals, environment-related content, motivated teacher guiding discussions, and modelling pro-environmental behaviour.

**Keywords:** Natural Outdoor Encounters, Experiential Learning, Environmental Consciousness, Appreciation to Nature, Pro-Environmental Behaviour, Outdoor and Environmental Education, Primary School, Sweden.

## Abbreviations

**EE:** Environmental Education.

**PEB:** Pro-Environmental Behaviour.

## Definitions of the Study Terms

**Outdoor Encounters in Nature:** Natural settings, like the forest, lakesides, green parks, school green playgrounds, the natural spaces around a school, or any green natural place.

**Environmental Consciousness:** It refers to the possession of knowledge about nature, appreciation to nature, positive attitude toward nature, and prospective pro-environmental behaviour.

**Eco-Literacy/ Environmental Knowledge:** General knowledge about nature, the ecosystem (namely, animals, insects, and plants), its importance, and the consequences of acting unsustainably.

**Appreciation to Nature:** Feeling of sympathy, care, respect, and appreciation for natural living creatures.

**Pro-Environmental Behaviour:** Responsible and sustainable actions of individuals that aim to improve the natural environment or lessen the negative consequences of the human on nature.

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# 1. Introduction

Apparently, humans have influential footprints in the ecosystem. Since the industrial revolution and the massive urbanization, human misbehaviour with nature has continued, which has led to considerable environmental crises (Roszak, 1995 as noted in Hibbard, 2003). In this situation, bridging the gap of human alienation from nature, and promoting environmental consciousness should be an aim of relevant disciplines and discourses to contribute to lessening the human negative effects on nature. An urgent call articulated by Rockström and Klum (2015) to do anything to reconnect people with mother nature and to address the most critical ecological crises by rethinking our relationship with planet Earth.

Now that outdoor provisions allow close encounters with nature and natural entities, they could be employed to enhance knowledge about the environment and how the human and non-human worlds are interrelated (Schatz, 1996; Cooper 1998). Outdoor environments offer unlimited opportunities for strengthening an emotional bond with nature and stimulating environmental awareness, that takes shape of understanding ecological issues, eco-friendly attitudes, and behaviours, thanks to the sensual and authentic experiences in natural encounters (Beery and Jørgensen, 2018; Frantz and Mayer, 2014; Pirchio, Passiatore, Panno, Cipparone, and Carrus, 2021, Parkin, 1998). Sandell and Öhman (2012) assert that outdoor education is one of the pivotal tools for boosting public environmentalism. For this reason, the Swedish national curriculum for compulsory school addresses schools and educators to consider the employment of outdoor settings for increasing the students' environmental awareness. (see p. 9)

Having reviewed a humble amount of research, I noticed that the relationship between outdoor experiences and environmental consciousness has been dealt with from different angles, with different ages of participants, and in different settings. Albeit the pioneering role of Sweden in outdoor education and the long history of addressing the environmental concern, there is no research, to my best knowledge, has been undertaken on the potential of outdoor natural encounters in raising children's environmental consciousness in the Swedish compulsory school context. Thus, the rationale of this study has arisen from my intention to explore how outdoor encounters in nature promote children's environmental consciousness as regards their knowledge about nature, and their attitudes and behaviours toward nature, in the Swedish context.

The qualitative nature of this study allows investigating perceptions of the primary schools' teachers of how outdoor natural encounters contribute to growing the environmental consciousness of their young students.

Whilst the short-term aim of the study is to investigate the teachers' perspectives of the advantages of outdoor encounters in nature for their young students concerning their environmental consciousness, the long-term goal is that the concluded insights will encourage the educators, the administrators in the educational institutions, and all the stakeholders to adopt outdoor education as part of the educational curricula. In so doing, pro-environmental awareness and behaviour may increase in the present and future generations.

## **2. Study Aim and Questions**

The study aims at exploring how outdoor activities in nature reinforce the young students' environmental consciousness, from their teachers' perspectives.

Study Questions:

1. How do teachers understand the potentials of outdoor activities in nature for the young students?
2. What factors contribute to an optimum application of outdoor learning activities in nature from the teachers' perspectives?

It is hoped that answers to these questions will assist understanding the linkage between outdoor experiences and environmental sensitivity, in an attempt to encourage educators to run more outdoor learning activities for young students in Sweden and in other settings.

## **3. Background of the Swedish Context**

In the wake of the industrial revolution and urbanization in the 1960s, wide-ranging environmental awareness grew and resulted in the inception of Environmental Education (EE) discourse. Sweden has been influenced by this global trend of pro-environmental thoughts and ideologies. It is deemed one of the pioneering countries in initiating and calling for such change to pro-environmentalism and nature-approached discourse. Hence, several agencies, initiatives, curriculum reforms, and conferences have burdened to address environmental problems and confronting them through education, to mention some (Breiting and Wickenberg, 2010):



- Keep Sweden Tidy (Håll Sverige Rent) initiative in 1965.
- Swedish Nature Protection Agency (Naturvårdsverket) established in 1967.
- Swedish National Agency for Education (Skolverket).
- School's Fostering of Environmental Protection 1968, producing new educational materials, methods, guidance and training for teachers.
- SMIL (Skolans Miljövårdsfostran), which engendered an environmental-oriented curriculum LGR 69 (the Swedish National Curriculum).
- Swedish Nature Conservation and Protection Association (Svenska Naturskyddsföreningen).
- Environmental Resource People in 1983, whose members were responsible for EE in schools.
- Expansion of Outdoor Education in theory and practice.
- UN Conference on the Human Environment (Stockholm Conference) in 1972.
- Conference on Environmental Education in Tbilisi in 1977, emphasizing EE in Sweden.
- Swedish National Curriculum 80 (LGR 80) with formal address of EE and more inclusion of environmental-related topics, esp. in natural sciences, and teachers have been considered as representatives of EE.
- Swedish Nature and Conservation Association (SNF).
- Ministry for the Environment that was founded in 1986.
- Environmental Election, resulting in the Green Party (Miljöpartiet) in 1988,
- United Nations Conference on Environment and Development (the Earth Summit) in Rio de Janeiro in 1992 giving birth to Agenda 21 sustainable development action plan.
- Environmental School (Miljöskola) and the World Wide Fund for Nature (WWF) are two initiatives by NGOs in the 1990s, contributing to flourishing EE in Sweden.
- European Environmental Education initiative (Green Flag) in 1996, giving students voice to participate in the school management through Environmental Council.
- New orientation to Education for Sustainable Development (ESD) in late 1990s.
- The Award for School for Sustainable Development (Utmärkelsen Skola för Hållbar utveckling) initiated by 2000 to encourage schools to adapt the green flag project, and at the end of the same year around 151 Swedish schools reported to shift from EE to ESD pertaining to ESD principles and goals' inclusion in the teaching units of the curriculum and in the teachers' training programs and guiding books.

- National Strategy for Sustainable Development was presented in the World Summit, Johannesburg in 2002, which stated that education is a fundamental tool to achieve sustainability.

The Swedish curriculum for the compulsory school, revised in 2018, supports the employment of outdoor education for environmentalism. Having a look on its goals, I chose the most relevant to display here (Skolverket, 2011):

- ✓ Schools should influence and stimulate pupils by "showing respect and care for both the immediate environment, as well as the environment from a broader perspective." (P. 10)
- ✓ School is responsible for pupils who complete compulsory school have "obtained knowledge about the prerequisites for a good environment and sustainable development, and [...] an understanding of the importance of the individual's own lifestyle and its impact on health, the environment and society." (P. 12)
- ✓ "All who work in the school should act to enrich the school as a learning environment [...] and with other activities outside the school."
- ✓ "teaching in different subjects integrates cross-disciplinary areas of knowledge, such as the environment, [...]" (P. 17)
- ✓ " development of the pupils' interest in and knowledge of nature," (P. 24)
- ✓ "By having the pupils be out in nature and society, [...] strengthens their opportunities to actively participate in [...] and outdoor activities in their local environments." (P. 24)
- ✓ "Outdoor excursions during the different seasons, as well as the opportunities for nature excursions, in the local environment and elsewhere, for physical activities and nature experience." (P. 26)
- ✓ "The rights and obligations that are involved when we interact with nature, according to the law of Outdoor Access Rights (Allemansrätten)." (P. 26)

In general, the national curriculum (LGR 11) for the compulsory school support outdoor education, and recently numerous schools in Sweden are using the outdoor environments, either the schoolyards or the nearby nature, for outdoor pedagogy (Faskunger, Szczepanski, and Åkerblom, 2018).

## **4. Literature Review**

### **4.1. Contextualizing the Study in Related Disciplines**

#### **4.1.1. Contextualization in Environmental Education (EE)**

The field of EE deals with the question of raising the environmental consciousness as an essential factor in achieving its ultimate goal of improving and conserving the environment. To this end, EE is studied either as a separate discipline in university or other tertiary educational institutions, or it is presented through other relevant subjects, like geography, biology, and science in compulsory school (Rickinson, Lundholm, and Hopwood, 2009). Furthermore, EE projects based on environmental-related content have been conducted for different society groups and ages. Thus, several studies aimed to measure the impacts of such EE programs on the learners' attitudes, values, knowledge, skills, capacities, motivations, and behaviour. Most of these studies demonstrated high positive impacts, as documented in a research review of 105 studies by Ardoin, Bowers, and Gaillard (2019), except for Edsall and Broich' (2019) study which revealed that EE does not necessarily generate environmental awareness, as there are different factors that may intervene, such as the learner's cognitive abilities in science, family characteristics, socio-economic status, and so on. However; they recommended that schools pursue their effort in improving EE in the curricula, but at the same time, consider the other factors that consolidate the pro-environmental attitudes.

In their article that reviewed a body of research in EE, Chawla and Cushing (2007) displayed findings and recommendations of this research, which augmented the model role of teachers in backing responsible environmental actions and the role of knowledge of environmental issues by education or reading books. In addition, the reviewed studies give importance to the life experiences of children in nature, thus, they recommended spending more time in natural places to develop a strong bond with nature. This is also assured by Pirchio, et. al. (2021) upon conducting two studies on Outdoor and EE programs for primary and secondary schoolers, and also by Frantz and Mayer (2013) after having reviewed some studies in the field, as they all concluded that connectedness to nature motivates and predicts pro-environmental behaviour (PEB). For this reason, fostering an affective relationship with nature should be a target for supporting PEB, and the role of EE, according to them, not only to impart knowledge but also

to provide opportunities for promoting environmental knowledge, attitudes, beliefs and behaviour.

In the meantime, combining EE to outdoor provisions yields better results in terms of strengthening children's connection to nature, positive attitudes and interest in spending more time outdoors in nature (Mullenbach, Andrejewski, and Mowen, 2017), which presumably prompts PEB, as reassured by Cheng and Monroe (2012 as cited in Gifford, 2014). Another supporting evidence from an experimental study by White, Eberstein, and Scott (2018) aimed at evaluating the effect of an urban EE in enhancing the children's awareness, knowledge, attitudes, and behaviour towards the local biodiversity and wildlife. The six-week bird-feeding and monitoring project was proved to have positive influence on the primary school children as shown by the results from the pre-and-post project questionnaires. Similar qualitative study by Nolan (2020) explored the effect of biodiversity education on the sustainability consciousness of Irish primary schoolers. It results in concluding the positive effect of biodiversity education on students' sustainability consciousness.

An Australian case study by Lloyd and Gray (2014) augmented the significance of place-based outdoor learning in constructing connectivity with nature, and deep environmental knowledge, which incites pro-environmental behaviour. Earlier, Cooper (1998) mentioned some of the benefits of outdoor learning reported from studies conducted in Britain for young people students participated in a 5-day outdoor program. Surveys collected from 73 schools, assuring the personal and social development of the outdoor program, as well as raising the environmental awareness, appreciation, and PEB.

Ardoin, Bowers, Roth, and Holthuis (2018) reviewed findings of 119 articles in EE, and came to the conclusion that the EE programs succeeded to achieve the expected outcomes of increasing the K\_12 students' environmental knowledge, attitudes, dispositions, and skills, which is another evidence, I assume, for the usefulness of such educational programs that depend on providing hands-on experiences outdoors, accompanied by environment-related content.

The reason for contextualizing part of this study in EE is the value of the environmental-related educational content that is salient in the study data. Several participating teachers mentioned that the Swedish curriculum contains units of inquiry directly related to environmental and

sustainability issues, the matter that works as a linkage between indoor classes and outdoor activities meaningfully.

#### 4.1.2. Contextualization in Eco-psychology

Eco-psychology is a newly emergent sub-discipline, still lacking adequate theoretical framework, research, practical application, and credentialing as a branch of psychology (Hibbard, 2003) while Doherty (2009) assumed that it is an off-shoot of Environmental Psychology. However; it has a clear focus, purposes and promising insights. The environmental movement in the sixties was the main contributor to the inception of several pro-environmental disciplines and sub-disciplines, among which was the eco-psychology as an emergent response to the pervasive environmental crisis caused by the industrial revolution and gigantic urbanization. This ecological movement as stated by George Sessions was a revolution that shifted the existing perceptions, values, and lifestyles from anthropocentric to ecocentric paradigm. Several scholars contributed to emergence of eco-psychology, yet; two names are echoed to be credited with founding this sub-discipline, Paul Shepard who published "Nature and Madness" in 1982 has been considered as the pioneer of matching the psychological theories to the ecological problems. The second pioneer who formally named and outlined the eco-psychology in 1992 is Theodore Rozak with his essay "Voice of the Earth" (Hibbard, 2003).

Rozak believes that there should be a cooperation between ecology and psychology for the sake of the planet, to put it in other words, psychology requires re-conceptualization to assimilate the ecological concerns and contribute to remedying the planet's pains, on the other side, ecology needs to benefit from the psychological applications to encourage pro-ecological behaviour. Hence; the goal of eco-psychology is to reconsider the human relationship with the Earth to be more restorative and sustainable, which means changing human's destructive behaviour and motivating positive green behaviour. Rozak, Shepard, Winter, Metzner, and other psychologists justified that the human psychological incentive to oppress and dominate all non-human worlds is owing to the absence of our ecological conscious and unconscious and the feeling of alienation and separation from nature due to the sedentary modern life dependent on agriculture and industry. This unsustainable behaviour of human beings has been described as collective insanity, and most of the environmental problems are attributed to the human

ailing psychic, interpreted into distorted values, thoughts, conducts, and collective norms concerning the connection to nature (Hibbard, 2003).

Thereby, scientific efforts have examined the interrelationship between humans and nature. One of these studies is by Byrka, Hartig, and Kaiser (2010) which manifests the mediating role of the environmental attitudes between the psychological restorative effects of nature on human beings and human behaviour toward nature, in that positive experiences in nature stimulate ecological behaviour.

### 4.1.3. Contextualization in Environmental Psychology

Hibbard (2003) explains that there is a prevalent confusion of the difference between environmental psychology and eco-psychology regarding their definitions and focuses. However; the studies that discussed the concept of environmental consciousness and PEB under the umbrella of the environmental psychology did not pay attention to such demarcating lines.

Environmental Psychology is mainly concerned with understanding the interrelationship between humans and their natural or built environments, that is to say, how human positively or negatively affect their surroundings with their behaviour, and how in turn the surroundings affect the human's psyche. It looks at the environment as a stimulus that incites the human senses and consequently their responses. The field took different directions, one is focusing on how to improve the built environment in accordance with the human's needs (like in Urban Planning and Architecture) and how the physical environment effects humans in terms of pollution, transportation, crowding and so forth, and the restorative effects of nature. Another direction concerns the effect of human behaviour on the natural settings and resources (Doherty, 2009). As may be noticed, the first direction is more anthropocentric, while the other one is an ecocentric concern, as the latter is the concern of this study too.

This thesis study tries to find a place in the field of environmental psychology on an attempt to understand how the environmental consciousness mirrored by the PEB is perceived. In fact, research in this field analyzed different aspects of human psychology in relation to the environment, researching how emotions toward the environment are shaped, exploring if there is a relationship between environmental literacy and PEB, and talking about different factors that frame PEB.

Starting with the attitudes, some studies differentiate between egoistic motives/concerns (anthropocentric), regarding the restorative benefits of nature for human health, well-being, and natural resources, and biospheric motives/concerns (ecocentric) respecting the health of nature for its pure sake (Schultz, Shriver, Tabanico, and Khazian, 2003; Gustafson, Pace, Singh, and Goldberg, 2022). Such attitudes, according to Schultz, et.al. (2003) determine the implicit connectedness with nature positively or negatively and correspond with the levels of PEB, according to Gustafson, et.al. (2022).

Bell, Greene, Fisher, and Baum (2001) presented different previous theories about the formation of attitudes. These theories explicated that attitudes could be genetic, acquired, or triggered by sensual intake. One of these dominant theories is the theory of Planned Behaviour by Fishbein and Ajzen (1980), which states that behavioural intentions determine behaviour, and these intentions are basically dependent on one's attitudes, social and subjective norms, as well as knowledge. Gifford (2014) also mentioned that knowledge and education play an essential role in provoking people's PEB. Whereas Lindenberg and Steg (2007) explained that behaviour is governed by multiple goals: normative (doing what is believed appropriate), hedonic (doing what is comfortable) and gain (doing what preserves or improves resources), arguing that the dominant goal and motive determine how people perceive and evaluate the environmental issues and how accordingly act upon. Thus, acting environmentally is presumably based on normative goals. Therefore, Steg, Bolderdijk, Keizer, and Perlaviciute (2014) suggest mitigating the conflict between these goals by reducing the costs of the hedonic and gaining goals of PEB, which may require scarifying personal interests to some extent for the benefit of the environment, and powering the normative goals that are based on endorsed values and situational factors. This could be realized by changing people's perceptions of the benefits and costs of their behaviour, through media (revisiting the concepts of costs and benefits), legislation (pro-environmental laws), economic tools (extra financial costs on unsustainable actions), etc. By so doing, people would be motivated to act pro-environmentally, since their actions are in harmony with their hedonic and gain goals.

Likewise, Chan, Balvanera, Benessaiah, Chapman, Díaz, Gómez-Baggethun, Gould, Hannahs, Jax, Klain, Luck, Martín-López, Muraca, Norton, Ott, Pascual, Satterfield, Tadaki, Taggart, and Tumer (2016) classified pro-environmental attitudes into intrinsic values (appreciating the independent value of nature), instrumental values (looking at nature as a source of benefits for human), and relational values (considering the intertwined relationships between human and

nature socially, culturally, and morally). Earlier, Sandell and Öhman (2012) distinguished between the intrinsic and the instrumental values that motivate experiences in nature, dealing with nature either as an independent being that humans are attached to emotionally or as a means for various purposes and benefits for humans.

Turning to environmental behaviour, numerous psychological studies sought to explore the determinants that contribute to environmentally enlightened behaviour, presenting different explanatory models. Kollmuss and Agyeman, 2002 displayed some of these models:

- The oldest model drew on a linear progression, as environmental literacy develops a positive attitude and consequently PEB.
- The second model of Rajecki (1982) presented more explanation for the motives of behaviour, emphasizing the strong influence of direct practiced experiences on attitudes and behaviour. He also explained the social normative factors, relating to one's culture and family values. Yet, he elucidated that people's attitudes are not consistent, and many studies did not use subtle measures for the participants' attitudes and behaviour.
- The third model was developed by Hines, Hungerford and Tomera in 1986, adding to the factor of environmental knowledge, knowledge about how to act ecologically, as well as peoples' attitudes, sense of responsibility, commitment, and ability to make a change in their behaviour.
- Fietkau and Kessel (1981) model considered knowledge as a factor that partially influences the attitudes toward environment. The model also paid attention to the feedback someone gets for his/her actions either from others or from their internal feeling of satisfaction of doing such actions, as well as other economic and financial factors.
- Other models tackled with the topic from different angles, in that they explored the barriers of acting environmentally, for instance the model by Redclift and Benton (1994), sorting them into barriers related to individuality like attitudes, temperament, priorities, desires, and interests, and barriers related to responsibility which means absence of feeling responsible for others or absence of trust on others, and barriers regarding practicality, such as lack of time, money, facilities, and so on. Such barriers in many times are responsible for the gap between attitudes and behaviour (Kollmuss and Agyeman, 2002).

On the other hand, Chawla (1998) argued that PEB or "Environmental Sensitivity", as he quoted from Hungerford and Volk's (1990) model, is correlated with one's life experiences. Upon interviewing a lot of environmentalists about their previous experiences, he concluded



that a collection of experiences in nature during childhood besides education, the modelling role of their teachers or friends, the family values, and the influence of environmental organizations, all contributed to their environmental consciousness. Chawla also asserted that contact with natural settings is of great importance and leads to an emotional connection to nature, which in turn powers pro-ecological attitudes, values, and beliefs. Meanwhile, he drew attention to the internal characteristics of personality (e.g. interests, abilities, needs, and emotions) as a significant variable in responding to other external physical and social variables, all of which lead to actions.

## **4.2. Experiential Education**

Outdoor studies have dealt with the concept of "experience" implicitly and explicitly since most outdoor activities are reckoned as outdoor learning experiences inasmuch as they encompass a reflective process that guarantees that knowledge is perceived from the experience (Quay and Seaman, 2015).

When mentioning the word "experience", the name John Dewey resonates, the American philosopher and educator who applied his pragmatic ideas to the field of education, by linking abstract learning to practical learning interpreted into "experience". Quoting his words:

"I have taken for granted the soundness of the principle that education, in order to accomplish its ends both for the individual learner and for society, must be based upon experience, which is always the actual life experience of some individual." (Dewey, 1997/ 1859-1952) P.89.

An experience, then, is a pivot of education, through which the required ends of development and growth of children are attained, given that it fulfils the conditions of an educative experience, in other words, a fruitful experience should be connected to past experiences and have a long-lasting influence to prepare the young to future life experiences, and it should be a product of a balanced interaction between the internal (the individual's needs, capacities, desires, and purposes) and external (subject-matter, place, social settings, instructional methods, materials, etc.) conditions. Therefore, continuity and interaction are the two principles that shape any educative experience, and it is the business of education to provide such quality experiences for immature learners, accompanied by guidance from mature educators, and the role of educators lies in using their insights to evaluate the experience

whether it assists or harms the intact growth, judge and direct (Dewey, 1997/ 1859-1952). (See Role of Educator in Outdoor Education, P. 22)

Nevertheless, there is no shared definition for the word "experience". An experience, according to Fox (2008) is of a subjective nature and it does not imply only the physical aspect, but also other cognitive, psychological, and neurological processes, and not to forget the crucial role of the unconscious in forming our experience along with conscious cognition. In a try to clarify the boundaries of learning that could be named experiential, Illeris (2007) has followed a similar approach to Dewey's discrimination between educational and non-educational experiences, as he differentiates between experiential and non-experiential learning. To do so, Illeris suggests that three dimensions of learning should exist in experiential learning: content, incentive, and interaction. In essence, the content of learning should be relevant, engaging, and based on the learner's needs and previous knowledge, and it should be conveyed in an efficient communicative way through social interaction. Additionally, it should motivate the learner to learn willingly, provoking higher levels of acquisition, and giving priority to the learner's readiness and intention to learn from certain learning content or specific situation. In a nutshell, the learning experience is and should be subjective.

In another context but similar to Dewey's assumption, Chawla (1998) claimed that valuable life experiences are results of exchange between inner (people's interests, emotions, capacities, needs, etc.) and external (social and physical) environments. Pritchard (2017) has some input to add in this regard, as he contends that any "experience" incorporates three qualities: the learner's being (identity, individuality, values, etc.), knowing (cognitive meaning-making), and doing (observable behaviour and skills). This signifies that how you act is a result of what you know and what you are, that is to say, your conduct is based on your prior knowledge and your beliefs and attitudes. Pritchard describes the "experience" as "the sensory bridge between the human mind and the external world" p.10, chapter 1. He supposes that experiential learning that is designed rigorously and undertaken in an appropriate setting is more likely to be long-lasting, unforgettable, and have a transformative effect. This is also highlighted by Higgins and Nicol (2002), explaining that clarity of the curriculum's goals in the instructor's mind and selecting the appropriate place that aligns with the required learning outcomes contribute to the success of the outdoor learning experience, and vice versa, hence; an instructor's key role here is to carefully reflect on how to realize the maximum benefits from outdoor activities by assisting the young children to interpret their experiences and help them take the right direction.

Only this way, we can guarantee the occurrence of an educative experience through which children actually learn. In a Swedish context, Faskunger, et. al. (2018) affirm that outdoor experiences are beneficial for both the learner and the teacher, as they allow more creativity, motivation, curiosity, participation, and reflection for the learners, inspire teachers, facilitate authentic teaching, connecting indoor and outdoor activities meaningfully and achieving the curriculum goals. Likewise, Fägerstam (2014) explored the potential of outdoor teaching from teachers' perspectives in a Swedish junior secondary school. The findings manifested that outdoor experiences increase students' motivation and participation, and function as a valuable link between indoor and outdoor learning.

My drive to allocate this part for experiential learning is that a big deal of this study's data attributes the paramount significance of outdoor learning to the experiential learning opportunities it offers, in that authentic experiences and direct contact with the real world occur outside the classroom. Regular experiences in green environments during childhood are notably associated with environmental awareness and a feeling of connectedness to nature and the local environment during adulthood, according to Gill (2011; and Wells and Lekies (2006 as both references cited in Faskunger, et. al., 2018).

Experiential learning has been described in several studies simply as learning by doing, learner-led outdoor experiences, or student-centred learning outdoors (Dewey, 1997/ 1859-1952; Priest, 1986 as quoted in Dabaja, 2022), nonetheless, a big burden lies on educators, since they should thoroughly create novel experiences and intelligent questions about the world that trigger the learners' curiosity and desire to know more about their world through their own experiences (Pritchard, 2017). Moreover, Quay and Seaman (2015) emphasized that learning by being outdoors requires more than the learner's mind; other minds (e.g. the educators) and the environment altogether constitute the experience.

Given these facts, the outdoor experience is very valuable for children as a source of pleasure, richness, and lasting learning. Outdoors, children use all their senses to discover the world, meet novel things, people, or other living creatures, match the new knowledge with what they already knew, practice their skills, move, enjoy, and, importantly, connect with nature (Rivkin, 2000; Parkin, 1998).

### **4.3. Affordances of Outdoor Education from an Environmental Eye**

Outdoor education is largely introduced in connection with environmental education. Raising environmental awareness and responsibility requires planning nature-bonded outdoor activities and engaging people actively in genuine experiences in the environment, as posited by Tan, Chang and Kim (2017).

In Britain, there have been two approaches to connecting outdoor learning with environmental awareness, the first approach stressed learning science as part of the school curricula (about the environment), and the second considers the physical, personal, and social development (through the environment), yet; there has been a scant proof of employing outdoor education for raising the environmental awareness and concern (for the environment) (Cooper, 1999).

Research has associated outdoor education with environmental education and experiential education recurrently with different foci, one of which is learning about nature. An intended outcome of such is developing positive values, attitudes, and emotions in favour of nature (Becker, 2017; Dabaja, 2022), though, this outcome has not always been realized in practice or maybe not been measured delicately, as claimed by Rickinson, Dillon, Teamey, Morris, Choi, Sanders and Benefield (2004), for this reason, they call for more consideration for the preparation of outdoor activities, pertaining to clarity and relevance of the goals, the robustness of the used methods, skilfulness of the teachers who conduct these activities, and account for learners' needs.

This space presents a brief account of relevant literature introducing the potential of outdoor education with respect to environmental consciousness (i.e. environmental knowledge, attitudes, and behaviour) (See p. 2). Before demonstrating some of these benefits, I will mention, in short, the changes in the role of outdoor education during the successive traditions of EE from the seventies up-to-date, as described by Öhman and Sandell (2015). The three traditions of EE are "Fact-based EE", "Normative EE", and " Pluralistic EE". The environmental concern during the first tradition was focused on developing a good understanding of the ecosystem and its interrelation with the human so that to encourage more friendly-environmental actions through direct encounters with nature. While the second tradition shed more light on the necessity of changing human irresponsible actions owing to the industrialized revolution and alternatively fostering knowing about nature by being in

nature for the health of nature, hence the interdependence between environmental knowledge, values and behaviour were underscored. On the other hand, the third tradition has been the result of globalizing environmental problems and incorporating the social and economic dimensions besides the ecological one, which means different perspectives and interests that require pluralistic satisfying solutions for the sustainability of the people and the planet. This study could be placed on the second tradition, focusing on consolidating the interdependence between outdoor provision and environmental attitudes, values, and behaviour.

In an article reviewing numerous pieces of research on fieldwork in the UK, Dillon, Rickinson, Teamey, Morris, Choi, Sanders and Benefield (2006) came to the conclusion that well-prepared, well-taught, and followed-up fieldwork offers valuable opportunities to learners in terms of developing their knowledge, skills, and environmental awareness. Similarly, Parkin (1998) proclaimed the value of outdoor provision in promoting learners' environmental knowledge, values, and ethics as long as educators planned purposeful experiences that lie on valid goals and run in relevant places.

Higgins (2008) contended that fundamental issues should be integrated into outdoor education, particularly issues related to environmental sustainability and global climate change. Thus; he addressed all educators and decision-makers in the educational institutions to take the responsibility of considering such exigent matters when planning the curricula. For this purpose, he specified certain priorities to be included in outdoor education, otherwise, he claimed it would be of no value for the learners. These priorities are named the three Rs: Relatedness, Relationships, and Responsibility, first, the educational content should be real and related to global contemporary topics, second, educators should support learners develop their relationships with people and place, and third, learners should understand that they take the responsibility of their actions.

### 4.3.2. Environmental Literacy

Research has revealed that outdoor experiences in nature contribute to elaborating knowledge about the natural environment (Robbins (2015 as noted in Dabaja, 2022; Becker, 2017; Nicol, 2014). Therefore, outdoor education could be employed to address environmental issues and problems, which underlines the symbiotic relationship between outdoor education and EE, as argued by Dabaja (2022). Worth-mentioning, outdoor encounters do not only provide cognitive isolated facts but also relations to the natural surroundings emotionally, morally, aesthetically,

and practically, which enhances the sense of belonging to nature (Parkin, 1998; Sandell and Öhman, 2010). For this purpose, Kals, Schumacher, and Montada (1999) advocated for integrating a discourse on ethical responsibility to nature into educational programs in addition to direct sensual experiences with nature. Likewise, Beery and Jørgensen (2018) proclaim the importance of practical sensory experiences in nature for children as a tool for understanding, appreciating, and conserving biodiversity.

Relatedly, Rios and Brewer (2014) confirmed the educational opportunities of the outdoor natural settings, for instance, increasing the science content knowledge because they allow rich observation of nature and experiential learning opportunities, which increases the children's environmental consciousness, particularly if outdoor activities are conducted repeatedly. Subsequently, they urge schools and educators to take advantage of such opportunities by considering more structured or unstructured outdoor learning activities.

### 4.3.3. Appreciation of Nature and Pro-Environmental Behaviour

Outdoor exposure to nature is generally seen as strongly related to connectedness and appreciation of nature (Cheng and Monroe, 2012; Amini, 2015). Children with regular outdoor experiences in natural places develop an emotional relationship with nature and care for living creatures. This presumably influences their attitudes and intentions to contribute to PEB (Collado and Evans, 2019; Cheng and Monro, 2012; Jeronen and Jeronen, 2012; Nicol, 2014; Duron-Ramos, Collado, García-Vázquez, and Bello-Echeverria, 2020; Kals, et. al., 1999). A multitude of factors affect the formation of PEB, which refers to one's actions that attempt to lessen the negative footprints on ecology, to name some, age, gender, educational status, emotion, motivation, attitude, values, personal traits, knowledge, socio-cultural background, economic situation, as well as priorities and responsibilities (Kollmuss and Agyeman, 2002), besides interest and experiences in nature (Kals, et. al., 1999), however; a number of qualitative and quantitative studies in the domains of Outdoor and EE, Nature Education, and Environmental Psychology proved an appreciable linkage between connectedness to nature, developed by being outdoors, and PEB (Pirchio, et. al., 2021; Sevim, 2020; Frantz and Mayer, 2014). On the other hand, some studies unravelled that such linkage is uncertain, unclear, and influenced by other factors, aside from being outdoors in nature (Kollmus and Agyeman, 2002; Sandell and Öhman, 2012).

#### **4.4. Role of Educator in Outdoor Education**

Undoubtedly, the teacher is one of the pillars of the educational process, and this is demonstrated in related studies in outdoor and environmental education. The teacher's values, beliefs, enthusiasm, confidence, experience, as well as autonomy in decision-making and practice are constituents of the successful implementation of outdoor learning (Prince, 2020). Even with the impetus of the student-led learning in the outdoor settings, the teacher still has an essential role to play in constructing learning experiences skilfully, facilitating the children's learning, and engaging with them in more structured environmental lessons to improve their knowledge, values, and awareness, if to realize effective environmental learning (Hunter, Syversen, Graves and Bodensteiner, 2019; Thorburn, 2018). However, the degree of teacher's facilitation and intervention has been controversially in question in some studies, for instance, Stan (2009) examines different roles a teacher plays in outdoor activities: a controlling facilitator, a detached facilitator, and a part-of-the-team facilitator. In the first approach, the teacher intervenes heavily in the process of activity to achieve the intended aims, the second one steps back and lets it flow without any intervention in the process of activity, whereas the third approach has great flexibility in making a balance between intervening and allowing free learner-led activity, which means creating a free learning environment with reasonable support when needed, so obviously this latter seems to be the most appropriate approach, as it balances the two extremes.

Shume and Blatt (2019) investigated how the past outdoor experiences of elementary teachers affect their attitudes and intentions to take their young students outside the classroom. The study posits that teachers' meaningful outdoor experiences in their childhood encourage intentions and future actions of conducting similar outdoor activities for their students since they are cognizant of the values of taking children outdoors in nature. This implies that teachers' beliefs and attitudes toward outdoor education affect their decisions of taking advantage of outdoor exposure. Accordingly, teachers contribute not only to developing the young students' environmental awareness but also their attitudes affect their students' attitudes and future choices (Rios and Brewer, 2014; Frantz and Mayer, 2014; Amini, 2015).

## **5. Methodology**

The study follows the qualitative approach, using the semi-structured interview and the thematic analysis for gathering and analyzing the data. Thus, it pursues the interpretative hermeneutic paradigm, valuing the subjective interpretations of individuals' utterances about their experiences. This approach will be expounded and rationalized in this section.

The qualitative method is characterized as subjective-oriented, giving more reflexivity to the researchers as active participants with their perspectives, beliefs, values, and social and cultural backgrounds, together with the researching objects (i.e. participants), appreciating the exploration of the participant's understanding of their unique lived context-related experiences. Therefore; it deals with less structured verbal data rather than rigorous statistical data, according to Hammersley (2013 as cited in Cohen, Manion, and Morrison, 2017). The recent study investigates how the teachers perceive the advantages of outdoor natural encounters for young students in raising their environmental consciousness and how they describe the constituents of the ideal application of outdoor activities in nature to attain this environmental consciousness, taking into account the context of their schools. Accordingly, the choice of the qualitative method, with the means of the semi-structured interview, and the thematic analysis, is appropriate for the study's aim.

Braun and Clarke (2013) differentiated between two spectrums of qualitative research analysis, the descriptive/exploratory and the experiential/critical. This study followed the descriptive approach for analyzing the data, prioritizing the participants' interpretations of their experiences, taking the face value of the data, rather than investigating the implicit discursive understandings of data.

### **5.1. Participants**

The population of the study is the teachers of primary schools in Sweden, who conducted several outdoor activities for their young students. Two methods of sampling were used, convenient and snowball samples to represent the characteristics of the study population. Thirteen primary school teacher participated in the interviews: seven teachers from a national school in Linköping volunteered to participate, one teacher from a national school in Örebro, one teacher from a national school in Malmö, three teachers from an international school in Lund, and one teacher from an international school in Helsingborg.



The teachers aged between 31 and 65 years old, and their professional experience ranged from 2- 41 years. Nine of the participants are females and four are males, all of whom are Swedes. Most of them are class teachers, which means they teach all the essential subjects, i.e. NO (Natural studies, like maths and science) and SO (Social studies, like geography, history, and languages), some of them are responsible for the Fritids (i.e. the after school outdoor activities), and one teacher of physical education (PE).

All the interviewed teachers are acquainted with outdoor education and have conducted regular outdoor activities and field trips, the time and frequency of the activities change according to the nature of the teaching subject, the teacher's motivation, the time available, and the students' level. To mention some instances, during the Fritids, the children go outside every school day for free games and for practicing what they learned in class about some subjects. For the other subjects like math, science, language, and so on, the class teacher goes outdoors nearly once or twice a week for the lower levels, whereas levels six to nine have a tight schedule, so they go outside the classroom nearby or for far-field trips once a month or could be only twice a semester. The activities vary from free walks and play in the school green yard, in the nearby forest or oak hill, planned learning activities to practice some subjects, or field trips to the zoo, at lakes and rivers, to a farm, to the woods, etc. Examples of such activities are measuring the trees, counting and symmetry using natural stuff like pinecones, chestnuts, acorns, stones, leaves, and branches, and building things out of this stuff, growing plants, watching the different species of birds, plants, flowers, and animals, building shelters and hotels for insects and small animals, storytelling while sitting around a fire pit and barbecuing, watching the locations of the sun in the different seasons, studying about the friction by sliding in the snow, making interviews with trees, carving the bark of old trees to make small boats and play with them on the stream, littering, and hiking.

The participants teach young primary students aged between five to twelve years old, that means from class one to eight (compulsory school level).

Three of the schools follow the National Swedish Curriculum of the compulsory years, while two of them adopt the IB program (International Baccalaureate) for PYP (primary years' programs). Both the National Swedish Curriculum and the IB have educational goals supporting outdoor education and environmental concern.

I had the chance to visit one of the participating schools, in Linköping where I reside recently. Most of the participants (seven teachers) are working there, so I was able to conduct face-to-face interviews with them. The school encompasses different separate buildings, not very near to each other. The school is advantaged with a beautiful natural location at an oak trees hill and near the forest, and there is a small narrow creek that passes across the schoolyard. A part of the school playground is planted with grass, and the other part is left sandy, but there is no concrete. These features facilitate easy access to the natural settings and encourage teachers to go outside the classroom frequently.

## **5.2. Data Collection**

The study adopts the qualitative approach, following the qualitative method protocol, thus a semi-structured interview was chosen as a tool for data gathering to answer the study's main questions. An interview guide was prepared (see Appendix 1), including the main questions, and some follow-up questions. The interview is a common method in the social sciences, and it was selected for collecting this study's data for its privilege in probing the teachers' diverse perceptions and understanding their outdoor experiences with the young students. In the same vein, the semi-structured interview is featured by its flexibility, responsiveness to participants, and openness to some extent, in that it allows some new ideas and insights to be raised during the interview. The pre-determined questions allowed me to frame the study themes that cover the research issues, while the interactive follow-up questions enriched the conversation and provide more relevant and unanticipated details (Bryman and Bell, 2019; Braun and Clarke, 2013).

Upon preparing the interview guide, I started contacting the assisting principal of a primary school in Linköping, as I had met her before when I had an outdoor activity during the course "Outdoor Learning in Theory and Practice". She thankfully assisted me in finding six participants beside her for the interviews. Simultaneously, I emailed a lot of schools in the different cities of Sweden, from which I could gain six more participants from Lund, Örebro, Malmö, and Helsingborg. The first interview was on the 17th of May 2022 and the last one was on the 09th of June 2022.

Thirteen interviews were conducted with primary school teachers, six of which were face-to-face, and the other seven were online and video-recorded by Zoom and Teams applications. The average time for each interview was around 30 minutes. I stopped accepting other

volunteering participants after I reached the saturation of data. After each interview, I took field notes about my observations on how the interview went on, how the interviewees responded to the questions, the surroundings of the interview, what to be amended for the subsequent interviews, and finally to benefit from some of the notes for the analysis phase, as these benefits are also confirmed by Braun and Clarke (2013). Based on the taken field notes, my performance as an interviewer was improving after each interview, in terms of the follow-up questions, reordering the questions according to the interviewee's answers, and becoming much more confident and focused. Moreover, some of the codes started to take shape while writing these field notes.

### **5.3. Data Analysis**

Data were analyzed using the hermeneutic thematic analysis design. After transcribing the recorded interviews verbatim on Microsoft Word documents, I followed the steps prescribed by Braun and Clarke (2013) to analyze the data thoroughly:

1. Familiarizing with the data: although this is the first step in the data analysis, I was immersed in the data even before that, particularly during the data collection and transcription, then by reading the data at different levels of depth and listening to the recordings several times until I had a good grasp of and familiarization with the data, starting to recognize some notions that could be later as codes. During this phase, I continued writing down my ideas and everything came to my mind in the journal/diary that I used after each interview.
2. Coding: the process followed here was a mix of complete and selective coding, in that I coded everything relevant to the study questions, and at the same time, I was sensitive to those chunks of data that are more representative. The created codes were at first data-driven, which means that they mirrored the semantic explicit content of the participating teachers, then at a later phase, I was able to go deeper into the data and be sensitive to its implicit meaning, as Braun and Clarke (2013) mentioned that the analysis could transfer from the surface reading of the data to the latent level of reading the meaning. NVivo 12 software application was used for arranging codes, for it was a helpful instrument in organizing and providing quick access to the codes with their belonged excerpts.
3. Identifying patterns (Theming): at this phase, I was moving through the codes back and forth, trying to identify the patterns of data that would be candidates for themes. A theme holds central, broad and meaningful features and concepts that relate to the questions of the study,

and the process of theming is an active one, as it is shaped and influenced by the researcher, so the themes are created rather than discovered (Braun and Clarke, 2013). Here, I was able to recognize the most important and recurring patterns of ideas and I started creating initial themes and sub-themes from the codes. While classifying the codes into themes, the excerpts for each code and for the broader themes were collated with representative excerpts.

4. Reviewing themes: the initial themes were revised and those themes that did not relate directly to the study's aim were excluded. It took a long time to refine the most important themes that serve the study's questions. Even though some of the themes were common and reoccurring, they did not fit the study questions, so I had to omit them.
5. Identifying themes: the themes were clearly named and defined in this phase and the relationship between the different themes was specified hierarchical and laterally (See p. 32). A thematic map was developed to outline the themes, sub-themes, and the relationship between them. (See Figure 1, p. 33)
6. Writing the results of the analysis: finally, the themes were analyzed descriptively according to the researcher's interpretation of the participants' quotes, as displayed in the upcoming section.

The ground for the thematic analysis is the hermeneutic approach to interpreting data, which belongs to the interpretative qualitative school that highly regards the social context, the subjectivity of the participants, and the researcher's reflexivity (Prince and Mallabon, 2020). This method of analysis is featured as comparatively easy to be conducted by inexperienced researchers, flexible to be utilized with different qualitative orientations of data analysis, inductively, deductively, or critically. The interpretive hermeneutic analysis supports unearthing deep meaning-making that the participants bring from their experiences (Braun and Clarke, 2013). When analyzing the data of this study, I tried to allow the data to speak for themselves, which implies that themes emerged from the data inductively, yet, some of the themes were constructed deductively, for the influence of the researcher's educational and professional background.

## **5.4. Ethical Considerations**

The integrity of any research is determined by the extent of its commitment to ethics. Although the acquisition of knowledge is of significant value, it should not be at the expense of the

participants' welfare and interests as ascertained by Bryman (2016) and the Swedish Research Council (2017).

Ethical responsibility is highly considered in this study, as it followed the ethical deliberations recognized in the scope of the scientific research. The researcher was aware and committed to principles of respect, trust, justice, anonymity, confidentiality, and honesty in interpreting the data. The names of the participating schools and teachers have not been mentioned in the study, and the recorded interviews were deleted from the devices once completed the analysis. The participants are presented in the Results section as Teacher 1, Teacher 2, and so forth. Apparently, the research topic of this study is not sensitive nor personal and the interviews did not lead to any form of harm, to the best of my knowledge, since the anonymity and confidentiality of the participants and the data have been warranted.

The participants signed consent forms that were distributed before the interviews, accompanied by information sheets about the purpose of the study and how the data will be dealt with (see Appendix 2).

## **5.5. Quality Aspects and Limitations**

One of the criticisms against the qualitative method is the limited transferability of the findings to other settings because it is hard to generalize interpretations of a phenomenon to other situations with different input. However; the results of this study are not necessarily generalized universally, instead they could apply to similar phenomena with similar circumstances, as this is also argued by Larsson (2009 as cited in Cohen, et. al., 2017). The produced knowledge could be endorsed as coherently true and internally consistent by relating it to other relevant studies and observations in the field of outdoor and environmental education. This also could be justified by the theory of falsification (proposed by Karl Popper in 1934) which assumes that a body of knowledge could be considered scientifically genuine if it can be proved or disproved, which distinguishes it from pseudo-knowledge (Cohen, et al., 2017). Moreover, a detailed description of the characteristics of participants, settings, and context of the study aid the reader to assess the possibility of transferability of the findings to other analogous inputs (Braun and Clarke, 2013).

Another limitation to be raised here is the subjective bias that inevitably influences the results of research. The researcher as a human being decides the research design, the choice of the

methods for data collection and analysis, and finally interprets the data by applying subjective standards. This qualitative study is inescapably influenced by the researcher's subjectivity, yet; staying close to the interview guide minimized the bias. Braun and Clarke (2013) confirm the value of subjectivity in qualitative research, as they claim researchers are not robots, they unavoidably reflect their perspectives to their interpretations, which makes each study a unique contribution to social knowledge. Likewise, the process of reflexivity, whether functional or personal, is of great importance as one of the metrics of quality control. For this reason, I kept a research journal/diary along with the phases of the research, namely during the data collection, to write down thoughts, feelings, and perspectives. The journal was very helpful while analyzing the data.

Challenges are inevitable during the practical processes of gathering and analyzing the data, which could hinder or affect the study's findings, so; I had prepared a plan B for some of the expected risks before starting data collection and analysis. The most obvious challenge that I faced during the study collection was the language barrier because of the difference in the mother tongues of the interviewer and the interviewees, so the English language was used as a foreign language to communicate. This was a challenge in terms of difficulty in clear expression and proper usage of vocabulary and other problems related to foreign language use. The teachers could have explained more and better if they spoke in their mother tongue, i.e. Swedish. To damper this limitation, I sent the interview guide to the participating teachers to have a look at before the interviews, so that they could prepare themselves and arrange their ideas. Moreover, to mitigate the effect of this limitation, I kept a notebook with me and whenever the interviewee was facing difficulty finding certain vocabulary in English, I told them to write it down, then I translated it later on by Google Translate.

For the unexpected technical problems, I used two devices to record the interviews, a laptop and a mobile phone to keep backup copies for emergencies., and after each interview, I uploaded it on Linköping University online cloud (OneDrive).

The small sample of the study should be acknowledged in this space, as the number of participants was thirteen teachers. Incorporating more participants would have given more trustfulness and transferability to this study. Moreover, collecting the data from the young students themselves, to explore their environmental consciousness would be preferred over collecting data from their teachers. Despite that, the study provides rich manifestations that

could be applicable to other contexts with close circumstances, and beneficial for interested outdoor educators and environmentalists.

Another constraint I faced was the squeezed time allocated for conducting the thesis, as this could affect the study in one way or another, for instance, not enough time for moving forth and back through the data during the analysis, and for elaborating in writing the study sections.

Regarding the study keywords (Outdoor Encounters in Nature), and (Environmental Consciousness), they are defined in line with the study purpose, to avoid ambiguity and misunderstanding of the concepts.

## **5.6. Method Discussion**

The onto-epistemological underpinnings of this study are based on the relativist ontology that considers reality as relative, i.e. there is no one true reality in the social world, rather, there are multiple realities constructed by different people with different perspectives and values. Here, the participating teachers are creative meaning-makers of the concept "environmental consciousness and its connection to outdoor encounters" and their cognitive constructions are context-bound, which implies the existence of various and even contrasting interpretations of the same experience. The task of the qualitative researcher, here, is to present these unique interpretations and understand the surrounding social and cultural context of these interpretations, using words rather than numbers (Cohen, et al., 2017). Although this is one of the criticisms against constructionism as claimed by Hammersley (1992 as cited in Andrews, 2012) who put the relevancy of these findings in question, I believe that different interpretations enrich the field and contribute to manifestations of some parts of knowledge related to a certain social phenomenon, attempting to generalize some common characteristics with similar phenomena. Exploration of how outdoor encounters influence the children's environmental consciousness, as the aim of this study, has revealed the teachers' interpretations of this phenomenon in the Swedish context, which could be similar and applicable to other settings.

The interpretative paradigm aligns with the aim of this study, in that it allows exploring how the teachers conceptualize their outdoor experiences in relation to environmentalism cognitively and socially. Hence, the choice of the thematic analysis, and the semi-structured interview appeared to be appropriate for this study's aim. The interactions between the participants and the researcher as human beings during the interview, as well as their

surroundings, entails the knowledge is constructed rather than discovered, interpreted subjectively, influenced by the researcher, the studied people, as well as the different times and places. This tangled nature of social interactions and meaning-making justifies the adoption of interpretivism as a theoretical perspective of the qualitative school in the recent study.

As there are different approaches to interpreting the knowledge, i.e. hermeneutics, phenomenology, and symbolic interactionism (post-structuralism), the approach that resonates the most with the aim of this study is hermeneutics, which gives priority to the holistic explanation of the meaning constructed by individuals through social interaction (i.e. among the participants of the study and with the researcher), as well as the contextual input (i.e. time, place, culture, etc.) (Cohen, et al., 2017). The justification for selecting the hermeneutics for this study was due to the tendency to focus on the holistic meanings the teachers create to interpret their experiences outdoors with their young students and how these experiences influence their conceptualization of the benefits of outdoor activities in boosting the environmental consciousness of children. Hermeneutics considers the researcher's pre-assumptions and values (Reflexivity), which inevitably influence data analysis. This process of analysis is complicated and tangled, in which the researcher dives deeper to understand the existing data in light of their prior presumptions, trying to find an interpretation for the parts of the data as well as to look at the data as a whole. This hermeneutic loop of reading the data from different angles presumably results in a rich and profound understanding of the data (George, 2021). Analyzing this study entailed going through this loop, as it was difficult to define when precisely the analysis started. The immersion in the data and the familiarization with the characteristics of the themes began after collecting the data; however, my presumptions about the results of the study that were based on my theoretical background had preceded, as I have been oriented by the reviewed literature about the linkage between outdoor encounters and environmental awareness. However, I tried to let the new interpretations that the teachers bring speak for themselves. Moving back and forth on the data (the written and the recorded) allowed deeper interpretation of the parts (the codes) and the full picture of how the concept of "environmental consciousness" was grasped by the teachers and how they interpret the constituents of the optimum application of outdoor activities for realizing such consciousness.



## 6. Results

This section aims to answer the two study questions, which are:

1. How do the teachers understand the potentials of outdoor learning activities in nature for the young students?
2. What factors contribute to a good application of outdoor learning activities in nature from the teachers' perspectives ?

The results of the study will be presented in the form of themes, that will be provided with some representative excerpts of the participating teachers. Three overarching themes are emanated from coding the data of the thirteenth interviews, one of which is split into two sub-themes (See Figure 1, p. 33). The first main theme (Authentic Learning) and the second main theme (Nature-Friendly Emotion and Behaviour) are related to the first study question, while the third main theme: (Pedagogical Guidance) with its sub-themes: (Environment-Oriented Curriculum), and (Teacher's Attitude and Role) answers the second study question. Naturally, the themes are interrelated and overlapping on some points.

### **Study Themes:**

Theme One: Authentic Learning

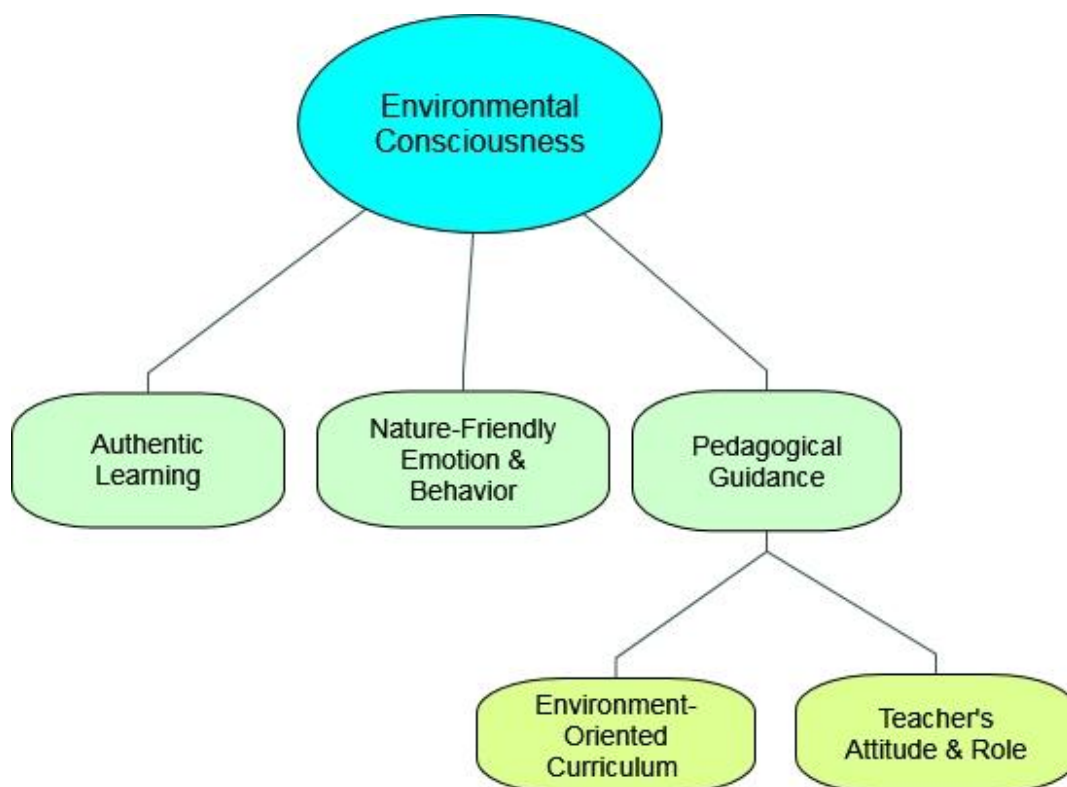
Theme Two: Nature-Friendly Emotion and Behaviour

Theme Three: Pedagogical Guidance:

Sub-theme one: Environment-Oriented Curriculum

Sub-theme two: Teacher's Attitude and Role

Below is a thematic map that gives visual illustration of the study themes and the sub-themes:  
(Figure 1)



**Figure 1** Thematic Map of the study Themes

## 6.1. Theme One: Authentic Learning

This broad theme has a big weight in the study data, in that the participants recurrently articulated in different places that outdoor learning activities in nature or even small walk-and-talks provide an authentic learning for the young students. The theme partly answers the first study question.

It is repeated in many utterances of teachers that outdoor encounters evoke the inspiration and the interest of young students because they got a chance to see things in real, which motivates them to enquire for more details. When I asked her about the benefits that she finds in outdoor encounters, Teacher 12 replied:

I think for me; I see more inspiration for the kids [...] you can often find areas of children's interest when you're outside so they can then bring back to the classroom. So If they're interested in birds or in fungus or leaves, they can come back and use that as a starting point for their own kind of inquiries about whatever they want to learn about .

The quote clarifies one benefit of outdoor activities, which is triggering children's curiosity, since they are attracted more in actual things that they experience in nature, and this attraction push them to ask for more information from their teachers. That said, gaining more literacy about living creatures in nature, which I see the first step in developing their appreciation to nature.

Exposure to outdoor settings in nature may give children a chance to explore new or unexpected experiences, as captured in the quote below by Teacher 11:

There was a hedgehog and squirrel. They are very alike [...] as it's quite similar for the children and they told me they saw a hedgehog climbing up the trees in the school yard, and I said I have to see that hedgehog because I haven't seen a climbing one ever, and it was a squirrel instead. Then we started to work with animals in the city because a lot of animals that they don't see them because they hide during the daytime or in the bushes. So, we combine the natural science with the Swedish lessons, they're writing about animals in the city, and when we're outside, we look at different kind of animals. So we use their interest to continue our work to make them more aware. There are foxes, not just rabbits or cats, but there are wild animals in the city, and which kind of animals can we see some trace from them? So try to make them more interested when they show the interest.

In this excerpt, we can notice the fragmented knowledge that the children had regarding the difference between two mammals living nearby, and how the outdoor encounter gives them the chance to meet one of these animals in real, but it was hard for them to know which one is which because they have never seen them before. This spontaneous situation that happened outdoors urged the children to tell their teacher about it. The teacher then realized that they need to know more about such animals living in the children's surroundings, and then employed this situation to increase their vocabulary and information about local animals.

Most of the participating teachers assured that outdoor activities in nature provide genuine hands-on learning experiences to the children, as they use all their senses to recognize things around them. This idea could be found in Teacher 8's comment below:

The kids love rain as well [...]. You hear things, and when I take them on the walk, they can taste different things, especially in spring and in summer, we pick some things with us from the nature because the kids create things out of nature, like pine cones and wood. We always carve things, when the kids ask, and every time they want to do that, they train the hands to do the, I mean the concept like the mind has to be in the hand, when you carve, you use all the senses.

The excerpt shows the sensual experiences that the children have when outdoors, as they have the chance to see, hear, smell, and touch everything in the nature, which in the end enhances their environmental knowledge and feelings of attachment to nature. Additionally, they train their creativity by using the accessible natural stuff to make new stuff as also explained by Teacher 9:

We have in grade three something that we call (Farmers' Year), and we learn about the farming year with the seeds in spring, and taking care of the crops and the harvesting, and we go and visit a farm or farmers, look and learn.

Such practical experience contributes to elaborating the children's environmental competences, in that they are empirically involved in real-life activities, such as farming and carving.

For this reason, I believe that watching a caterpillar is better than reading about it, and this has been proved in different scientific studies (Dewey, 1997/ 1859-1952; Beery and Jørgensen, 2018). Teacher 4 has the same opinion too:

They see the birds or the insects in their own habitats, not only in a book or in a film. If you take an insect inside, it's not in their habitat, so that thing is very important, and the flowers also, if you pick a flower and take it inside, you can't see why it's growing in that place and not

in that place [...] So I think you get knowledge of, bigger knowledge when you're doing it outside in the nature, then if you bring it, brings the nature inside, because it's kind of fake, world inside. [...] I think that's important for the education to learn and see it for real.

This manifestation stressed that the authenticity of learning in outdoor natural settings consolidates the elaboration of the children's environmental knowledge. The teacher argued that learning outdoors is unlike learning only from abstract books, since the earlier provides an original in-the-field experience where the children can identify the natural objects and distinguish the various types of them, as well as the natural phenomena and changes that happen in the actual world.

Another potential of outdoor encounters related to this theme and highlighted by the participants is the fruitfulness of making connections between outdoor experiences and abstract knowledge in the classroom. These connections help young students learn better and in a more meaningful way. Asking her about the nature of the outdoor activities she conducts with her young students, Teacher 11 illustrated:

We look at real birds and then we discuss it. Then we write about it when we come inside. So we try to use what we experience outside inside. [...] We tried to connect everything we do with the outdoors [...] I think for many of our children, we have to be very concrete to feel things and to get to know, [...] we go out to look at animals or just explore things and if we do that, we can put words, then it's easier inside when we read about things or discuss: What do you think happened when we so and so? Then they know about it, or I can remind them: Do you remember when we went to that pond, when we saw these animals? Ok, they can use it like hooks to remember the facts. A lot of the books today are very abstract, so we need to come closer to the reality so they know what we're talking about.

As noticed in the previous quote, children learn tangibly when they connect what they learn inside to their experiences outside, and this kind of authentic learning lasts longer, with the help of their teacher making such links and benefited from the outdoor activities effectively to support their knowledge about the environment. Obviously, different people have different ways of learning, some students can acquire theoretical knowledge easily, while others learn better from practical experiences in which all their senses are engaged, and here comes the benefit of outdoor learning in offering such variety of encounters to satisfy the different learnings styles.

## 6.1. Theme Two: Nature-Friendly Emotion and Behaviour

A visible theme in the study data that reveals the effect of outdoor encounters in nature on the children's feeling of respect and care for nature, as well as their pro-environmental actions.

This theme relates to the first study question.

The participants voiced that being close to nature not only expands the children's environmental literacy but also increases the possibility of valuing the living creatures. The following explanation by Teacher13 captures this idea:

I think if you can go outside and look at leaves, plants and insects, you value them, then hopefully, when you get older and say, well you know if you use chemicals or if you burn wood if you need more resources, then it's gonna use the habitat where these animals are. Hopefully they'll get a connection. I think it's important that children know the names of birds and trees and insects because if you know the name of something, you sort of, value it. If it's just a bird or a tree or a flower who cares? So I think it's important to know the names of things.

As we can see in that excerpt, the teacher clarifies how knowledge about nature promotes the appreciation for it, in other words, when children have a good comprehension of the non-human worlds and how their lives are important for the ecosystem and how human affects their lives, their feelings of sympathy for these living creatures increase, which expectantly refrains them from harming nature in the future with irresponsible practices.

Teachers supposed that close contact to nature and involving young students in different activities related to other living creatures strengthen the feelings of inclination to nature. This could be touched in the following comment by Teacher 9 when I asked her about how being in nature influences the children's feelings toward nature:

I think you'll get another feeling if you're outdoors, [...] if you touch a tree and if you shall draw it, look at it and grow it or just study, you get another relation to what's around them, some respect, some relationship, maybe.

Here, the teacher presents an example of how to engage children with various activities with a tree, proposing several ways of learning and from different angles, as such leads to showing more appreciative feelings toward these creatures. This can be also elicited from this quote by Teacher 10:

When we were building shelters for animals, some students were really trying to find some actual insect that they could put in the little shelter, so I ended up with the mini shelter that

some girls had made, like a hotel for ladybugs, and there were chasing after lots of ladybugs and being very gracious and very graceful, they were putting them on leaves, then in that mini hotel that they have made for. We also had in one of the trees of the school, in the stem, a hole with lots of baby birds, there was a nest with actual birds, and the students had spotted it and they had protected the tree, so nobody would go around it. They had some cones, and putting like a warning signs, and they were telling people: Don't go next to that tree because the smaller birdies are living there!

Instead of teaching them only in the classroom about the insects and their habitat, he inspires them to make small houses for these insects. By so doing, the children build up sort of appreciation and tendency to insects. This means that they become more conscious about non-human worlds. This is also apparent in the other example he provided about how the young students tried to protect a nest with new-born birds in, which signifies their awareness about living creatures in nature.

Some teachers indicated that recurrent visits to nature contribute to creating a relationship with nature, as this frequent contact to natural settings becomes a habit that the children do not want to stop. I asked Teacher 3 if there is any connection between being outdoors in natural settings and children's awareness about nature, his wording was this:

if they experience that, if you create awareness, if they go to that often, and this is repeated, they love it, they don't change it, they want to go on fieldtrip and respect. [...] We have this fire pit at school, we would have a short Christmas gathering where we eat hotdog and then we discuss, we read a story around the fire, that's also to use it because I also think if we use nature for that, you will also respect nature, the more you spend time in it, the more that the students will respect it.

In this quote, the teacher uses an outdoor setting for doing something interesting for the children, gathering around a fire pit, listening to a story, chatting, barbecuing, and eating together, thereby they become more attached to that setting having lovely memories to take with them for events happened in that place in specific, so they love to repeat such visit and make it a habit. This excerpt could be related to the theme in that getting used to being in nature regularly raises the possibility of falling in love with nature and developing positive attitudes toward everything in nature.

Another point to be raised in this context is the children's way of behaving towards nature, as this is a logical consequence of having a positive attitude toward nature, though it is not

scientifically evident. However; some of the participating teachers noticed that outdoor activities accompanied by lessons and discussions with teachers obviously lead to a pro-environment manner. This essence appears in the following excerpt by Teacher 2 when she was asked about the relationship between being outdoors and the pro-environmental behaviour:

I can see they are taking care about animals when we teach about animals and they're taking care of flowers and everything in the nature when we have talked about it and see, I've seen it. [...] We also went away to a place they had bees, so it was very interesting to see, not only about bees, about every little insect so small because they were not screaming so much and were not afraid of it so much, they took care of them, and before maybe they put their foot on the small animal, so they could see everything in the nature more, I think so, and that's good.

In the previous comment, the teacher observed her young students' practices toward some animals, insects and flowers and how they show their sensitivity and awareness about these living creatures. Moreover, the feeling of fear from insects has started to decrease because they have become more cognizant of the non-human worlds and their benefits to the ecosystem and because they have the chance to meet such insects in reality, so that this fear of the unknown has disappeared. As a result, this awareness is translated into a good conduct.

Another quote by Teacher 6 adds that developing a feeling of attachment to nature and prospective green behaviours entails early initiation of environmental concerns:

I think if the children start when they're young to learn about nature and about environment and stuff, then maybe they make better choices when they growing up. I think it generates more consciousness with the children for the future too, to be aware. So when they are outside and they can recognize all, this is palm tree or this is a... I think the children feeling more home there and want to take care, don't want to break the branches and stuff because they know this tree and they know this flower and get the relationships. I think it's a very important these days.

As noticed, she explained that what people feel and think about nature is a result of how their connectedness to nature has been developed since childhood, attributing pro-environmental attitudes and behaviour to exposure to nature and by learning about nature and environmental issues. Again, Teacher 9 supposed that helping children learn to appreciate nature is as important as being outdoors, stating:

Well, not just by being in the nature but, if you talk about it and you should take care, and then there is a child, he doesn't listen, and then we're outdoors and he may be put his feet on a slug



or a snail, maybe like that. The other children, most of the other children, will react. And that's an education too, that the other children don't like it and they get upset.

Here, she depicts how children are angry when they encounter misbehaviour against nature by their peers, which indicates that they have positive attitudes toward nature and act accordingly, and this is because of having learnt to care about nature.

## **6.2. Theme Three: Pedagogic Guidance**

An overarching theme that discusses the importance of the educational orientation for realizing the required results of taking children outdoors in nature, as this answers the second study question. Two interrelated sub-themes are branched from this theme, which will be presented separately:

### **6.2.2. Sub-Theme 1: Environment-Oriented Curriculum**

Most of the participating teachers augmented the role of the curriculum in realizing the hoped outcomes from taking children outside the classroom for different outdoor activities in nature. Three factors are mentioned in regard to the curriculum: the goals, the content, and freedom. As for the goals, the teachers see that there should be clear pedagogical goals to be followed when planning outdoor activities, as commented here by Teacher 13 when I ask him about the benefits of outdoor education:

Going outside can have a benefit on making the thing real, but it's good to be connected to clear objectives and outcomes that you want to see in the classroom.

In the aforementioned comment, the teacher opined that depending only on outdoor activities with no clear plan or educational goals in mind may not lead to the wanted result, which is, in this context, raising the children's environmental awareness.

The teachers denoted that the content of the curriculum, either in the public Swedish schools or in the international schools, includes units and materials related to the environment and sustainability of the natural resources. This instructional orientation assists to connect the outdoor activities with learning inside the classroom. The quote below by Teacher 12 from an international school explains this:

Some students in our school would talk about those things because they are very aware of, I mean, it's part of our curriculum, our learning that we talk about, for example, the Sustainable

Development Goals from the United Nations, we use a lot in our school and the end of the primary school of children would choose one of these sustainable development goals to do projects on exams, so many children are aware of those things in the school, I think.

Teacher 5 from a private Swedish school that uses the Swedish curriculum added:

They have a project with grade 2, 5 and 8. All classes in the area can visit "Kolmården", the zoo park, about 75 kilometres from Linköping and they have a project about water, and they talk about how important it is for the snow leopard, dolphins and seals.

In the two quotes above, the teachers communicated that the curriculum, the Swedish and the international, contains units of inquiry related to environmental literacy and sustainability, for example, life in water and sustainable development goals, which means that the content provides the young students with the materials that raise their environmental consciousness.

Some teachers revealed that there has been a change in the Swedish curriculum, in that the priority in the modified curriculum is for nature. Teacher 7 explained:

if you look at our curriculum, now it's changing, first it was called LGR 11, and now it's called LGR 12, so there's a new one this year and in this curriculum, the environment is even more spotted than the one before, more pointed out, more important, I would say that the last one was more like human and nature, and now it's nature and human.

From the quote above, we can elicit that the new curriculum gives more importance to nature, which indicates that there would be more included lessons about non-human worlds and the ecosystem. Not only the content but also the way of presenting the content would give more superiority to nature, which is another required factor for the realization of the consciousness about nature.

In the meantime, the Swedish curriculum and the IB (International Baccalaureate) program give space to teachers in deciding their way of teaching and for students in choosing their way of learning, as explained in the following excerpts by two teachers, Teacher 12 from an international school:

This school is an IB school, so we do the primary years' program which is very much focused on allowing a lot of freedom for children to choose how they like to learn and inquire about the world around you and supporting your local..., so particularly this school and the curriculum we use definitely really, really focused towards the environment outside, what part do we play in looking after our environment.

And Teacher 11 from a Swedish school:

Maybe you hear something spontaneously, but you pick it up as a teacher and continue working with it, but you know the direction with the goal, so we have a goal and we decide the way to the goal. We have a lot of freedom in Swedish curriculum to go our own way, as long as you meet the goal.

The teachers in both comments appreciate the freedom they are given in deciding their way of teaching in light of the curriculum's broad goals. Strict adherence to pre-stated steps or methods constrains the teachers' creativity and good employment of the different learning situations. Since teachers are in direct contact with their students and they are aware of their students' needs and interests, so they are the persons who decide which content or method works for their students.

### 6.2.3. Sub-Theme 2: Teacher's Attitude and Role

A theme that deals with the effect of the teachers' self-motivation, mindset, and attitude toward outdoor education, as well as the role that they play to enhance outdoor education. The participants elucidated that a teacher's self-motivation and interest either or not urge to take young students outside the classroom. The more the teacher is inclined to be outdoors in nature, the more they strive to employ the outdoor natural settings for education. Several teachers stressed this hypothesis, yet two of them have been chosen to display their statements, here. When I asked them about the motive that makes them go outside the classroom, Teacher 5 spelled:

First of all, my own love to nature and what it makes to me.

And Teacher 11 has the same reason too, with more explication :

For me it's more fun. I don't like to be inside, I like to do things and feel things, and if I like to do that, I think the students also like it because I'm more interested, so it's easier then.

Commenting on their statements, the first teacher clarifies that her innate passion for nature and the benefits that she gains from nature drive her to take her students outdoors, and this motivation transfers to her students too. The second teacher also has the same fondness for nature and she prefers the outdoor surroundings to the indoors. That means when you like doing something, you do not focus on the hindrances, rather you only see the opportunities and the

positives. So, in this case, not only the teacher will find it easy and interesting to go outdoors but also the young students will be influenced by their teacher's motivation.

Teacher 9 explicated the importance of the teacher's attitude as an influential element in the success of outdoor education application, saying:

Well, the attitude of the teacher is very important, I should say, unspoken attitude, not what you're talking about. That's important in everything you do, of course. It is thought that you should explain with words everything, but that is not the basic thing, the attitude you have inside yourself towards nature, towards what you're doing, to the subject and the kids and teaching, that will keep success.

She believes that the teacher's attitude toward everything, including nature, teaching, students, teaching subject...etc. specifies their approach and method of dealing with such things. So; succeeding or not in applying outdoor education in natural settings is determined by the teacher's stance about outdoor education and about nature specifically.

For this reason, the teachers denoted the necessity of having a new mindset about outdoor education, and try to see the potential of it for them and for students, as stated by Teacher 1:

I can absolutely understand in a school context that it is hard to go outside and have a math lesson and do some of the work outside. It's a lot of students, it's complex, I can understand it, but I think if their mindset is changed and think I will try, then I think they would do it.

In the previous comment, the teacher advises other teachers, who are not motivated to go outside the classroom, to think of outdoor education differently by reflecting on the potential rather than the difficulties, this way of looking positively at outdoor activities helps overcome their hesitance in taking a step forwards .

Relatedly, Teacher 2 justified that some teachers do not take the risk of making lessons outdoors because they think that students do not actually learn outside the classroom:

I think teachers won't dare to go out because that's Oh that was the lesson that we didn't do anything. Maybe how you think about outdoor education too. It's important that's really learning when you are outside.

In the quote above, it is apparent that some educators underestimate outdoor education since they do not see the direct outcomes and benefits. They think that education is only what is

going on inside the classroom, i.e. lessons, presentations, and alike. Teachers, then, need to be assured that it is possible to meet the goals of the curriculum even though they teach outdoors.

The teachers emphasized that they have a role to play in inspiring the children to appreciate nature by considering more activities outdoors. Asking him about his opinion if outdoor activities influence the students' behaviour toward nature, Teacher 5 had good wording on that:

Yes, I think it's teaching them to respect the nature and the animals, we used to say we are guests here, the animals live here, so don't shout too much because they are living here. It's like baby birds now, so you cannot shout so much because they will be afraid. So, it's a home for many animals. So you can see it from that kind of view.

The participant, here, told us about his creative way of evoking the young students' sympathy and mercy for other living creatures, like birds, by drawing their attention to the right of non-human worlds to live peacefully without any harm or disturbance from the human world. Here comes the significant role that the teacher plays in benefiting from the outdoor setting to start a constructive and directed talk with the children to increase their environmental consciousness.

The participants' advice for other teachers is to have the courage to start simple steps in seizing the opportunities of outdoor encounters and try to keep even simple outdoor activities and make it a habit. Let us check these two related quotes:

Do not be so afraid. If you can give one or two lessons outside, you're going to get more and more ideas, I think. That's one big advice, because when you are outside you can get the idea when you are over there.

In the quote above, Teacher 2 interprets the teachers' fear of going outside the classroom as their concerns of finding applicable ideas for outdoor activities, so she opined that starting with even a few planned lessons outdoors could be enough for inspiring a teacher, in that the outdoor surrounding is a source of inspiration.

While Teacher 10 finds out that the problem lies on the teacher's desire to stay in the safe side:

it's just depend how open-minded the teachers are, some teachers feel very safe in the little box, the classroom box, and some teachers that I've seen, the most using the outdoor space. It just comes down to your own creativity and I think you need to push the boundaries of the classrooms. [...] I think it's important for the students to be close to the nature and learn to respect it, because no matter what the nature will always be, we are not gonna outlive our planet, we always take over the environment.

He argues that the teachers prefer to keep their routine and are afraid of any change in their way of teaching, so, he encourages them to think out of the box and take the burden of helping their students become aware of the importance of the earth's sustainability.

Another visible concept found in the data related to this theme is the significance of adults' guidance in terms of discussion or behaviour to attain the required outcomes from outdoor learning .

The participants stated that outdoor activities should be accompanied by a guided conversation in order to draw the children's attention to the necessity of maintaining the environment and natural resources. Teacher 12 puts the weight of guiding children on adults, clarifying:

I think their [children] attitude changes if you do lessons, or an adult helps them to learn about these things. [...] leading discussions and modelling behaviour is quite important. I think just being in nature, no. It requires teachers and other adults to share information because it's hard for children can just make connections on their own. Of course, we can walk around in the park, which we did, litter picking on Earth Day, they can go: Oh! Someone dropped this, oh, that's not good. Then they start to think about it. But often younger students need an adult to help them connect what they see in the environment with their own understanding.

As we can notice in the previous quote, the teacher augments the adults' assistance in orienting the young students because they may deviate in the wrong direction if they are left with no instructional guidance. She thinks that only being outdoors in nature does not mean that they would be cognizant by themselves, as they are still young and need some help to get things right.

When I asked him to give me some examples of a noticeable change in the children's attitudes due to being outdoors in nature, Teacher 2 responded:

Many time they wanted to put the foot on the animal, like an ant, but: oh no! we can help it out so we can take care of it. We also brought some glasses and take animals in them, you can look at the animal and then we have to put it out again in the water or in the nature. So we have to teach them respect for animals and the nature. They also build blocks in the creek, so they stopped the water and then we have to: Oh now we have to take away this block so the water can go, because otherwise the frogs over there don't get any water.

In this narration, it is obvious that the leading discussion and the teacher's behaviour are substantial in guiding the children away from bad conduct against nature. The teacher in these

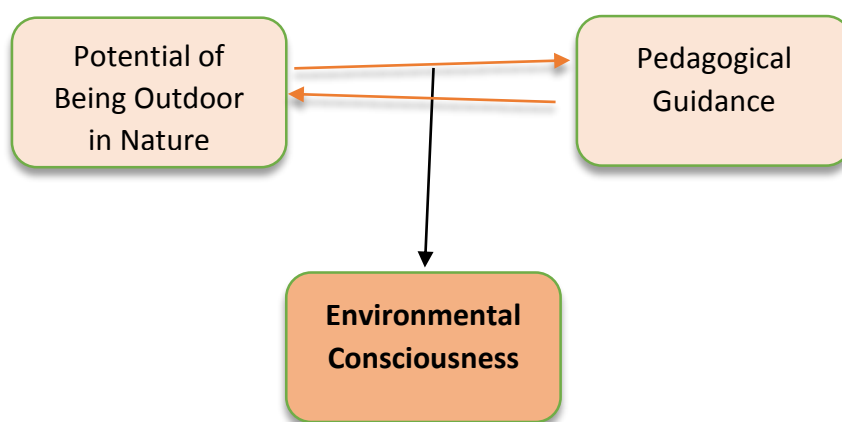
two situations made an oriented talk with her young students and was a good model, as she was able to rectify the children's bad conduct of smashing the insects by asking them to participate in taking care of the ant they wanted to hurt and providing a shelter for it in a glass for a while to let them observe the insect and develop a sort relationship and sympathy, and then let it go to nature again. Similarly, she reacted wisely when the children put some blocks in the creek, as she told them how their irresponsible deeds could affect the lives of the frogs on the other side of the bank because of the absence of water.

Some teachers asserted the role of storytelling in conveying the message in a compelling way. Here is an articulation by Teacher 13:

I think storytelling has a strong place to play. So if you can get a nice setting and read a story about the environment, I think being outdoors is a great opportunity for telling stories. And the stories are very important because, often you remember a story and it can touch your soul, whereas a long lecture from a teacher about sustainability and this and that, they can forget that.

The excerpt shows the preference for telling a story than presenting a lecture on any topic, and in our context on nature and its sustainability. The teacher illustrates that the outdoor setting is an ideal place to tell a story about it so that you make a deep and memorable lesson. Hence; different strategies could be used to increase the children's awareness of nature and how to save the environment.

Below is an illustrative chart, illustrating the interaction between potential of being outdoor in nature and the pedagogical guidance required, and how this interaction prospectively leads to environmental consciousness:



**Figure 2 Illustration of Study Results**

## 7. Discussion

In the following pages, I will present an interpretation of the study findings in relation to the existing literature in the fields of outdoor and environmental education, ecological psychology, and environmental psychology. The section starts with a short introduction of the findings, followed by a discussion of the findings theme by theme. Then a brief account of the study implications and a drawn conclusion will end this section.

The first question of the study sought to unravel how teachers of primary schools perceive the potential of outdoor activities in nature for their young students. The results show that the teachers look at outdoor natural encounters as an asset for experiential learning and stimulating children's environmental consciousness in terms of their nature-friendly emotions and behaviour. Most of the teachers denoted that outdoor experiences in nature provide opportunities for elaborating authentic knowledge about nature and for raising appreciation for nature, yet; few teachers noticed observable friendly-environmental behaviours.

The second study question investigates some of the factors that contribute to the optimum application of outdoor learning activities in nature perceived by the teachers of primary schools. Their answers reflected the importance of pedagogical guidance during the outdoor activities in enhancing ecological literacy and appreciation for natural entities, as well as the teacher's attitude and role as influential factors in the success or failure of the outdoor learning activities. In general terms, the findings of this study attune to the reviewed literature to a large extent.

### 7.1. Theme One: Authentic Learning

Most of the participating teachers appreciate the outdoor natural setting because it allows authentic experiences in nature. These benefits are noticed to be related to experiential learning and could be summarized as follows:

1. Triggering curiosity and inspiration.
2. Ecological literacy.
3. Engaging all senses.
4. Practicing hands-on activities.
5. Experiencing real-life activities in the actual world .
6. Connecting outdoor experiences with indoor knowledge.



Echoing one of the goals stated in the Swedish curriculum for compulsory school: " A sense of exploration, curiosity, and desire to learn should form the foundations for school activities." (Skolverket, 2011) (P. 9), the teachers' narratives clarify that the natural setting is a source of inspiration for children. Things are real outside the classroom and invite the curiosity of the young students to know more about what they see in their surroundings, so they are more interested in asking their teachers, which leads to elaborating their ecological knowledge. Similar findings by Faskunger, et. al. (2018) showed that outdoor experiences inspire young students and trigger their motivation, curiosity, and creativity. Fägerstam (2014) also spelled that motivation is a benefit of outdoor experiences, but; her study was in the junior high school context.

Another benefit of the outdoor natural exposure, as emanated in the teachers' accounts, is that it is ideal for exploring nature, encountering living creatures, and live unexpected new experiences, so it is a good chance for the teacher to bridge the gap in the children's environmental knowledge and use their interest to make them more eco-literate and aware of their local environment by giving them the chance to reflect and provide relevant information. This is not far from what Illeris (2007) suggested concerning the essence of experiential learning, in that the experience incorporates relevant and meaningful content that is based on the learners' needs and previous knowledge and conveyed through social interaction, in this case with the teacher. Fox (2008) also mentioned the cognitive aspect of experiences as a major constituent besides other aspects. Additionally, (Quay and Seaman, 2015) explained that an outdoor experience is not a learning one if it does not comprise a reflective process that ensures the grasp of knowledge from this unique experience. Earlier, Chawla (1998) clarified that interaction between people's needs, interests, and capacities on one side and the physical and social environments on the other side generates a valuable life experience.

Sensual learning is also another potential of outdoor experiences valued by the teachers. Being in nature means using all your senses effectively to recognize the world around you and learning genuinely in the real environment. Children have the chance to see, smell, hear, touch, and taste things in nature, so, not only their knowledge becomes wider but also their attachment to nature becomes greater. This is in accordance with Pritchard's (2017) description of the outdoor experience as " the sensory bridge between the human mind and the external world" (p.10), and with Beery and Jørgensen' (2018) claim that sensory experiences in nature could be utilized instrumentally for understanding, appreciating, and conserving biodiversity.

Relevant literature depicted experiential learning as learning by doing, and learning empirically (Dewey, 1997/ 1859-1952; Priest, 1986 as noted in Dabaja, 2022). This interpretation of outdoor experiences is supported by the teachers' excerpts, as this one by Teacher 3: "it's being in the real world and not in your cocoon, teaching the young birds how to fly, [...] how to take care of their environment,". Not only practicing tangible hands-on activities and training life skills but also doing this in the real world, as children can identify different kinds of living creatures and observe them in their original habitats. This could be a sufficient reason for motivating children to know more about their natural environment and care for it. In fact, authenticity is the most representative feature of outdoor experiences that appeared in the data. Here, is a self-explained example quoted from Teacher 4: "*some days we were watching the sun go and it was very nice. I think, it's always better to see the real thing than being in the classroom and only look in the books or on a film or something, it's I think it's better to be in the real world.*"

Anecdotal evidence shows that outdoor experiences function as consolidation for indoor learning. The teachers explained that they use outdoor activities either to connect what the students took in the classroom previously or to trigger their interest to enquire more about new things they encounter outdoors in nature, then they use it as a start for initiating new knowledge when coming back to class. Teacher 3 uttered: "*it's a meaningful and relevant connection to what is happening in the classroom,*" This mirrors what is found in the literature, particularly the description of the educative experience as linking to previous knowledge and meaningfully connecting indoors and outdoors experiences (Illeris, 2007; Faskunger, et. al., 2018), which means that children obtain a deeper understanding of the natural environment because they learn it in different settings and times, and simultaneously develop emotions toward nature. On this matter, Pritchard (2017) illustrated that our action is a result of our attitudes and prior knowledge, in that any experience includes three dimensions: being (the person's values), knowing (cognitive construction), and doing (observable behaviours). For this reason, I think, the function of outdoor education in "building bridges", as depicted by Faskunger, et. al. (2018) (p. 19), between theoretical and practical experiences should not be underestimated, as this constitutes the cognitive, emotional, and moral basis for an individual's actions in the future. In addition, studies on "udeskola" in Denmark showcased that learning activities conducted in natural settings enrich and support traditional schooling activities. (Bentsen, Mygind, and Randrup 2009)

To sum up this theme, the results of the study shed light on the important dimension of experiential learning as the core of outdoor learning with the miscellaneous opportunities it provides for children in terms of developing them cognitively, emotionally, physically, and socially, as well as strengthens their attachment to nature. These results harmonize with previous studies by Rivkin (2000) and Parkin (1998) who assert the richness of outdoor experiences and the capacity of providing exploratory, sensual, and practical learning. By the same token, Stelter (2005, as cited in Bentsen et al., 2009) clarifies that natural settings provide choices for various pedagogical methods that can boost learning based on situations and experience. He suggests that nature can be a good source for experiential and situation-based learning. Fägerstam (2014) suggested that only being outdoors even in the schoolyards benefits the students, however, her study focused on the student's personal development, no benefits regarding the environmental concern were referred to, and no emphasis on the natural setting was denoted.

## **7.2. Theme Two: Nature-Friendly Emotion and Behaviour**

A valuable theme stemming from teachers' quotes is the potential of outdoor encounters in fostering the children's feelings of appreciation for nature thanks to the closeness to nature and to the ecological literacy gained through being in natural outdoor settings, using all senses to recognize natural entities and connect with previous knowledge. This is aligned with the findings of Rios and Brewer's (2014) study, asserting that children's environmental consciousness is increased by experiencing natural settings because of the rich observation and sensory experiential opportunities they grant.

The teachers matched ecological literacy with a feeling of respect and care for living creatures in nature, as they believed if you do not know about something, you do not have any feeling toward it, and on the contrary, if you know how important the non-human worlds for the equilibrium of the ecosystem, you do appreciate their lives and develop a feeling of sympathy toward them. These outcomes are analogous to Cheng and Monroe (2012) who assured that learning about nature besides living near nature evokes belonging to nature and an affective attitude toward nature. They also resonate with what Parkin (1998) and Sandell and Öhman (2010) stated regarding the importance of outdoor environments in addressing not only the cognitive aspect but also the emotional, moral, and aesthetical ones.

Of note, teachers' reoccurring remarks on the importance of conducting outdoor activities in nature frequently to make a habit for the children, so that they build an emotional bond with the setting they repeatedly visit and probably hold positive attitudes toward all non-human worlds in that setting. These statements coincide with DeWitt and Storksdieck' (2008) and Rios and Brewer's (2014) recommendations for teachers who intend to take their students outside, as they assured that enhancing the learning benefits and environmental awareness could be realized by repeating outdoor activities and field trips in nature. Other studies ascertained that regular outdoor provisions in nature create an emotional relationship with living creatures, which develop positive attitudes and intentions to contribute to friendly-environmental behaviour (Collado and Evans, 2019; Cheng and Monro, 2012; Jeronen and Jeronen, 2012; Nicol, 2014; Duron-Ramos, et. al., 2020; Kals, et. al., 1999) because maintaining a certain behaviour requires practicing it to turn it into a consistent habit, as this coincides with Kollmuss and Agyeman (2002).

In the same regard, some teachers reported the interconnection between being outdoors in nature, improving knowledge about nature, developing affection for nature, and acting responsibly. This result is close to conclusions drawn by many studies in different disciplines that reported the linkage between connectedness to nature, by virtue of outdoor exposure, and PEB (Pirchio, et. al., 2021; Sevim, 2020; Frantz and Mayer, 2014; Lloyd and Gray, 2014). Other studies added the cognitive dimension, expressing that connectedness to nature promotes nature literacy, care for nature, and green lifestyles (Schatz, 1996; Gurholt, 2015). Also, Öhman and Sandell (2015), emphasized this relationship between outdoor learning and environmentalism, nonetheless, they denoted the inconsistency and uncertainty of this linkage because of other intervening factors. This is also asserted by Kollmus and Agyeman, (2002).

Most of the interviewed teachers posited that their young students developed positive attitudes toward natural creatures by being outdoors in nature, but; a few of them indicated that they noticed some green behaviours by their young students when going outdoors in nature. This is probably because noticing one's behaviours entails intended and focused observation, and for a long time. Most of the green behaviours that are noticed by teachers were related to school activities as part of curricular requirements, like littering, recycling, gardening, building shelters for insects, and so forth, as stated by Teacher 3:

"We have World Bee Day going on, it's a UN kind of, and some students are setting up a little stool on the playground to inspire their fellow students in the school and to plant more bulbs to make it more bee-friendly",

However, PEB that is spontaneous and out of an individual's internal desire has not been captured. This does not negate their existence, but as mentioned before, it is difficult to be observed or to be attributed to only being outdoors due to the other intervening factors, which are beyond the scope of this study. Here, I agree with Rajecki (1982 as noted in Kollmuss and Agyeman, 2002) who assumed that people's attitudes and behaviours are not consistent and difficult to be predicted or measured. Yet; most of the participating teachers do believe that being outdoors in nature is one of the factors that incite friendly-environmental attitudes and PEB, echoing Kollmuss and Agyeman's (2002) conclusion that positive attitudes toward nature indirectly influence one's behaviours and determine PEB. Another factor that I can mention here in passing is learning about nature and how to preserve it (i.e. environmental literacy through pedagogical guidance). In the following pages, I will explain this in detail.

### **7.3. Theme Three: Pedagogic Guidance**

This theme emanated from the narratives of all interviewed teachers, as they described the pedagogical process as indispensable to realizing the prospective learning outcomes and growing environmental awareness of children. This process can be divided into two foci, the curriculum's (goals and content) and the teachers' (attitudes and roles).

#### **7.3.2.Sub-Theme 1: Environment-Oriented Curriculum**

According to the participating teachers, the curriculum plays a significant role in orienting the educational process in regard to its stated goals and content, as well as the extent of freedom it gives to the teachers.

First, the teachers were convinced that there should be clear goals to be followed when conducting outdoor activities, as this helps make connections between indoor and outdoor activities, or better say between abstract knowledge and practical experiences. They expressed that the clarity of the curriculum goals in addressing the environmental concerns and striving to raise the students' awareness make it a helping tool for teachers to consider as an educational guide to follow when selecting the instructional materials and methods, as outdoor learning is

one of these methods. In this regard, the goals of the Swedish curriculum for compulsory school assure the importance of outdoor education and environmental awareness in many places in the document (Skolverket, 2011). (See section: Background of the Swedish Context, p.6) This study finding corresponds with Higgins and Nicol (2002), who affirmed that attaining the maximum benefits of an outdoor experience entails clear goals of the curriculum in front of the teacher's eyes. Again, DeWitt and Storksdieck (2008) recommend outdoor teachers to have clear learning outcomes and orientation for the outdoor visits and activities, share these outcomes with the learners before going outdoors, and allow reflection and feedback.

Second, the relevancy of the content pertaining to environmental literacy is visible in the study data. The teachers stated that the Swedish curriculum and the IB program have incorporated units of inquiry that address contemporary environmental issues, which assist their outdoor teaching by connecting what they teach in the classroom with the activities outside the classroom. By doing so, environmental awareness is consolidated. This coincides with Higgins' (2008) assertion to integrate crucial topics related to environment and ecological sustainability into the curricula as part of outdoor education. Moreover, Gifford (2014) and Chawla and Cushing (2007) concluded that PEB is provoked by education and knowledge about the environment. Not far from conclusions by Ardoin, et. al. (2019) upon reviewing 105 studies, all of which proved that environmental programs that are based on environment-related content have positive impacts on the participating learners' attitudes and behaviours toward the environment. This study's finding related to the environment-related content study outcome also corresponds with Kollmuss and Agyeman's (2002) belief that education consolidates intensive environmental literacy. Nevertheless, this outcome is incongruous with the findings of a nsive environmental literastudy by Edsand and Broich' (2019) which revealed that EE does not necessarily generate environmental awareness, as there are different factors that may intervene, such as the learner's cognitive abilities in science, family characteristics, socio-economic status, and so on, yet; they recommended that schools pursue their effort in improving EE in the curricula, but at the same time, consider the other factors that consolidate the pro-environmental attitudes.

Besides providing environment-related knowledge, the teachers think that it is necessary to teach children how to take care of nature. These statements resonate with what Hines, et. al. (1986 as cited in Kollmuss and Agyeman, 2002) proposed, in that environmental knowledge and knowledge about how to act ecologically are some of the factors constituting PEB. The

teachers also indicated that the Swedish curriculum has been changed to be more dedicated to environmental concerns, which corresponds with Breiting and Wickenberg (2010) who reported that the Swedish National Curriculum (LGR 80) has had formal initiation to EE and more inclusion of environmental-related topics.

Third, some teachers appreciated the flexibility and freedom they are given to decide their way of teaching. The teachers denoted that they have the curriculum goals clear in mind, they delineate specific objectives and plan outdoor activities accordingly. Becker et al. (2017) mentioned that Danish teachers have the right to decide which methodology to use since it achieves the general educational goals framed by the Danish Ministry of Education and the Parliament. So, from my point of view, I see that this freedom is important because teachers are the persons who can estimate the lack of environmental knowledge for their students by virtue of their close connection with them and can employ certain outdoor settings for the same purpose, thus resonating again with Higgins and Nicol (2002), when emphasizing that the teacher is responsible for selecting the content and the appropriate places that enable realizing the goals of the curriculum regarding the success of outdoor experiences. Likewise, Parkin (1998) posited that outdoor experiences are valuable tools for growing children's environmental consciousness, given that they are based on clear goals and conducted in appropriate settings.

### 7.3.3. Sub-Theme 2: Teacher's Attitude and Role

The participating teachers had a lot of comments regarding the influence of the teacher in the success or failure of outdoor education, explicating that a teacher's self-motivation, attitude, mindset, and role are to be considered for outdoor activities in nature.

For the teacher's self-motivation, the participants mentioned that as long as the teacher loves being in nature and appreciates its countless opportunities, such feeling transfers to the young students who in turn start loving, if not already, being in natural places and enjoy everything there. This accords with Becker et al. (2017) assertion to the crucial role of the teacher in the success of the teaching activities, explicating that teachers' motivation, beliefs, pedagogical ideas, and devotion are of strong impact on students.

Similarly, how teachers think and believe about nature and outdoor education reflects on their intentions and actions. Teachers having positive attitudes toward nature, strive to take

advantage of its potential for themselves and for their students, and the opposite. For that, the participants proposed that teachers should have a new mindset for outdoor education because if they recognize and value its benefits, they will be able to employ outdoor settings for education and for the development of the students' environmental awareness. These ideas are in line with Prince's (2020) assertion of the effect of the teacher's enthusiasm, values, and attitude on the success of outdoor experiences. Shume and Blatt (2019) also touched on the influence of the teachers' attitudes, as they expounded that teachers who had felicitous outdoor experiences in their childhood think positively toward outdoor activities in nature, and consequently, would like to conduct similar meaningful outdoor activities for their students. Nonetheless, some educators prefer traditional indoor education to outdoor education, claiming that children do not veritably learn when outdoors. Apparently, this is one of the mistaken beliefs about outdoor activities, as this underestimation of the value of outdoor education discourages them to take their students outside the classroom walls. Such points were raised also in other studies, referring to the influence of the teacher's attitude on the students' attitudes positively or negatively toward outdoor learning and as a result their awareness of the environment and its sustainability (Rios and Brewer, 2014; Frantz and Mayer, 2014; Amini, 2015).

Another major essence that emerged from the study findings is the significant role of the teacher in growing the young students' consciousness about nature. Most of the participants mentioned that there should be pedagogical guidance for children to assist them to recognize how beneficial is the ecosystem, appreciate all the non-human worlds, and develop positive attitudes toward nature, which presumably push them to act green, that said, teachers, should initiate a leading discussion during outdoor activities because it could be hard for young students to distinguish what is right and what is wrong all alone. A guided talk with children helps them decide the appropriate direction to follow, concerning their relationship with nature. Not only by directing them with words but also by modelling actions, that means a teacher should be a good model for his/her young students and show them with visible behaviour how to care for nature. Identically, Chawla (1998), Chawla and Cushing (2007), and Prince (2017) explicated that the teacher's modelling role during outdoor experiences is regarded as crucial, influential, and supporting children's values and green actions, therefore pro-environmental and sustainable roles demonstrated by educators engender children's PEB. The study findings also agree with Higgins and Nicol's (2002) emphasis that gaining the required benefits from



the outdoor experiences entails an effort from the teacher, well planning outdoor activities, orienting and directing the children's learning.

On a related note, some of the teachers indicated that some of the strategies that could be utilized for guiding children when outdoors is storytelling, expounding that it is very efficient in orienting and transferring ideas and advice in an interesting way. Comparably, the Swedish curriculum for the compulsory school ascertains that teacher should "be responsible for pupils having opportunities to try different working methods and forms" (Skolverket, 2011). (P. 14)

Generally speaking, there was a strong voicing of the participating teachers on the substantial role of the pedagogical guidance pertained to the curriculum goals, the content, and the teacher's guidance, which resonates with what Dewey (1997/ 1859-1952) augmented the clarity of the educational aims and the role of the teacher in guiding, directing, and evaluating the outdoor experiences to assure the quality of such experiences. For this purpose, outdoor experiences should be well-prepared, guided, and based on clear educational goals, according to Richardson and Simmons (1996 as cited in Dabaja, 2022). In the same context, Thomas, and Munge (2015) proposed that the teacher's role is to thoroughly plan and facilitates the outdoor fieldwork trip in order to actively engage students in deep learning methods. Thus, the results of the recent study identify and support the idea that the teacher's guiding and modelling role is crucial and influences the young students' environmental consciousness.

Taken together, these findings suggest the optimum formula of employing outdoor activities for raising the environmental consciousness of young students, which makes the study as the first comprehensive investigation of the different aspects of the connection between outdoor education and the environmental concern, and the best utilization of outdoor activities for serving environmentalism.

## 8. Conclusion

To explore the potential benefits of outdoor encounters in nature and the factors that constitute the felicitous implementation of outdoor activities in natural places, the study followed two methods, theoretical and practical, the theoretical approach discussed the literature reviewed from different scopes, i.e. studies in Outdoor Education, Experiential Learning, Environmental Education, Ecological Psychology, and Environmental Psychology, while the practical method displayed teachers' perspectives from data collected through thirteen interviews from five schools in Sweden.

Based on this study's findings, being outdoors in nature benefits young students, in terms of raising their environmental consciousness, which has been confirmed in the previous relevant literature (Sandell and Öhman, 2012; Gill (2011 as quoted in Faskunger, et. al., 2018). The linkage between outdoor exposure to nature, knowledge about nature, connectedness to nature, positive attitudes towards nature, and green behaviour has been evidenced in the findings of this study, similar to those of studies by Parkin (1998); Cooper (1998); Kollmuss and Agyeman (2002); Frantz and Mayer (2014); Lloyd and Gray (2014); Beery and Jørgensen (2018); and Pirchio, et. al. (2021). However; the teachers acknowledged that only being in nature is not sufficient to raise environmental consciousness, pedagogical guidance should accompany the outdoor activities, particularly the supportive curriculum goals, the related content, and the teacher's favourable attitude and effective role to successfully realize the aspired outcomes of growing environmental consciousness.

On the whole, using outdoor natural settings for learning provides authentic experiential learning, which encompasses:

- ✓ genuine learning experiences in real situations,
- ✓ novelty and richness that incite curiosity and interest to know more about nature (i.e. knowledge literacy),
- ✓ close contact to nature (i.e. emotional connection),
- ✓ care and appreciation for nature, and
- ✓ the prospect of behaving green.

These above-mentioned opportunities besides clear curriculum goals pertinent to the natural environment, environment-related knowledge, as well as a motivated teacher holding a

positive attitude toward nature and playing an influential role in guiding discussions and modelling green behaviour all contribute to increasing the children's pro-environmental consciousness.

To sum up, the findings of this study are corresponding to previous broader literature, concerning the indisputable and evidenced asset of outdoor experiences in nature. The study underlines the valuable opportunities of the outdoor natural settings in raising children's environmental consciousness. More importantly, it outlines the prerequisites of the effective implementation of outdoor education with respect to environmental concerns, which optimistically contributes to the educational research and practices through the insights it provides to educators working in the Swedish compulsory schools and the international schools in Sweden or other similar places. The findings can be capitalized on for encouraging educators and decision makers to consider more outdoor activities in natural settings. Yet, I suggest conducting a longitudinal study of a similar aim, but with young students as a study sample. Faskunger, et. al. (2018) had a similar suggestion for more longitudinal studies in the Swedish context because they opined that it is not sufficient to draw conclusions from short-term studies regarding the advantage of outdoor activities in general.

Of relevance, the elementary grade has been looked at in many studies as an advantageous age for strengthening the affinity with nature, therefore; this is a call for educators to make use of this opportunity and facilitate the development of their environmental consciousness, as this is comparable with Rios and Brewer's (2014) argument.

With hope, this study could add to the existing scientific discussion about employing the outdoorsy to rectify the deteriorated human-nature relationship that started at the inception of the industrial era. Herein, I would like to conclude with an excerpt from one of the study's participants, stating:

*"We were part of the environment, now we've become alien. Now, it's an alien environment, a little bit because we're not used to working in nature so much."* (Teacher 13)

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## 10. Appendices

### Appendix 1

#### Interview Guide

##### Demographic information:

Gender, Age, Teaching Subject, Teaching Grade, School, City.

##### Main Questions and Sub-questions:

- 1) Can you tell me about the outdoor activities you make for your students?  
How often do you go outside the classroom?  
Where do you go?  
What do you do exactly?  
Concrete examples?
- 2) What benefits do outdoor activities provide to students and to you as a teacher?  
(Examples?)
- 3) Do you think that certain places/spaces could be employed for outdoor education?  
How? (Examples?)
- 4) What makes you go outside the classroom? / Why do you make such activities? /  
What motivate you?
- 5) What are the difficulties that could hinder making activities outside the classroom?  
(Examples?)
- 6) How could outdoor education be employed in different teaching subjects?  
(Examples?)
- 7) Do you think that taking students outside the classroom is of importance? Why/  
Why not?
- 8) How do outdoor activities affect the students' awareness of the environment/nature  
in your opinion? (Examples)

- 9) In what way do the outdoor activities influence the students' knowledge about the environment? (Examples)
- 10) How/ in what way do outdoor activities affect/ change the students' attitudes towards the environment/nature in your opinion? (Examples)
- 11) How do outdoor activities affect the students' behaviour/ lifestyles towards the environment/ the natural resources? (concrete examples?)
- 12) In your opinion, what would encourage teachers in Sweden to take their students outdoors?
- 13) What advice would you give to teachers who are not motivated to take their students outdoors?
- 14) Anything else you want to add or ask?

Prepared by: Researcher/ Eateman Al-Qadasi

May 2022

## Appendix 2

### Informed Consent

#### Outdoor Encounters in Nature as a Promoter for Environmental Consciousness of Primary School Students from their Teachers' Perspectives

Please read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information.

#### **TITLE OF STUDY**

Potentials of Outdoor Encounters in Reinforcing Environmental Sustainability Awareness

#### **PURPOSE OF STUDY**

The study aims at understanding the environmental sustainability awareness of the students who are exposed to outdoor encounters. In other words, if there is a correlation between practicing outdoor activities and raising the students' environmental sustainability awareness in terms of knowledge, attitudes, and behaviour.

#### **STUDY PROCEDURES**

To answer the study question, semi-structured interviews will be conducted with ten teachers from Swedish primary schools. The duration of each interview ranges 30\_50 minutes.

The interviews will be audio-recorded and transcribed by the researcher. The data will be stored in a safe location belonging to Linköping University (LiU internal server) and will be only used for the purpose of this thesis study. Confidentiality of the data and anonymity of the participants will be guaranteed. The collected data will only be analysed by the researcher and be available to the supervisor and examiner. Data will be deleted at the end of the study, estimated in the Autumn of 2022.

#### **BENEFITS**

We hope that the information obtained from this study may contribute to some insights regarding the interrelation between outdoor education and awareness of nature and the ecosystem. These insights may encourage educators, administrators in educational institutions, and all stakeholders to adopt outdoor education as part of the educational curricula. In doing so, pro-environmental awareness and behaviour may increase in the present and future generations for the sake of the human and non-human entities.

#### **CONTACT INFORMATION**

If you have questions at any time about this study, or you experience adverse effects as the result of participating in this study, you may contact the researcher at Email: [eatal800@student.liu.se](mailto:eatal800@student.liu.se) If you have questions regarding your rights as a research participant, or if problems arise which you do not feel you can discuss with the Primary Investigator, please contact Linköping University's data protection officer at [dataskyddsbud@liu.se](mailto:dataskyddsbud@liu.se).

Thank you for reading the information sheet about this study. If you are happy to participate, please sign the form below.

-I confirm that I have read and understood the information sheet dated on May 2022 and have been given the chance to ask questions about it.

-I don't expect to receive any benefit or payment for my participation. I understand that my participation is voluntary, and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline.

-I understand that my responses will be kept strictly confidential. I understand that my name will not be linked with the research materials, and will not be identified or identifiable in the report or reports that result from the research.

-I agree for this interview to be voice-recorded and for its contents to be transcribed. I understand that the audio recording made of this interview will be used only for the master thesis. I understand that no other use will be made of the recording without my written permission, and that no one outside the research team will be allowed access to the original recording.

-If you want to know how your personal data are used, or you believe that we have used your personal data in a way that violates the agreement, please contact Linköping University's data protection officer at [dataskyddsbud@liu.se](mailto:dataskyddsbud@liu.se). If you have complaints regarding the way in which Linköping University processes your personal data, you are always entitled to contact the relevant inspection authority, which in this case is the Swedish Data Protection Authority.

**CONSENT**

I have read and I understand the provided information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this study.

\_\_\_\_\_  
Name of participant                      Date                      Signature

\_\_\_\_\_  
Place

Researcher Name and Signature: *Eateman Al-Qadasi* \_\_\_\_\_

Email: [eatal800@student.liu.se](mailto:eatal800@student.liu.se)