LEARNING IN NATURE-BASED ENVIRONMENTS

A Case Study of Nature-Positivity Among Nature Instructor Students

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Jaana Liukkonen (Y30223503)

jaliukko@ulapland.fi

Supervisor: Outi Rantala

University of Lapland, Faculty of Social Sciences

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Author: Jaana Liukkonen

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Abstract

Nature-positivity has recently emerged as an increasingly visible concept in tourism, education, and sustainability discussions. At the same time, there is still limited research on how nature-positive thinking develops in educational contexts. This study examines how vocational nature instructor students develop their understanding of nature-positive action through a pedagogical process combining discussions, practical activities, reflection, and experiential learning.

The study was conducted as a qualitative case study in a vocational education context in Northern Ostrobothnia, Finland. The empirical material was collected between December 2025 and February 2026 during three on-site teaching periods. The dataset consisted of group discussions, Padlet tasks, written reflections and assignments, as well as the researcher's field notes and observations. The data were analysed using an inductive qualitative approach informed by thematic analysis and transformative learning theory.

The findings suggest that learning related to nature-positivity develops as a gradual, context-dependent, and socially shaped process rather than as a clear or singular transformation. Learning emerged through the interplay between knowledge, practical engagement, reflection, and social interaction. Small and spontaneous moments, discussions, and concrete activities appeared to play a significant role in shaping students' understanding. At the same time, the findings highlight the complexity and uncertainty related to nature-positive action, as students critically reflected on the possible positive and negative impacts of their actions.

The study contributes to discussions on transformative and experiential learning in nature-based education and tourism contexts. The findings suggest that learning related to nature-positivity may be better understood as an ongoing and evolving process rather than as a clearly measurable outcome. The study also highlights the importance of reflection, contextual understanding, and meaningful engagement in supporting learning processes related to sustainability and nature-positive thinking.

Keywords: nature-positivity, transformative learning, experiential learning, vocational education, nature-based learning, tourism education

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1. INTRODUCTION

1.1 Background of the study

Tourism and other nature-based professions, along with other industries, face many challenges related to the ecological crisis, climate change, and biodiversity loss. These global concerns are shaping tourism services, as travellers are becoming more aware of their responsibilities and seeking ecologically conscious experiences. Travellers increasingly expect not only low-impact experiences but also opportunities to contribute positively to nature (World Travel & Tourism Council, 2022, p. 5). Global reports indicate that visitors value destinations that protect and restore biodiversity, and many actively seek nature-positive actions during their travels (World Travel & Tourism Council, 2022, p. 5). Nature-positivity refers to approaches that go beyond minimising negative impacts to actively restoring ecosystems and generating measurable net gains for biodiversity (World Travel & Tourism Council, 2022).

These changes in tourism expectations also put pressure on educational institutions, which are responsible for preparing future professionals for sustainability-focused work. According to Sarivaara and Uusiautti (2017), meeting these demands requires more than just technical skills; it requires learning processes that develop values, attitudes, and ways of relating to nature. Ecological sensitivity, environmental awareness, and a reflective relationship with nature do not develop automatically; they grow through guided learning, experience, and opportunities to examine one's own assumptions (Sarivaara & Uusiautti, 2017). Research shows that sustainability-focused tourism education is most effective when it uses active, experiential, and reflective learning methods that help students connect sustainability principles to their personal values and professional practice (Chen et al., 2022).

Drawing from nearly 20 years of experience as a vocational teacher in tourism and nature-based education, I have noticed that students' ways of perceiving and relating to nature often change during their studies. Students gradually learn to slow down, observe more details, and connect more deeply with natural environments. These shifts indicate that students are beginning to learn in ways that could lead to profound changes in how they view and understand nature. In the context of vocational education, these processes are particularly

relevant for nature instructor students, whose future work is closely connected to guiding and facilitating nature-based experiences.

These observations, together with the increasing focus on nature-positive thinking, have raised questions about how integrating nature-positive actions into education may shape nature instructor students' thinking and developing professional identity. As graduates work with visitors from diverse backgrounds, their own learning experiences influence how they facilitate nature encounters for others. This creates a connection between students' learning during their studies and the potential for transformative tourism experiences in their future careers, as previous research has highlighted the role of guides and facilitators in shaping visitors' meaningful and transformative experiences (Johansen & Konu, 2025).

Little is known about which study-related moments students perceive as meaningful or transformative, or how such experiences shape ecological awareness and professional identity. My study addresses these issues by exploring how learning processes within vocational education shape the mindset of nature instructor students.

1.2 Literature review

Krippendorf (1987) was one of the early critics of tourism's impacts and called for more humane and responsible tourism. Concepts such as ecotourism, responsible tourism, and sustainable tourism have been used to explore and explain sustainable tourism within tourism research (e.g., Weaver, 2006; Saarinen, 2006; Sharpley, 2020). Over time, however, concerns about the limitations of traditional sustainability approaches have led to the emergence of new concepts that aim to go beyond minimising harm and instead focus on actively improving socio-ecological systems.

Sharpley (2020, p. 14) argues that sustainable tourism remains largely product-focused and driven by economic growth rather than guided by holistic, equitable, and long-term sustainability goals. Although the concept is based on the broader paradigm of sustainable development, its implementation often prioritises market logic and economic modernisation. This creates a gap between the rhetoric of sustainability and the actual practices in tourism development. Sharpley (2020, p. 14) further emphasises that tourism's inherent dependence on global consumption and growth-oriented structures makes it incompatible with the

principles of endogenous, alternative development. Therefore, he concludes that "true" sustainable tourism development is ultimately unachievable. Similar criticism has also been presented by Higgins-Desbiolles (2018), who argues that sustaining tourism often means sustaining capitalist systems rather than ecosystems. Together, these critiques have contributed to the emergence of alternative approaches, including regenerative tourism.

Regenerative tourism has emerged as one response to these critiques, aiming not only to reduce negative impacts but also to restore and strengthen nature. Bellato et al. (2022) describe regenerative tourism as an approach that emphasises restoring and enhancing the capacity of places and communities to thrive within interconnected socio-ecological systems. In contrast to traditional sustainable tourism, the focus is not only on minimising harm but also on actively contributing to ecological and social wellbeing. However, Bellato and Pollock (2025) argue that regenerative tourism is often interpreted too simplistically, for example, through the idea of "leaving a place better than it was found," which risks reducing the concept to a marketing slogan. They further note that the tourism industry's continued focus on economic growth may limit the transformative potential of regenerative approaches.

Similar ideas are also visible in the concept of caring tourism. Salmela (2020) introduces caring tourism as an approach that shifts the focus from exploitation towards mutual well-being and highlights ecological and community resilience rather than economic profit. Tourism's environmental, social, and economic impacts are extensive and often contribute to structural vulnerabilities in local communities.

Ateljevic (2020) examines the transformative potential of tourism through a transmodern lens. She describes transformative tourism as a process of personal and societal change that prompts travellers to pursue ethical, value-driven lifestyles and to use travel for self-growth and community development (Ateljevic, 2020, pp. 469–471). Additionally, she promotes a shift toward regenerative tourism, which, like regenerative agriculture, aims not just to lessen harm but to actively improve the health of ecosystems and communities (Ateljevic, 2020, pp. 471–473). Similarly, Vidickienė et al. (2023) describe transformative tourism as travel experiences that may lead to meaningful changes in a traveller's values, attitudes, behaviour, or lifestyle, often resulting in personal growth, learning, and improved well-being.

These emerging approaches share a common critique of traditional sustainability discourse in tourism. Rather than focusing solely on reducing harm, they increasingly emphasise

restoration, relationality, responsibility, and the active role of humans in supporting ecological and social wellbeing. Although the concepts differ in emphasis, they all reflect broader attempts to rethink the relationship between tourism, learning, and the natural environment. Nature-positivity can be understood as part of this wider discussion.

These discussions also raise questions about the role of education and professional practice in tourism. As Tribe (2002) argues, tourism education should not focus solely on technical or vocational competence, but also support critical reflection, ethical understanding, and the development of responsible professional identities. From this perspective, discussions surrounding regenerative tourism, caring tourism, transformative tourism, and nature-positivity may also encourage students and future professionals to critically examine the relationship between tourism, society, and the natural environment.

Within this broader discussion, the idea of nature-positivity emerged from the need to establish a clear and measurable goal for biodiversity, shifting the focus from merely reducing environmental harm towards actively restoring nature (Lambertini et al., 2025, p. 3). According to Locke et al. (2025, p. 2), “nature-positive means halting and reversing nature loss by 2030, measured from a baseline of 2020.” In this sense, minimising harm to nature alone is no longer considered sufficient. Within tourism, this implies that the industry should not only reduce its negative environmental impacts but also actively contribute to biodiversity and ecosystem health.

Although the idea of nature-positivity has gained some attention in recent discussions, there remains very little academic research on the topic. Jones (2024) emphasises that nature-positive tourism is an emerging concept that has attracted significant interest from industry groups but little engagement from academic scholars. According to Jones (2024), the conversation is mainly driven by consultancy reports and organisational frameworks rather than empirical, peer-reviewed studies. This lack of academic investigation highlights the need to explore nature-positive actions from new perspectives, including how students make sense of such actions through transformative and experiential learning processes. This perspective is particularly relevant in the context of transformative and experiential learning theories, where reflection, dialogue, and personal meaning-making play a central role in shaping understanding.

Even though nature-positive tourism is still emerging in both global strategies and national tourism guidelines (WTTC, 2022; Visit Finland, 2024), little is known about how students interpret the concept or how it shapes their developing professional identities. Focusing on students' experiences, therefore, offers a valuable perspective that links international policy, tourism practice, and the educational conditions needed to develop future professionals capable of engaging with nature-positive practices and sustainability-related challenges.

In addition, the choice to focus on the concept of nature-positivity is not self-evident. The increasing number of overlapping terms in sustainability discourse has created both confusion and critical reflection. Engaging more deeply with the concept of nature-positivity also provides a way to explore these tensions and better understand what it means to contribute positively to nature in practice.

At the same time, the purpose of this study is not to position nature-positivity as superior to other concepts, but rather to examine how such concepts function in practice and how they may support reflection, discussion, and learning. From this perspective, the focus is not only on the concept itself, but also on how learning shapes the way individuals understand and relate to nature.

1.3 Aim of the thesis: research questions and approach

Education plays a key role in shaping how future tourism professionals grasp sustainability and engage with nature. Previous research on environmental and nature-based education shows that ecological awareness and pro-environmental values develop through guided experiences, reflection, and opportunities to examine one's own assumptions (Sarivaara & Uusiautti, 2017). Therefore, students in tourism and nature-related fields at different educational levels are an important group for understanding how nature-positivity can be translated into professional practice.

Transformative learning theory provides a valuable perspective for analysing these processes. Taylor (2007) emphasises that transformative learning is most effectively promoted through hands-on, experiential activities, relational learning settings, and reflective practices that encourage learners to rethink their assumptions and sense of responsibility. These principles

closely match the goals of nature-positive tourism, which aims not only to minimise harm but also to foster a deeper ecological understanding and sense of agency.

The purpose of this study is to understand how learning related to sustainability and nature-positivity develops, and how students experience and interpret this development within their educational context. The main question of this research is: *How does learning related to nature-positivity develop as a process?* To support this, two sub-questions are addressed: how students understand and interpret nature-positivity during the learning process, and what kinds of experiences and situations they perceive as meaningful in learning related to nature-positivity.

A case study design is appropriate because, as Vuori (2021) argues, it enables an in-depth examination of a specific phenomenon – in this case, a group of nature instructor students and their shared learning process – within its real-life context. Case study research is particularly suitable for exploring complex, context-dependent processes, in which the boundaries between the phenomenon and its context are not clearly defined (Yin, 2018, pp. 45-46). This makes it possible to examine how learning develops through interactions, experiences, and reflections within a pedagogically structured educational setting.

The theoretical perspective of transformative learning theory (e.g., Mezirow, 1991 and 2000; Illeris, 2018; Cranton, 2016; Taylor & Cranton, 2012) offers the conceptual framework for understanding changes in students' thinking, values, and connection with nature. Instead of aiming to develop or modify practice, the study centres on how students' experiences and reflections demonstrate inner transformation and increased ecological awareness.

The research is grounded in an interpretivist paradigm and adopts a qualitative case study approach, viewing reality as multiple and socially constructed (Schwandt, 1994). The goal is not to find a single objective truth, but to understand how students interpret and experience nature-positivity. This perspective can also be connected to a post-humanist worldview, which recognizes the agency of nature and non-human beings in co-creating knowledge and shaping lived experience (Braidotti, 2013).

1.4. Description of the context

This study is situated within the context of Finnish tourism and nature-based vocational education, where expectations related to nature-positive practices are increasingly shaping both industry and education. In Finland, nature-positivity has been identified not only as an ecological responsibility but also as a strategic priority in tourism development (Visit Finland, 2024, p. 25). This creates a relevant context for examining how students engage with and make sense of nature-positive actions during their studies.

This study examines a group of students enrolled in a vocational upper secondary programme in Natural and Environmental Protection (EQF level 4), which leads to the occupational title of Nature Instructor. Vocational education and training (VET) in the field of nature and environmental studies in Finland provides a practice-oriented pathway for developing skills related to outdoor guidance, environmental management, and sustainable practices. In this field, it is possible to complete a vocational qualification at different levels, including the Vocational Qualification, Further Vocational Qualification, and Specialist Vocational Qualification (Finnish National Agency for Education [EDUFI], 2023a).

The Vocational Qualification in Nature and Environmental Studies (Luonto- ja ympäristöalan perustutkinto) is a 180-credit upper secondary qualification with three competence areas (EDUFI, 2023a), and it can be completed in a range of vocational institutions across the country. While the number of providers is relatively limited compared to larger vocational fields such as social and health care or technology, the programme is offered nationwide, typically by one or a few institutions within each region**.**

The qualification emphasises learning through practical activities in authentic environments, including forests, protected areas, and urban green spaces. Typical units of competence completed by students include, for example, working in the nature and environmental sector, guiding in nature, guiding wilderness excursions, organising outdoor meals, and providing nature-based well-being services. In addition, students may develop skills in areas such as invasive species control, guiding special groups in nature, and the construction and maintenance of outdoor recreation areas. A substantial part of the learning process takes place in workplace settings, reflecting the broader Finnish VET model, which combines school-based and work-based learning (EDUFI, 2023b).

The student population in this field is notably heterogeneous and differs significantly from many other upper secondary vocational programmes. Although the qualification formally belongs to upper secondary education, recent evaluation data indicate that most students are adults. According to a national evaluation conducted by the Kansallinen koulutuksen arviointikeskus (Karvi), only 18% of students in the Vocational Qualification in Nature and Environmental Studies were under the age of 25, indicating that adult learners form a clear majority in the field (Hakamäki-Stylman et al., 2024).

In addition, based on my professional experience, a significant proportion of students in this field are career changers seeking either a temporary break from their previous careers or a transition to a new profession. This can also be seen after graduation, as many graduates go on to start their own businesses in the nature and environmental sector.

Students are often motivated by an interest in nature, outdoor activities, and hands-on learning, although their prior knowledge and engagement with environmental issues vary considerably. This means that students come into the studies with different views and experiences, which become visible during practical activities and discussions.

Overall, the field is characterised by its strong emphasis on experiential learning and its close connection to local natural environments. At the same time, it operates within broader societal discussions on sustainability and the role of vocational education in addressing environmental challenges. This makes it a particularly relevant context for examining how learning related to nature and sustainability develops in practice.

Employment opportunities for nature instructors are varied. After graduation, students may work in tourism centres offering nature-based activities, as independent entrepreneurs, or, for example, in early childhood education settings focused on nature. In Finland, nature, tourism, and education are closely interconnected, forming an important context for this study. Nature instructors often work at the intersection of environmental awareness and tourism practices, which highlights the importance of learning processes that shape how students understand both their relationship with nature and their future professional role. From this perspective, transformative learning can be understood as a process in which students reflect on their relationship with nature and construct new meanings through sustainability-related experiences.

1.5. Structure of the thesis

This thesis is structured into six main chapters. The first chapter is the introduction that presents the topic, its background and relevance, as well as the research problem and key concepts that frame the study. The first chapter also outlines research questions, methodological choices, and ethical considerations.

The second chapter provides the theoretical framework, drawing particularly on transformative learning theory and related pedagogical perspectives. This is followed by Chapter 3, which describes the methodological approach in detail, including the data collection process, participants, analytical strategy, and research ethics.

Chapter 4 presents the findings of the study, focusing on the learning process related to nature-positive action. These findings are then discussed in Chapter 5 in relation to earlier research and the theoretical framework, with particular attention to their broader implications.

The thesis concludes with Chapter 6, which summarises the key insights of the study and reflects on its limitations, as well as suggesting directions for future research and practice.

2. THEORETICAL FRAMEWORK

2.1 Transformative learning

To understand how students experience and interpret changes in their thinking and understanding related to nature-positivity, this study draws on transformative learning theory. Transformative learning theory comes from the work of Jack Mezirow (1991), who described transformation as a process where adults critically examine their taken-for-granted assumptions and update their "meaning perspectives" through reflection and rational discussion. According to Mezirow, transformative learning is mainly an epistemological shift—a change in how people interpret experience, often sparked by a disorienting dilemma (Mezirow, 1996).

Although the theory was originally developed within adult education, later scholars, including Taylor (2007) and Cranton (2016), have broadened its application to experiential, vocational, and younger adult learners. This broader interpretation supports the present study, which examines how students' practical engagement with nature might encourage shifts in their thinking. While Mezirow's theory emphasises rational reflection and discourse, later interpretations have expanded the concept to include emotional, embodied, relational, and contextual dimensions of learning. This shift reflects a broader understanding of learning as not only cognitive but also experiential and socially situated (Taylor, 2007).

Over the years, transformative learning has been examined from multiple perspectives. Scholars have criticised Mezirow's rational and discourse-oriented focus for overlooking emotion, embodied experience, context, and power dynamics. Later research suggests that transformation may emerge through relational support, emotional engagement, and experiential learning rather than rational argument alone (Taylor, 2007). In addition, transformative learning is not always a linear or clearly structured process. Rather than following a predictable sequence, learning may involve pauses, uncertainties, and partial shifts in understanding (Taylor, 2007). This perspective is particularly relevant in nature-based learning contexts, where learning is closely connected to experience and environment.

In this study, transformative learning is not treated as a clearly observable or complete outcome but rather as a process that may manifest in subtle and gradual changes in thinking. Instead of focusing on a clearly identifiable transformation, attention is directed towards

emerging awareness, questioning, and evolving interpretations related to nature-positive action. This perspective also raises questions about how transformation can be identified and defined in research. If learning develops gradually and unevenly, rather than through clear or sudden shifts, it may be difficult to determine when transformation has actually occurred. From this perspective, transformative learning is better understood as an ongoing and context-dependent process rather than a fixed or clearly identifiable outcome (Taylor, 2007).

2.2 Reflection and the role of experience in learning

Reflection is central to transformative learning, yet research summarised by Taylor (2007) shows important qualitative differences in the forms it may take. While learners often reflect on content and processes, deeper reflection that questions underlying assumptions is considerably less common. Taylor notes that deeper reflection seems to require more maturity, experience, and motivation, and that people often find it difficult to recall these reflective moments.

Reflection does not occur in isolation but is closely connected to experience. As Kolb (1984) argues, experiences alone do not automatically lead to learning; rather, they require interpretation and meaning-making. This highlights the importance of creating opportunities for learners to reflect on their experiences, both individually and in interaction with others. Without reflection, experiences may remain fragmented and unexamined, limiting their potential to contribute to deeper understanding.

Studies also emphasise the value of creative and experiential forms of reflection, such as photo-elicitation, portfolios, writing, and dialogue (Taylor, 2007). These approaches allow learners to express meanings that may not surface through verbal reflection alone. Such variety is particularly valuable in nature-based learning contexts, where sensory and embodied experiences shape understanding.

The experiential character of outdoor learning aligns naturally with transformative learning processes. Direct engagement with nature creates emotionally and sensorially rich experiences that can challenge taken-for-granted assumptions, deepen awareness, and support reflective meaning-making. In experiential learning theory, learning is understood to develop through the interplay between experience and reflection (Kolb, 1984). This view builds on earlier

work by Dewey (1938), who emphasised the importance of experience as the foundation of learning, particularly when combined with reflection.

In this study, reflection is closely linked to active engagement in nature-positive actions. Experiences alone do not automatically lead to learning; they require opportunities for interpretation and discussion. This emphasises the need to combine hands-on activities with guided reflection, where learners are supported in expressing and examining their observations and thoughts. Schön (1983) further distinguishes between reflection-in-action, which happens during an activity, and reflection-on-action, which occurs after the experience. Both types of reflection are important in learning processes that involve practical engagement.

This perspective suggests that learning cannot be reduced to a series of planned instructional steps. Instead, understanding develops gradually through the interaction between experience, reflection, and context. In this sense, reflection is not a separate activity but an ongoing process embedded within learning itself.

2.3 Social and relational dimensions of learning

Transformative learning is not only an individual cognitive process, but also a fundamentally social and relational one. As Mezirow (1997) emphasises, meaning is constructed through dialogue, where individuals test and revise their assumptions in interaction with others. This highlights the importance of communication, shared reflection, and exposure to different perspectives in the learning process.

The social dimension of learning has also been widely recognised in educational theory. Vygotsky (1978) argued that learning is inherently social, taking place through interaction with others before being adopted at the individual level. From this perspective, knowledge is not constructed in isolation but emerges through participation in shared activities and dialogue.

Similarly, Bandura's (2001) social cognitive theory highlights the role of social environments in shaping learning, behaviour, and perceived agency. According to Bandura (2001), individuals develop their understanding and sense of capability through observation, interaction, and feedback from others. This is particularly relevant in contexts where learners engage in shared practices and reflect on their experiences together.

Taylor (2007) further emphasises that transformative learning is deeply relational. Trustful relationships enable dialogue, vulnerability, and mutual meaning-making. Empathy, emotional expression, and a supportive group climate are essential, particularly when learners encounter uncertainty or challenge their assumptions. Without such relational conditions, critical reflection may remain superficial or not occur at all.

Together, these perspectives suggest that learning involves more than the acquisition of knowledge; it develops through interaction, collective reflection, and the co-construction of meaning. In group-based learning settings, shared experiences and discussions may challenge existing assumptions and support deeper understanding.

In nature-based learning contexts, the social dimension of learning may become particularly visible, as experiences are often shared, discussed, and interpreted collectively. From a social learning perspective, learning is shaped not only through individual reflection but also through processes of collective meaning-making and interaction (Vygotsky, 1978; Wenger, 1998). Such environments may support new ways of understanding, as learners are exposed to multiple perspectives and encouraged to articulate and negotiate their views.

In addition, learning can be understood as participation in shared practices and communities. Wenger (1998) highlights that learning takes place through engagement in social contexts, where individuals develop their understanding and identity as part of a community. This perspective is particularly relevant in group-based learning environments, where shared experiences and interactions contribute to the construction of meaning. Similarly, Illeris (2018) emphasises the multidimensional nature of learning, where cognitive, emotional, and social aspects are closely interconnected.

2.4 From reflection to action and responsibility

Along with epistemological change, transformative learning can also involve ontological change—changes in one's way of being in the world. As Taylor (2007) suggests, transformation can appear in new forms of relatedness, social responsibility, and more embodied and relational ways of engaging with the world. In environmentally focused contexts, such changes may include heightened ecological awareness and an increased sense of responsibility toward the natural environment.

However, the connection between understanding and action is not simple. While transformative learning is often linked to changes in thinking, these do not automatically result in behavioural change. As Taylor (2007) points out, learners often need guidance, practical tools, and supportive structures to turn new understanding into action. This suggests that learning involves not only reflection but also opportunities to apply and negotiate understanding in real situations.

From the perspective of social cognitive theory, agency plays a key role in this process. As Bandura (2001) argues, individuals' capacity to act is shaped not only by their knowledge, but also by their beliefs about their own ability to influence outcomes. This highlights the importance of supporting learners in developing both understanding and confidence in their ability to act.

In the context of sustainability, this relationship between knowledge and action becomes particularly complex. Increased awareness may lead to questioning, uncertainty, or even a sense of inadequacy when individual actions are compared to large-scale environmental challenges. Rather than representing a failure of learning, such tensions may be an integral part of the learning process, as they encourage critical reflection and deeper engagement with complex issues. As Illeris (2018) suggests, learning involves cognitive, emotional, and social dimensions, which may interact in ways that create both development and uncertainty.

Together, these perspectives on transformative learning, agency, and sustainability suggest that learning related to sustainability should not be understood as a linear progression from knowledge to action. Instead, it involves an ongoing process in which understanding, reflection, uncertainty, and action are continuously negotiated and reshaped. As Jarvis (2006) emphasises, learning is a lifelong and context-dependent process that develops through experience and interaction, rather than as a simple sequence of stages.

2.5 Transformative learning in tourism and nature-positive contexts

Transformative learning is increasingly applied in tourism studies. As Ateljevic (2020) suggests, tourism can act as a catalyst for personal and societal transformation, emphasising ethical, value-based development and regenerative approaches. Similarly, Vidickienė et al.

(2023) define transformative tourism as travel that leads to meaningful changes in values, attitudes, behaviour, or lifestyle.

These perspectives highlight the potential of tourism experiences to influence how individuals understand themselves, others, and their relationship with the environment. However, recent research has also critically examined the assumption that transformation occurs as a result of short-term experiences. As Zhang (2025) argues, transformation in tourism contexts is better understood as a gradual and ongoing process shaped by repeated experiences and evolving practices, rather than as a single moment of change.

Based on these perspectives, transformative learning theory functions in this study as the main interpretive lens for analysing how nature instructor students make meaning of nature-positive actions and how these experiences influence their ecological awareness and emerging professional identity. Rather than aiming to provide a comprehensive explanation of learning, the framework brings together cognitive, experiential, and social perspectives to interpret how reflection, experience, and interaction shape understanding.

This approach views learning as a gradual, context-dependent, and socially constructed process rather than as a clearly defined or measurable outcome. It supports the analysis of how small everyday experiences, shared reflections, and practical actions may contribute to the development of ecological awareness, responsibility, and agency. By connecting transformative learning theory with nature-based and sustainability-oriented contexts, the study highlights how education may support not only knowledge acquisition but also the development of ways of thinking, acting, and relating to nature.

3. METHODOLOGY

3.1 Methodological approach

This study adopts a qualitative case study approach. The case study approach is a research strategy in which the entire design is built around a single bounded case that represents a broader phenomenon (Vuori, 2021). According to Robert K. Yin (2018), a case study investigates a contemporary phenomenon in depth and within its real-life context, particularly when the boundaries between the phenomenon and its context are not clearly defined. Similarly, Vuori (2021) notes that many qualitative studies resemble case studies in that they explore examples of broader issues. However, a true case study focuses on an in-depth, holistic understanding of a single, well-defined case or a small number of carefully selected cases. As Vuori (2021) points out, a case may consist of an organisation, a group, or a process, and it is always situated in its social, temporal, and spatial context.

The purpose of case study research, as Vuori (2021) explains, is not to produce broad generalisations but to develop a rich, contextually grounded understanding of the phenomenon through multiple forms of data, such as interviews, observations, and documents. This aligns with Yin's (2018) emphasis on using multiple sources of evidence to gain a comprehensive understanding of the case. The case is examined within the real-life context in which the phenomenon naturally occurs. By examining a concrete example of a wider phenomenon, the researcher can gain insights that may be transferable to other contexts.

This study employs a qualitative, interpretive approach to understand students' learning processes in a specific educational context (Vuori, 2021). In this context, interpretive refers to understanding how participants make sense of their experiences and perceive their learning processes (Schwandt, 1994). The aim is not to produce generalisable results but to explore how students construct meaning and how learning related to nature-positivity emerges during a pedagogical process.

The practical activities in this study provide a context for meaningful learning situations and are not designed as a research intervention. Instead, they offer a concrete basis for exploring how students perceive and make sense of nature-positivity and their own role in sustaining the natural environment.

3.2 Data collection and participants

The study participants are students of different ages enrolled in a blended-learning programme at an educational institution in Northern Ostrobothnia, Finland. I work at the same institution as a lecturer in nature and environmental studies and in tourism. All participants have studied in the field for at least 1.5 years. The group meets on-site for three consecutive days each month, and independent study occurs between sessions. The broader study context is described in more detail in Section 1.4.

Most of the students in the group are currently employed, mostly outside the nature-based sector, and many are thinking about a career change. Some students also participate in voluntary activities that support outdoor recreation, nature engagement, and conservation. Many future job opportunities for these students are connected to the tourism industry, where guiding and nature-based services are key components.

The study was conducted as part of the group's ongoing studies and is linked to a compulsory study unit focusing on guiding in natural environments. During the academic year, students have been completing this extensive module, and the theme of nature-positivity aligns closely with its learning objectives. To avoid the theme becoming too dominant, it was integrated as one element among other learning activities.

The empirical material for this study was collected between December 2025 and February 2026, during three on-site teaching days. All data were collected in Finnish, and the quotes presented in this thesis have been translated into English by the researcher.

At the beginning of the study in December, the group consisted of 15 students. Not all students were able to attend the on-site sessions. During data collection, one student graduated and one discontinued their studies. In total, nine students contributed to the data analysed in this study, although not all participated in every phase of the process. Informed consent was obtained from all participants, and the consent form is provided in Appendix 1.

Due to ethical considerations and the small group size, detailed background information is not provided. Participants are referred to in a generalised manner (Participant 1, Participant 2, etc.). Not all participants are equally represented in the quotations presented in this study. This reflects the nature of qualitative analysis, where excerpts are selected based on their relevance to the themes identified, rather than to ensure equal representation of all participants (Braun & Clarke, 2006).

The data collection process was integrated into teaching activities and organised into several interconnected stages, forming a pedagogically structured sequence in which each phase built upon the previous one. Each stage served a specific purpose in supporting students' understanding of nature-positivity and contributed differently to the overall dataset. To clarify the data collection structure and the roles of the different data sources, the material is summarised in Table 1. The table presents the types of data collected, their timing, their purpose in the study, and their role in the analysis.

Table 1. Overview of the data collected in the study.

Data (type & timing)	**Description**	**Purpose in the study**	**Role in analysis**
Orientation and initial group discussion (December)	Short introduction to the topic and guided group discussion on nature relationship and nature-positive actions	To explore students' initial understandings and assumptions	Provided baseline for comparison
Teaching session, Padlet 1, and group work (January)	Lesson on nature-positivity, Padlet task on nature-positive actions, group work on nature-positive companies	To introduce the concept and capture initial interpretations	Analysed to identify initial themes
Guest lecture and field excursion (January)	Visiting lecturer on wildlife tracking (snow tracking) and related field experience	To connect theory with practice and deepen understanding	Supported interpretation of experiential learning
Padlet 2 and activity planning (January)	Students generated ideas for concrete actions and selected activities, including initial preparation	To support the transition from ideas to action	Showed development in thinking and agency
Pre-assignment (February)	Individual preparatory task related to upcoming activities	To activate prior knowledge and support reflection	Provided context for later reflections
Practical activities (February)	Building birdhouses, insect hotels, and making fat balls	To engage students in concrete nature-positive action	Supported analysis of action–reflection relationship
Learning diaries (December–February)	Students wrote reflections after each session	To document ongoing learning and reflection	Provided longitudinal insight into the learning process
Final reflections and group discussion (February)	Written reflections and shared discussion on learning and experiences	To capture deeper meaning-making and collective reflection	Key material for identifying themes
Researcher notes, diary, and photographs (December–February)	Teacher-researcher's observations, notes, and visual documentation	To capture informal situations and contextual factors	Supported interpretation and triangulation of data

As shown in Table 1, the data collection progressed from initial discussions and concept exploration towards more concrete activities and reflective phases. The process began with a short orientation to the topic of nature-positivity, followed by an initial group discussion focusing on students' relationship with nature and its development during their studies. Prior to the discussion, key concepts such as sustainability, regenerative approaches, and nature-positivity were briefly introduced. The purpose of this phase was to explore students' existing perspectives and establish a baseline for later comparison.

Although the discussion was originally planned as an orientation activity, it proved to be an important part of the data, offering insights into students' starting points. The discussion involved nine students and took place in December 2025. The discussion script is presented in Appendix 2.

In January 2026, the process continued with a Padlet task in which students were asked to list as many nature-positive actions as possible. The aim was to capture initial understandings and associations before engaging more deeply with the topic. Students were encouraged to express their own interpretations without predefined correct answers.

Following the Padlet task, a discussion was held in which students critically examined the suggested actions, considering which could be seen as neutral and which as genuinely nature-positive. This phase supported the refinement of initial ideas.

Students played an active role in planning and developing the practical activities. A second Padlet task was used to generate ideas for concrete actions, with the requirement that the activities be feasible during the on-site days in February. After the discussion, students selected building birdhouses, insect hotels, and making fat balls as their activities.

Students also completed a related remote assignment, in which they examined these activities from a nature-positive perspective. This included exploring their purpose, appropriate design and placement, potential benefits, and possible negative impacts.

The practical activities took place during the final on-site days in February 2026. Participation during these final sessions was lower than anticipated due to seasonal illness. The researcher participated in facilitating the activities and documented the process through photographs and field notes.

The final phase consisted of individual written reflections followed by a group discussion. This phase aimed to explore whether and how students' understanding had developed. The

discussion addressed questions related to learning experiences, surprising moments, and possible shifts in thinking. The written reflection task is presented in Appendix 3, and the discussion guide is provided in Appendix 4.

The dataset consists of group discussions, Padlet entries, written reflections, and observational material. In total, the dataset included 33 pages of transcribed discussions, two Padlet datasets (Padlet tasks), and 11 pages of written reflections and assignments. These materials provide complementary perspectives on the learning process. In addition, the data include the researcher's field notes and reflective journal, which were used selectively to support the analysis.

Participation varied across different phases, as not all students contributed to every part of the data collection. As participation was voluntary, the dataset is not fully consistent across all participants.

3.3 Analytical strategy

The analysis followed an inductive qualitative approach, in which patterns and themes were derived from the data rather than imposed from predefined theoretical categories, while also being informed by transformative learning theory. This created a dialogue between data-driven insights and theoretical interpretation. The analytical process drew on principles of qualitative coding (Saldaña, 2013) and thematic analysis (Braun & Clarke, 2006) to identify patterns and meanings across the dataset. The analysis process was iterative, involving continuous movement between the data, coding, interpretation, and theoretical reflection throughout the study.

The analysis was conducted in two phases. First, the data were organised chronologically to describe how the learning process unfolded at different stages. During this phase, initial themes were identified based on the progression of learning. In the second phase, the data were analysed thematically across the entire dataset by identifying recurring patterns related to learning, reflection, and nature-positive action.

The focus of the analysis was on how learning emerged and developed during the pedagogical process. Rather than analysing each data type separately, the material was approached as a whole, while still recognising the specific characteristics of different data sources. The

analysis involved identifying meaningful expressions, comparing them across stages, and grouping them into broader patterns through an iterative process of coding and thematic interpretation (Braun & Clarke, 2006; Saldaña, 2013). Attention was paid to indications of change, new insights, and shifts in perspective.

The data were analysed interpretively, acknowledging my active role in making sense of the material and focusing on how participants constructed meaning through their experiences. The aim was to develop a context-specific understanding of how learning occurred in this educational setting. The analysis generated several key themes, including learning in small and spontaneous moments, the role of discussion and social interaction, the relationship between knowledge and action, and the emergence of complexity and uncertainty in the learning process. These themes and their meanings are discussed in more detail in Chapter 4.

3.4 Research ethics

Good scientific practice forms the ethical foundation of all research. According to the Finnish National Board on Research Integrity (TENK, 2012, pp. 6–7), researchers are expected to act with honesty, care, and accuracy throughout all phases of their work, applying ethically sustainable methods and giving proper credit to the work of others.

Participation in the study was voluntary, and students were informed of the research purpose and the use of the data. Written consent was obtained (Appendix 1). The material has been anonymised, and individual participants cannot be identified.

The data were collected in a teaching context, where I acted as both teacher and researcher. I recognised this dual role as a potential ethical issue, particularly regarding power relations. Efforts were made to ensure that participation did not affect the assessment and that students could freely decide whether to participate. At the same time, the existing group dynamics may have supported open discussion. The familiar and trustful atmosphere may have enabled more open reflection, although the influence of the teacher–researcher role cannot be fully excluded.

The practical activities followed institutional safety and ethical guidelines. Artificial intelligence tools were used for linguistic support in the thesis, for example improving the

clarity of expressions. All analytical decisions and interpretations were made by the researcher.

4. ANALYSIS OF THE LEARNING PROCESS

4.1 Learning in small and spontaneous moments

In this study, learning is examined in relation to both the nature-based environment as a learning context and nature-positivity as a theme. These two dimensions are closely intertwined in the analysis.

Learning is understood as emerging from multiple perspectives, including those of the individual, the teacher, and the group. This reflects socio-cultural perspectives on learning, where knowledge is constructed through interaction and participation (Vygotsky, 1978; Wenger, 1998). Rather than focusing only on significant transformations, learning may also appear as small shifts in thinking, behaviour, or attitude, which aligns with the view that learning can involve gradual and partial changes rather than clearly defined transformations (Taylor, 2007). Attention is therefore directed to where and how learning occurs in practice, particularly in relation to different situations and experiences within the pedagogical process, as emphasised in experiential learning theory (Kolb, 1984).

The findings in this study suggest that learning is neither a simple nor a clearly structured process confined to situations pre-planned by the teacher. Instead, learning often occurs in small, spontaneous moments that are not always intentionally created as learning opportunities, and many factors can be at play simultaneously. This indicates that learning is not necessarily tied to formal teaching setups but instead happens in situations that are meaningful to the learner.

In the initial group discussion, students were asked to reflect on situations during their studies in which they felt they had learned something. The responses were somewhat unexpected. Students mentioned, for example, small pauses during a hike when they simply lay on the ground in silence. Others described learning through engaging in traditional outdoor practices in the forest.

As one student described, learning was reflected in a change in how they observed their surroundings:

> *I remember one trip when the teacher pointed out capercaillie droppings in the snow. After that, I started looking for them more often and sometimes spotted them again.* (Participant 2, translated from Finnish)

Another student continued:

> *You start seeing things.* (Participant 4, translated from Finnish)

This indicates that even a small piece of new knowledge can shift the learner's attention and change how they perceive their surroundings. At the same time, these examples suggest that learning to notice nature is often socially mediated, as new ways of seeing emerge when another person points out, names, or shares something in the environment.

A similar example emerged when two students were looking for mushrooms together. One of them taught the other how to identify funnel chanterelles, a species the other had not previously picked. Once the student had learned to recognise the mushroom and gained direct experience of collecting it, he noticed it repeatedly in the forest. This also seems to deepen the meaning of being in nature, as increased awareness makes the experience more nuanced and significant. This finding aligns with Taylor (2007), who emphasises that transformative learning does not necessarily occur in clearly structured situations but may emerge through subtle, often unplanned experiences. Rather than being triggered by a single event, learning may develop gradually through ongoing engagement with meaningful situations.

"Starting to see" therefore appears to be a central element of how learning related to nature-positivity develops in this educational context. In a nature-based setting, this involves actively engaging with the environment through seeing, experiencing, and doing. One student described how their studies had led them to observe seasonal changes more closely:

> *I also realised something about observation – these have been the first years when I have actually noticed the change of seasons. Of course, I have always known that they change, but now I have really followed it, like 'wow, the colours are amazing now' or noticing when the leaves fall. The experience has somehow become much deeper.* (Participant 6, translated from Finnish)

Previously unnoticed micro-seasons had become visible, particularly when these phenomena were discussed and explored together. This suggests that experiential engagement and shared reflection are closely interconnected, and that learning is not only an individual process but also socially constructed (Vygotsky, 1978; Wenger, 1998). In addition, this illustrates how

learning may not only involve acquiring new knowledge but also deepening one's way of experiencing and relating to the environment. The idea of observing seasonal nuances, such as micro-seasons, has also been discussed in nature-related literature, where attention to subtle environmental changes is seen as a way of strengthening one's relationship with nature (e.g. Leppänen & Pajunen, 2025).

Many students emphasised the importance of learning through doing. For example, in the final reflections, students described the birdhouse and insect hotel workshop as meaningful, as it made several aspects of the topic more concrete. However, the findings also indicate that practical activity alone does not necessarily lead to learning. As Kolb (1984) argues, experience alone is not sufficient but requires reflection and conceptualisation to support learning. This becomes particularly visible in situations where additional information or reflection changes how an activity is understood. In this case, a written assignment originally intended as a background task proved particularly significant, as it provided the knowledge needed to interpret the activity in a more critical way. This was also reflected in one student's observation:

> *Lectures and discussions had the greatest influence on my thinking, as they provided factual information about nature-positivity and different perspectives from different people. The assignment related to birdhouses and similar tasks also prompted reflection and made me consider which actions genuinely benefit nature.* (Participant 5, translated from Finnish)

This illustrates how knowledge, discussion, and practical tasks together support a more critical understanding of what can be considered nature-positive action. It also highlights the importance of the relationship between knowledge and action. Learning appears to occur when practical engagement is combined with an understanding of why and how actions are carried out. At the same time, this introduces a degree of tension into the learning process, as well-intentioned actions are not always beneficial.

A similar pattern can be seen in situations where abstract concepts are connected to real-world examples. One student described it as particularly meaningful to explore examples of companies that implement nature-positive practices:

> *It felt very concrete when we went through those company examples. Not just what is offered to customers, but what the company itself does and commits to doing. The example of Haltia Lodge made it visible, for example, sourcing fish that would*

> *otherwise go to waste and considering sustainability as a whole.* (Participant 4, translated from Finnish)

For this student, the experience helped to concretise what nature-positive action can mean in practice and demonstrated how even small actions can contribute to broader outcomes. This suggests that connecting abstract concepts to real-world examples can make them more accessible and meaningful for learners. In this context, learning is not only about acquiring knowledge, but also about changing how the environment is perceived and experienced, which aligns with experiential learning theory (Kolb, 1984). Overall, these findings suggest that learning in nature-based contexts develops through small, often unplanned moments where experience, attention, reflection, and social interaction become intertwined.

4.2 Conditions for learning: tension, meaning, and disruption

Another theme that arises from the data concerns the conditions of learning, specifically what appears to trigger learning and changes in students' thinking during the pedagogical process. In the previous section (4.1), I explained how learning does not always manifest as something large or clearly defined, and how it can occur in unplanned situations. However, this alone is not enough; the findings suggest that some form of tension, disruption, or meaningful engagement is often required for changes in understanding to emerge. While discussion is explored in more detail in Section 4.3, it already appears here as a key trigger for learning.

Across almost all phases of the process, interaction and shared reflection appeared to play a significant role in learning. Engaging with other people's perspectives often encouraged students to question assumptions they had previously taken for granted, which in turn seemed to support learning and changes in thinking. Verbalising thoughts and experiences also appeared to deepen understanding, as learners reflected on their own interpretations while listening to others. This aligns with socio-cultural perspectives on learning, which emphasise that knowledge is constructed through interaction, dialogue, and participation with others (Vygotsky, 1978; Wenger, 1998).

It can therefore be argued that learning appears to require some form of tension, disruption, or challenge to existing ways of thinking. Such tension or disruption may occur through discussion, but also through practical experience, such as making a small mistake while building a birdhouse. As Mezirow (1991, 2000) suggests, transformative learning often begins

when existing assumptions are challenged through a disorienting dilemma that disrupts taken-for-granted ways of thinking. In this study, such moments do not always appear as dramatic disruptions but may instead emerge as smaller tensions or uncertainties within everyday learning situations.

Learning also appeared to be strengthened by personal relevance and interest. When students experienced a topic as meaningful or connected it to their own lives, their engagement in the learning process seemed to deepen. For example, observations made in nature or hands-on activities became more significant when students were able to relate them to their own experiences, reflecting the importance of meaning-making in learning (Illeris, 2018; Jarvis, 2006).

At the same time, the data suggest that learning is not always a straightforward or comfortable process. Encountering new perspectives, questioning one's own assumptions, and making mistakes may create uncertainty or even tension. However, these situations appear to be central to learning. When existing understanding is no longer sufficient, learners are required to reconsider their thinking. This may lead to a deeper level of understanding, even if the process itself is not easy. This tension was also reflected in one student's comment:

> *Individual actions do seem to have an impact, even though at times it feels somewhat pointless.* (Participant 1, translated from Finnish)

Based on the findings, learning seems to require a certain kind of disruption or break in routine thinking. Without such moments, learning may remain superficial or limited to habitual action. In contrast, situations that challenge existing assumptions or introduce new perspectives can act as triggers for learning, which is also central to transformative learning theory (Mezirow, 1991).

Furthermore, these elements that support learning—discussion, mistakes, interest, and personal relevance—are often interconnected. For example, discussion may generate tension, which in turn can spark interest and lead to deeper reflection. Similarly, practical activities may reveal gaps in knowledge, prompting learners to seek additional information and reconsider their actions.

In summary, learning in this context does not result from a single factor, but rather from the interaction of several interconnected elements. It appears to require both experience and

reflection, as well as individual motivation and social interaction, which aligns with holistic views of learning as a multidimensional process (Illeris, 2018).

4.3 Learning as a social and relational process

Another key theme that emerges from the data is the role of discussion and shared reflection in the learning process. This theme appeared across different phases of the data collection, including the initial group discussion, the activity phase, and the final reflections.

Students repeatedly emphasised that discussing issues with others helped them to understand the topic more deeply. Through interaction, they encountered new perspectives that challenged their previous assumptions. This encounter with different viewpoints seems to support learning, as it encourages students to reflect on their own thinking. The data also highlights how hearing others' ideas can open entirely new ways of understanding the issue at hand. This highlights the social nature of learning, as described by Vygotsky (1978), who emphasises that learning takes place through interaction with others before being internalised at the individual level. Shared reflection and dialogue can therefore be seen as central mechanisms through which understanding is constructed (Taylor, 2007).

In the initial group discussion, several students described how hearing others' thoughts made them reconsider their own views. The discussion appeared as a situation in which students realised that others may share similar thoughts but also hold entirely different perspectives. This created space to examine and question one's own thinking.

This was also reflected in one student's comment:

> *I liked this discussion; it was very rewarding. The way people approach the same issue from different angles, yet we are still talking about the same thing. How differently one can have an impact (on nature). That was an interesting observation*. (Participant 6, translated from Finnish)

In the final reflective task, a similar experience was described by another student, who emphasised the importance of combining discussion with practical activity:

> *What influenced me the most was doing things and discussing them. Through discussion, different perspectives opened up and helped to understand what defines nature-positivity.* (Participant 9, translated from Finnish)

Together, these accounts illustrate how discussion not only introduces new perspectives but also supports the development of a more nuanced understanding of complex phenomena. At the same time, it helps students to reflect on their own role and possibilities for action.

Similarly, during the activity phase, discussions often emerged naturally alongside practical tasks. Discussion was not necessarily planned as a separate part of the learning situation but rather became integrated into the activity itself. In these situations, students were able to reflect on their actions during the process. This was also reflected in one student's observation:

> *Doing things and the discussions around them had the greatest impact on my learning. Through dialogue, different perspectives opened up, helping me to understand what defines nature-positivity. Things are remembered better, and learning is deeper when you get to do things in practice.* (Participant 5, translated from Finnish)

In some cases, discussion arose when something did not go as planned, which then led to shared reflection and the search for alternative solutions. For example, practical challenges such as measurement errors during the workshop prompted discussion about the importance of correct dimensions and their implications for the outcome. Such moments can be understood as learning opportunities where unexpected situations trigger reflection and deeper understanding (Schön, 1983).

In the data, discussion also appeared as a space where learning takes place collectively. Students described situations in which understanding was gradually built together with others, rather than being received as ready-made knowledge from the teacher. This highlights that learning is not only an internal process within the individual but also takes place through interaction and the co-construction of meaning. This was also reflected in one student's observation:

> *It has been meaningful to reflect on the topic aloud together with others and to develop a deeper understanding as a group.* (Participant 4, translated from Finnish)

An important aspect of these interactions is the presence of a safe and open atmosphere. In the data, discussions were described as situations where students felt able to share their thoughts

without fear of being judged. This kind of environment appears to support learning, as it allows students to express incomplete ideas, question their own assumptions, and engage with different perspectives. Without such a sense of safety, these kinds of exchanges may not occur, and learning opportunities may be limited. The findings therefore support Taylor's (2007) argument that transformative learning is deeply relational and depends on trustful environments where learners feel safe to express uncertainty and question their assumptions.

The significance of discussion is also related to the need for learners to articulate their own thoughts. When ideas are expressed aloud, they become more structured and often begin to change. At the same time, perspectives introduced by others may reveal contradictions or new ways of thinking, which can act as triggers for learning. This further supports socio-cultural perspectives on learning, where understanding is constructed through interaction and shared meaning-making (Vygotsky, 1978).

4.4 From action to understanding: the role of knowledge

The findings highlight the importance of background knowledge in learning related to nature-positive action and in the professional competence of nature guides more broadly. Such knowledge includes the ability to identify a wide range of plant, animal, and bird species, as well as knowledge of equipment, routes, orienteering, and working in natural environments, not to mention customer service skills. The findings of this study further suggest that the combination of knowledge and practice is essential for learning in this context, which aligns with experiential and holistic views of learning (Kolb, 1984; Illeris, 2018).

A key finding of the data is that action alone does not automatically lead to learning. While practical activities were seen as meaningful and motivating, the data suggest that doing is not sufficient for developing a deeper understanding of nature-positive action. This finding reflects Kolb's (1984) view that learning emerges through the interplay between experience and reflection. Practical engagement becomes meaningful when combined with reflection and conceptual understanding. In addition, Schön's (1983) distinction between reflection-in-action and reflection-on-action helps explain how learning may occur both during and after practical activities.

One important observation concerns the role of background knowledge in learning, including in practical tasks. This became visible in several phases of the process. For example, during the initial group discussion, students described how learning to identify species had changed the way they perceive nature. Earlier examples, such as noticing capercaillie droppings or learning to identify mushrooms, illustrate how new knowledge can shift attention and enable learners to recognise previously unnoticed elements in their surroundings. Similar patterns were also observed in relation to other species, such as birdwatching during the spring migration. For example, students were introduced to the "100 birds" challenge (BirdLife Finland), which initially raised questions about the number of species. As their knowledge increased, students began to notice and recognise more species in their surroundings.

This was also evident in discussions about invasive species. For some students, the topic was already familiar, as they had completed a related study module and demonstrated their skills in practice. Others, however, were not familiar with the concept or its significance. As one student described, the topic initially felt unclear:

> *When we were talking about invasive species, I realised I didn't really know what an invasive species is or why it is a problem.* (Participant 6, translated from Finnish)

Even brief exposure to the topic during the initial phase appeared to influence their thinking, prompting them to reflect on what they themselves could do.

The importance of knowledge became particularly clear during the activity phase, in which students built birdhouses and insect hotels. The task initially appeared simple, but it soon became evident that correct implementation required specific knowledge. For example, the size of the entrance hole in a birdhouse determines which species may use it and whether it might attract predators. When these details were overlooked or implemented incorrectly, the activity could no longer be considered nature-positive.

This example highlights the gap between intention and outcome, a dynamic that has been widely discussed in experiential learning and reflective practice (Kolb, 1984; Schön, 1983). Good intentions do not necessarily lead to positive environmental impacts if actions are not informed by adequate knowledge. This was also reflected in one student's comment:

> *It is important to emphasise doing things in the right way, so that good intentions do not cause harm.* (Participant 9, translated from Finnish)

In this sense, learning requires more than participation in activities; it involves understanding the principles underlying those actions, which aligns with experiential learning perspectives emphasising the relationship between action and reflection (Kolb, 1984; Schön, 1983). This is particularly relevant in the context of nature-positive action, where actions are expected not only to avoid harm but to actively contribute to improving the state of nature. Without sufficient knowledge, such actions may fail to achieve this goal or even lead to unintended negative consequences.

The preparatory assignment on this topic proved to be meaningful for some students. When they had engaged with the background information beforehand, they approached the practical task differently. At the same time, it became clear that not all students engaged with the task in the same way. Even if the assignment had been completed, it did not necessarily influence their actions or level of engagement. This points to the importance of personal relevance: the topic needs to resonate with the learner for deeper learning to occur. For some students, completing the birdhouses was sufficient, without a strong interest in understanding the broader ecological implications.

Based on the data, learning appears to occur in situations where action and knowledge intersect. This reflects the importance of integrating knowledge and experience, which Illeris (2018) identifies as central to meaningful learning. Situations where something does not go as planned can trigger reflection and reveal gaps in understanding. In these moments, attention shifts from simply completing the task to considering its meaning and consequences.

From this perspective, learning is not a direct result of doing but emerges when practical engagement is combined with reflection and conceptual understanding, as emphasised in experiential and reflective learning theories (Kolb, 1984; Schön, 1983). At the same time, learning also takes on a critical dimension, as students begin to evaluate whether their actions are genuinely beneficial and under what conditions they can be considered nature-positive, which aligns with the idea of critical reflection in transformative learning (Mezirow, 1991).

In the assignments and learning journals, many students also reflected on the concept of nature-positivity itself—what it means and how it could be applied in their future work. It can be argued that without practical activities and exercises, the concept might have remained abstract and only superficially understood. Linking the concept to a concrete, student-selected task, supported by prior engagement with background knowledge, appeared to deepen

learning compared to a situation in which the topic would have been addressed only through lectures. As one student summarises:

> *I am now able to think more deeply about what different actions mean for nature and to better consider the consequences of my own actions.* (Participant 5, translated from Finnish)

This illustrates how learning in this context involves a shift from performing actions to understanding their broader implications.

4.5 Learning as increasing complexity and uncertainty

Based on the data, learning does not appear as a process that leads to clarity or certainty. On the contrary, learning often seems to increase complexity, uncertainty, and critical thinking. This perspective aligns with more recent understandings of learning as a complex and multidimensional process, where cognitive, emotional, and social dimensions are intertwined (Illeris, 2018). Rather than reducing uncertainty, learning may increase awareness of complexity and support more critical ways of understanding sustainability-related issues (Taylor, 2007).

Across different phases of the data, students reflected on the significance of their own actions in relation to broader environmental issues. Although nature-positive actions were considered important, their impact was sometimes perceived as limited, particularly at a global scale. This became evident, for example, in a discussion that shifted towards tourism in Lapland and its impacts.

One student described the situation as follows:

> *The whole concept surprised me; I had never even heard of it before. But this is something where we can moralise and build as many birdhouses as we want. The reality is that if you go to Rovaniemi or Lapland, you can see what is actually happening there and what it does. People are so greedy. They don't build birdhouses there. It's all about calculations all the time—business is business. And Finns alone cannot influence this change.* (Participant 1, translated from Finnish)

This comment illustrates the tension between individual actions and broader structural processes. Learning, therefore, appears as a shift from more simplified thinking towards a

more complex understanding. Instead of viewing actions as clearly “good” or effective, students began to recognise contradictions, limitations, and uncertainty as discussed in studies on transformative and critical learning (Mezirow, 1991; Taylor, 2007).

This process can be understood as a form of cognitive disruption (Mezirow, 1991), where previous assumptions are no longer sufficient to explain the phenomena. As a result, learning may involve discomfort, as familiar ways of thinking are questioned. In this sense, learning does not simplify the world but makes it more complex.

The data also points to questions of agency. On the one hand, students described a growing willingness to act and influence outcomes in favour of nature, reflecting an increased sense of personal agency (Bandura, 2001). They recognised their own role and responsibility as part of a broader whole. On the other hand, they simultaneously questioned the extent to which individual actions can make a meaningful difference, particularly in relation to large-scale structural and global challenges.

This suggests that learning does not simply strengthen agency but also makes it more complex, as discussed in relation to agency and learning by Bandura (2001) and Illeris (2018). Rather than developing as a straightforward sense of empowerment, agency appears to involve an ongoing tension between the perceived importance of individual actions and their perceived limitations. Instead of providing clear answers, learning seemed to raise new questions and reveal the complexity of acting in a nature-positive way. In this sense, learning may expand understanding rather than resolve uncertainty, which also aligns with Taylor’s (2007) view of transformative learning as an ongoing and often unsettled process.

A similar development can also be observed when comparing different phases of the data. The initial Padlet responses were largely concrete and action-oriented, focusing on specific behaviours and practices. By the end of the process, students’ reflections had become more nuanced and critical. At the same time, increased understanding did not necessarily reduce uncertainty; instead, it often brought forward new tensions and questions. This suggests that learning involves not only clarification but also an increased awareness of complexity. Overall, learning appears as a process that expands rather than resolves understanding.

5. DISCUSSION

5.1 Main findings

The findings of this study emphasise the complexity and context-dependent nature of learning related to nature-positive actions. Rather than occurring as a clear or singular transformation, learning appears as a gradual, uneven, and socially influenced process that extends beyond the timeframe of the study. This challenges the assumption that transformative learning can be achieved through short-term educational or experiential interventions. As Mezirow (1997, p. 5) notes, transformative learning involves changes in one's frame of reference, including assumptions, beliefs, and ways of interpreting experience. However, the findings of this study suggest that such changes rarely emerge as distinct or easily identifiable shifts. Instead, they develop gradually through experience, reflection, dialogue, and repeated engagement with meaningful situations.

Although the data collection period was relatively short, students participated in a wide range of activities related to nature-positive action, including discussions, practical tasks, reflections, and outdoor experiences. Despite this intensity, learning did not emerge as a single outcome but rather as developing understandings and partial shifts in thinking. This supports Zhang's (2025) argument that transformation in tourism contexts should be understood as an ongoing process rather than a single moment of change. Short-term experiences may initiate new perspectives, but sustained learning appears to require continuity and opportunities to revisit and reflect on experiences over time.

The findings also highlight the importance of combining knowledge with practical engagement. Practical action alone was not sufficient for deeper learning; instead, students' understanding appeared to develop when hands-on experiences were combined with reflection and factual knowledge. This aligns with experiential and transformative perspectives on learning, which emphasise the interaction between experience, reflection, and meaning-making (Kolb, 1984; Mezirow, 1991). At the same time, the findings suggest that increased understanding does not necessarily lead to certainty. Instead, learning often appeared to increase awareness of complexity, contradictions, and the limitations of individual action.

Another important finding concerns the role of personal meaning and socially shared learning. Students often described seemingly small or unexpected moments as highly meaningful,

particularly when experiences connected with their own lives or were discussed collectively with others. This supports Illeris's (2018) emphasis on individual meaning-making and Jarvis's (2006) view of learning as shaped by lived experience and context. It also highlights the relational dimension of learning, where dialogue, shared reflection, and interaction contribute to the development of understanding.

Taken together, the findings suggest that learning related to nature-positivity is best understood as a gradual and context-dependent process shaped by experience, reflection, uncertainty, and social interaction, rather than as a clearly measurable outcome. From an educational perspective, this highlights the importance of combining structured teaching with opportunities for practical engagement, dialogue, and personally meaningful experiences. In particular, the findings suggest that learning may emerge not only through intentionally designed activities, but also through small, unplanned moments that encourage learners to reflect on their relationship with nature and their role within broader socio-ecological contexts.

5.2 Nature-positivity in the Finnish educational and business context

In the Finnish context, nature-positivity has recently begun to shift from a marginal concept into a broader framework shaping discussions on sustainability, including in education and regional development. While sustainability discourse has traditionally focused on climate change mitigation and the reduction of environmental harm, nature-positivity reframes the objective towards achieving a net positive impact on biodiversity and ecosystems (Opetushallitus, n.d.; Sykli, n.d.). This implies not only minimising negative impacts but actively contributing to ecological restoration and regeneration.

Within the educational field, early developments related to nature-positivity can be identified in vocational education contexts. Actors such as Suomen ympäristöopisto SYKLI (the Finnish Environment College) have introduced nature-positivity into educational practice through development projects and online courses targeted at vocational teachers (Sykli, n.d.). These initiatives have focused on practical pedagogical applications, such as how to integrate nature-positivity into teaching and learning environments. Based on this, nature-positivity appears to have first entered education through practical experimentation and development work, before becoming more visible at the level of institutional strategies. This interpretation

is supported by previous research: Dredge (2022) shows how sustainability transitions often emerge in practice before becoming institutionalised, while Sterling (2010) highlights the importance of experiential and context-dependent learning.

In contrast, the integration of nature-positivity into higher education appears to be more recent. Finnish universities have begun to incorporate nature-positivity into their sustainability strategies alongside climate action, indicating a shift towards a more comprehensive understanding of environmental sustainability (Oulun yliopisto, 2026). This development can be interpreted as a form of institutional consolidation, where concepts that have already emerged in practice are gradually formalised at the strategic level. Similar dynamics have been described in sustainability transition research, where innovations often develop in niche contexts before spreading more broadly (Dredge, 2022; Grin et al., 2010).

At the same time, regional initiatives such as Luontopositiivinen Pohjois-Pohjanmaa (the Nature-Positive Northern Ostrobothnia project) demonstrate how nature-positivity is being operationalised across sectors. This project illustrates how the concept is translated into practice, for example, through the development of assessment models for companies' environmental footprint and handprint (Handprint Centre, 2020). In this way, nature-positivity extends beyond reducing harm towards actively generating environmental benefits. These initiatives bring together education, regional development, and business actors, positioning nature-positivity as a cross-cutting framework that extends beyond individual institutions (Oulun yliopisto, n.d.). Taken together, these developments suggest a temporal layering, where pedagogical experimentation and project-based initiatives precede broader institutional adoption.

In vocational education, nature-positivity is closely linked to broader policy frameworks related to the green transition. National guidelines emphasise sustainability and ecological responsibility as key competencies (Opetushallitus, n.d.). At the same time, their implementation remains largely dependent on local actors, projects, and individual educators. This points to a structural gap between policy-level objectives and pedagogical practice. As Sterling (2010) suggests, developments in sustainability discourse do not automatically translate into changes in educational practice.

The findings of this study help to interpret this gap. Rather than emerging from formal instruction alone, learning related to nature-positivity appears to develop through situated experiences, concrete activities, and reflective processes. This suggests that nature-positivity

in vocational education is currently in a transitional phase, where conceptual frameworks are still being translated into pedagogical practice. This aligns with Sterling's (2010) emphasis on experiential learning and Mezirow's (2000) view of learning as a gradual and often uneven process of perspective transformation.

The increasing visibility of nature-positivity is not limited to education but is also evident in the practices of Finnish tourism and nature-based businesses. At the same time, the concept remains ambiguous and contested. While tourism actors increasingly promote sustainability and nature-positive goals, tourism has also been criticised for greenwashing and for continuing practices that may ultimately remain environmentally harmful. This broader tension was also reflected in the students' discussions, particularly in their uncertainty about what should be considered genuinely nature-positive action. At the national level, Visit Finland has explicitly adopted nature-positivity as part of its discourse, for example, through expert events and webinars focusing on nature-positive tourism (Visit Finland, 2025a). In this context, nature-positivity is framed not only as an environmental objective but also as a strategic opportunity for tourism development. A similar perspective is presented by Kokkarinen (2025), who argues that nature-positive tourism represents a development direction in which Finland has both the resources and the conditions to take a leading role.

This broader development is also reflected in the findings of this study. Students described real-world examples, particularly businesses and practical cases, as some of the most meaningful learning situations, as they made abstract concepts more concrete and relatable. As one student described:

> *"It felt concrete to me when we looked at company examples and considered what the company actually does and commits to."* (Participant 4, translated from Finnish)

Examples of Finnish tourism businesses that have begun to adopt elements of nature-positive or regenerative thinking can already be identified. Rather than representing isolated cases, these examples suggest an emerging shift in which tourism businesses increasingly engage in practices that go beyond minimising harm and aim to support ecological wellbeing. Similar developments are also visible in the Sustainable Travel Finland programme, where practical tools and guidelines have been developed to help tourism businesses identify concrete steps towards nature-positive practices (Visit Finland, 2025b). This reflects a broader shift in which nature-positivity is increasingly approached not only as an abstract sustainability goal but also as a practical framework for everyday decision-making.

At the same time, these developments align with broader shifts towards regenerative and participatory approaches to sustainability, where the focus moves from sustaining systems to actively restoring them (Dredge, 2022; Heslinga et al., 2019). However, as Higgins-Desbiolles (2018) argues, such initiatives may risk remaining superficial if they are not supported by bigger structural changes.

The findings of this study provide a grounded perspective on these developments. Learning appears to emerge not from the transmission of knowledge alone, but from engagement in situations where individuals can develop agency and reflect on their actions (Sterling, 2010; Mezirow, 2000). At the same time, the findings highlight a tension: while nature-positivity is increasingly institutionalised in strategies and policies, its pedagogical realisation remains uneven and dependent on local practices.

In this study, nature-positivity does not appear as a fixed or clearly defined concept, but rather as an evolving and context-dependent understanding shaped through learning processes. The findings suggest that nature-positive action requires not only good intentions but also critical reflection, ecological knowledge, and the ability to evaluate under what conditions actions may have positive or negative consequences. Students reflected, for example, on how practical activities such as building birdhouses or insect hotels may unintentionally cause harm if implemented without sufficient knowledge or consideration of context. Rather than functioning as a predefined set of competencies, nature-positivity appears as an ongoing process of learning, reflection, and negotiation of meaning.

5.3 Learning as a social, contextual, and experiential process

The findings of this study highlight several key elements that appear to support learning in the context of nature-positive action. These include the importance of discussion, both individual and shared reflection, and learning through practical engagement. Guided nature-based experiences seem to support learning by helping students notice and interpret their surroundings in new ways. This suggests that learning is not only about gaining knowledge, but also about learning to notice and understand what is observed.

In this sense, learning can be understood as a process of becoming more attentive to the environment. Small moments, such as noticing a detail in nature or experiencing a sense of

stillness, may shift the learner's perspective in subtle but meaningful ways. These moments are not necessarily planned or structured, yet they appear to play a central role in shaping how individuals relate to nature. Such moments may seem minor from an external perspective, but for the learner, they can become highly significant in shaping attention and understanding. This aligns with experiential perspectives on learning (Kolb, 1984).

The results also point to the importance of social learning. Discussions, shared reflection, and a supportive learning environment play a central role in shaping understanding. Learning does not appear as an individual process alone, but rather as something that emerges from interaction among students, teachers, and the broader learning context. This also highlights the fluidity of roles within the learning process, where the distinction between teacher and learner may become less clear, and learning can occur in multiple directions. As Mezirow (1997, pp. 6–7) suggests, learning can be understood as a social process in which meaning is constructed through dialogue and interaction with others.

In addition, the findings highlight the importance of combining theory and practice, as well as the overall complexity of the learning process. Learning is not limited to formal teaching moments but often occurs in small, spontaneous situations arising from group interaction, shared experiences, and engagement with the surrounding environment. Rather than being triggered by a single moment, transformative learning appears to develop gradually through repeated experiences and reflection. This is consistent with Kolb's (1984) view that learning is grounded in the interplay between experience and reflection. Although the practical activities themselves were relatively small in scale, their pedagogical significance appeared to emerge particularly through the reflection, discussion, and critical questioning connected to them. The activities functioned not only as practical tasks but also as opportunities to reconsider human relationships with nature and individual responsibility.

Nature also appears to play a significant role in this process. It serves as a source of inspiration, supports individuals during challenging times, and enhances positive experiences. The presence of a natural environment may create conditions that differ from more structured classroom settings, allowing for a different kind of engagement and reflection. As students begin to see themselves not only as part of nature but as nature itself, their perspective shifts, which may lead to greater respect, everyday actions, and sometimes a desire to take broader action. This kind of relational understanding resonates with posthumanist perspectives, which challenge human-centred ways of thinking and emphasise the interconnectedness between

humans, non-human beings, and the environment (Braidotti, 2013). As Mayer and Frantz (2004) suggest, a deeper sense of connection to nature is associated with changes in attitudes, behaviours, and wellbeing, which resonates with the experiences described by the students.

In this sense, nature is not only a setting for learning but an active element within the learning process itself. In this educational context, learning appeared to involve not only acquiring knowledge but also gradually "starting to see" and notice relationships, details, and meanings that had previously remained unnoticed. As Jarvis (2006) and Illeris (2018) suggest, the characteristics of the environment shape attention, support reflection, and influence not only what is learned, but also how learning takes place.

At the same time, the findings suggest that the relationship with nature is not static but continuously evolving. As Jarvis (2006) emphasises, learning develops through ongoing experiences, interaction, and reflection, and may deepen over time as new meanings are constructed. This process is highly individual, and different situations may affect learners in different ways.

The findings also indicate that education serves as an important facilitator of learning, but it is not the only source. Learning appears to develop across multiple contexts, including previous experiences, peer interaction, and activities outside formal education. In this sense, Jarvis (2006) conceptualises learning as a lifelong and context-dependent process that extends beyond formal educational settings.

Taken together, these findings reinforce the view that learning in nature-based contexts is inherently relational and situated, emerging through the interaction between individuals, social environments, and the natural setting. Rather than developing through isolated instructional moments, learning appears to evolve through ongoing experiences, shared reflection, and engagement with meaningful situations. This highlights the importance of educational approaches that create space for interaction, practical engagement, and context-sensitive reflection.

5.4 From action to understanding, agency, and implications

The findings also point to broader implications related to action, agency, and the role of learning in shaping behaviour. Learning related to sustainability appears to involve navigating

uncertainty. Rather than offering clear answers, the learning process can open new questions and tensions, sometimes increasing a sense of ambiguity rather than reducing it. At the same time, this uncertainty may encourage deeper engagement with complex issues.

The findings emphasise the connection between action and understanding. Learning does not occur through participation in activities alone but requires the combination of knowledge, reflection, and meaningful involvement. As Mezirow (1997) suggests, transformative learning involves critically examining one's assumptions and changing one's frame of reference. In this study, such reflection appears closely linked to action, where hands-on experiences serve as a foundation for questioning and reinterpreting one's understanding of nature-positive practices.

Similar tensions are also visible in current Finnish tourism education and development discussions. For example, Visit Finland's Train the Trainer network, which focuses on sustainable tourism education and the Sustainable Travel Finland programme, highlights ongoing discussions about how nature-positive thinking can be translated into concrete actions and educational practices (Visit Finland, 2025c). In this context, even relatively small-scale actions may function as important starting points for reflection, participation, and gradual changes in thinking and practice.

The data also suggests that students differ in how they perceive their sense of agency in relation to nature-positive actions. It is possible to identify different stages in how students position themselves between knowledge and perceived ability to influence outcomes. At an initial stage, students may have only a limited understanding of their own impact, which can lead to a more critical or even dismissive view of individual actions, especially in a global context. As their understanding develops, they begin to recognise small but meaningful opportunities to influence their immediate environment. At a more advanced stage, where students have gained both knowledge and practical experience, their sense of agency appears to expand further, and their perceived ability to influence outcomes becomes stronger.

This interpretation is consistent with Zhang's (2025) argument that transformation develops through ongoing engagement and changes in everyday practices. Rather than representing a clear shift from one state to another, agency appears to evolve gradually as students gain confidence, experience, and a deeper understanding of environmental complexity.

At the same time, the findings reveal tensions related to agency. As Bandura (2001) conceptualises, agency refers to individuals' capacity to act intentionally and influence their

own functioning and life circumstances. In this study, students' sense of agency appears to develop gradually as their understanding, experience, and confidence increase. However, some students express uncertainty about the impact of individual actions, particularly in relation to large-scale environmental challenges and structural constraints. This reflects a broader tension between individual responsibility and systemic change, where the significance of personal action may be questioned. At the same time, even small-scale actions may contribute to broader transformations when embedded in ongoing practices and supported by social and contextual factors, as Zhang (2025) suggests.

The findings also indicate that increased awareness does not automatically lead to action. Instead, the relationship between knowledge, responsibility, and behaviour appears to be complex and mediated by factors such as motivation, confidence, and perceived possibilities for influence. Rather than leading directly to behavioural change, learning may first appear as a shift in perspective, which gradually influences how individuals act over time. This highlights the importance of supporting learners not only in developing understanding but also in recognising their capacity to act.

Furthermore, the findings raise questions about the role of concepts such as nature-positivity in education. In this study, the concept appears to function less as a fixed framework and more as a catalyst for reflection and discussion. This aligns with Mezirow's (1997) view that transformative learning is closely connected to critical reflection and questioning of previously taken-for-granted assumptions. While the term provides a shared point of reference, learning seems to be less about adopting the concept itself and more about developing an individual understanding of what it means to care for nature in practice. In this sense, the value of the concept lies not necessarily in its definition, but in its ability to provoke reflection, critical thinking, and dialogue.

A further important finding relates to the role of critical reflection. Students expressed critical perspectives on their own actions and the limitations of individual agency, which can be seen as an essential part of the learning process. Without such reflection, meaningful change in thinking and behaviour is unlikely to occur. In this sense, uncertainty and questioning are not obstacles to learning but necessary conditions for it.

The findings also suggest that learning is closely connected to accepting imperfection. Rather than striving for ideal solutions, engaging in action and learning through mistakes appears to support the development of understanding. The learning process did not emerge as linear or

predictable, but rather as uncertain, uneven, and sometimes contradictory. Students moved between confidence and doubt, inspiration and criticism, as well as between enthusiasm and uncertainty regarding the significance of individual actions. This also reflects the characteristics of so-called “wicked problems”, where environmental and sustainability-related issues involve complexity, uncertainty, and competing perspectives with no simple or final solutions (Rittel & Webber, 1973). This highlights the importance of viewing learning as an ongoing process, in which partial knowledge and evolving practices are both legitimate and necessary. The learning process can also be connected to what Tribe and Paddison (2021) describe as a movement from “world-taking” towards “world-changing” approaches in tourism education. Although the activities in this study were relatively small in scale, they appeared to encourage students to critically reflect on existing practices and consider their own role in shaping the relationship between tourism and the natural environment.

Finally, the findings highlight the ways in which students understand their future professional roles. The role of a nature instructor can be seen at different levels, from leading practical activities to influencing clients’ perceptions, values, and behaviours. This reflects a broader understanding of professional practice as not only technical but also ethical and relational. As students deepen their understanding of nature-positive actions, their role may extend from guiding activities to fostering more reflective and responsible engagement with nature. This is particularly relevant in tourism contexts, where professionals often need to navigate tensions between ecological responsibility and economic pressures. In this sense, the findings resonate with Tribe’s (2002) idea of the “Philosophic Practitioner”, which emphasises that tourism education should extend beyond narrow vocational competence towards critical reflection and responsibility for the wider tourism world. Rather than only preparing students to function within existing tourism structures, education may also support students in questioning and rethinking those structures.

It is important to note that this study represents a case-based approach focusing on a specific group of students within a particular educational context. The findings are therefore not intended to be generalised but rather to provide insights into how learning related to nature-positive action may occur in similar contexts.

6. CONCLUSION

This study set out to examine how learning related to nature-positivity develops as a process, and what kinds of situations, actions, experiences, and reflections shape this learning.

The findings suggest that learning does not appear as a single, clearly identifiable transformation, but rather as a gradual and context-dependent process that unfolds differently for everyone. Instead of clear turning points, learning seems to develop through small, often subtle shifts in thinking, perception, and understanding. In this study, nature-based environments functioned as a particularly supportive context for learning, providing opportunities for experience, reflection, and interaction.

Learning was found to occur mainly in small, often spontaneous moments that were not always planned as formal learning situations. These moments were not necessarily repeatable, as the natural environment continuously changes and creates new and unpredictable situations. In this sense, learning in nature-based contexts differs from more structured environments, as it is shaped by dynamic and situational factors.

The findings also highlight the importance of discussion and social interaction. Through dialogue, students were exposed to new perspectives, which supported reflection and the questioning of their own assumptions. At the same time, practical engagement played a significant role. However, the findings indicate that action alone is not sufficient for learning. Instead, learning requires the combination of knowledge, reflection, and experience to support deeper understanding.

While no clear or complete transformation in students' relationship with nature-positivity could be identified within the timeframe of this study, the findings suggest that changes in thinking may represent an early stage of transformative learning. Shifts in perspective appear to precede changes in behaviour, highlighting the importance of cognitive and reflective processes in learning.

Taken together, these findings emphasise the importance of understanding learning as an ongoing and context-dependent process rather than a fixed outcome. This is particularly relevant in sustainability-related contexts, where learning involves complexity, uncertainty, and the need to navigate tensions between individual action and broader structural challenges. As sustainability itself is continuously evolving, concepts, practices, and expectations are

constantly being redefined, this further reinforces the need to approach learning as an ongoing process.

From a practical perspective, the findings suggest that learning environments should support not only knowledge acquisition but also opportunities for reflection, discussion, and meaningful engagement. In addition, the results highlight the importance of connecting abstract concepts, such as nature-positivity, to concrete experiences to make them more accessible and meaningful for learners.

An important methodological consideration in this study relates to the dual role of the researcher as both the teacher and the researcher of the group. This position had both advantages and limitations. On the one hand, prior familiarity with the students and their level of knowledge made it possible to design learning situations that were appropriate for the group. It also enabled a level of trust and openness that supported discussion, as students appeared willing to share their thoughts and engage in dialogue on different topics. This familiarity may have contributed to the depth and richness of the data, particularly in situations such as group discussions.

On the other hand, the dual role may also have influenced the data in ways that are difficult to fully assess. The presence of the teacher as a researcher may have affected how students expressed their views, for example, by shaping what they chose to share or how they formulated their responses. It is therefore possible that the data reflects, at least to some extent, the existing relationship between the students and the teacher, rather than perspectives that might have emerged in a different research setting. At the same time, the dual role can be understood as part of the context of this study, rather than as a limitation to be fully eliminated.

This study also has certain limitations. The data collection period was relatively short, and the number of participants was limited. As a result, the findings do not aim to be generalisable but rather to provide a context-specific understanding of how learning related to nature-positive action may develop.

Based on these findings, future research could further explore how learning processes related to nature-positivity develop over longer time periods, and how changes in thinking are translated into concrete actions. In addition, it would be valuable to examine how different educational contexts and learner backgrounds influence the development of nature-positive

understanding and agency. This could involve comparing learners from different vocational fields or exploring how prior experience with nature shapes engagement with the concept.

Another important area for further research concerns the relationship between small, concrete actions and their perceived and actual impact. While practices such as building birdhouses, winter bird feeding, or constructing insect hotels have been widely studied from an ecological perspective, less attention has been given to how these actions are understood, interpreted, and evaluated by learners in educational contexts. Future research could therefore focus on how students perceive the effectiveness of such actions, how this influences their sense of agency, and how their understanding develops over time. This would help to bridge the gap between intention and outcome, not only in ecological terms, but also in relation to learning processes and behavioural change.

In addition, this perspective is particularly relevant in tourism contexts, where small-scale, nature-positive actions are often integrated into services and visitor experiences. Further research could explore how such practices are communicated, understood, and enacted by both professionals and participants, and to what extent they contribute to meaningful learning and genuinely sustainable outcomes.

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APPENDIX 1: The letter of consent

Luottamuksellinen - Confidential (3Y)

LAPIN YLIOPISTO
UNIVERSITY OF LAPLAND

TUTKIMUSSUOSTUMUS

Hyvä haastateltava /tutkimukseen osallistuja,

Opiskelen matkailuntutkimusta Lapin yliopistossa ja kerään aineistoa pro gradu -tutkielmaani varten. Tutkielmani käsittelee transformatiivista oppimista sekä sitä, miten opiskelijat kokevat luonnosta huolehtimisen ja luontoa kohtaan tehdyt positiiviset teot. Tutkielmani ohjaajana toimii professori Outi Rantala.

Aineistonkeruu toteutetaan luontoalan opintojenne yhteydessä ajalla 12/2025–02/2026. Aineistoa kerätään ryhmähaastatteluissa, yhteisten toimintojen suunnittelun ja toteutuksen aikana sekä kurssin aikana tuotettujen opiskelumateriaalien (esim. oppimispäiväkirjat) muodossa. Haastattelut nauhoitetaan. Aineistoa käytetään vain tutkimustarkoituksiin, ensisijaisesti pro gradu -tutkielmassani.

Tutkimus noudattaa tutkimuseettisen neuvottelukunnan määrittelemiä vastuullisen tutkimuksen periaatteita. Aineisto käsitellään nimettömänä. Osallistumisenne tutkimukseen on vapaaehtoista eikä sillä ole vaikutusta opintosuoritukseenne. Mikäli myöhemmin haluatte vetäytyä tutkimuksesta, voitte tehdä sen ilmoittamalla asiasta minulle jaliukko@ulapland.fi p. 044 7692 246 tai alla mainitulle ohjaajalle.

Tarkempaa tietoa tutkimuksesta ja tutkimusaineistojen käytöstä saa kurssin vetäjältä: outi.rantala@ulapland.fi, p. 040 4844202.

Ystävällisesti,

Jaana Liukkonen

Suostun haastatteluaineiston käyttöön tutkimustarkoituksessa.

_____ _____

Allekirjoitus Päivämäärä

_____

Nimenselvennys

APPENDIX 2: The script of the first group discussion

1.12.2025 (kesto yhteensä n. 60–90 min)

Alustusta aiheeseen

- Lyhyt katsaus kestävästä matkailusta tähän päivään (miksi luonnon hoivaaminen on niin tärkeää ja ajankohtaista, miten linkittyy luonto-ohjaajan opintoihin)
- Aluksi jokainen miettii hetken itsekseen ja kirjaa lyhyesti ylös:
  - Miksi luonnon hoivaaminen on niin tärkeää?
  - Millä tavalla omat ajatukset ja teot ovat jo muuttuneet opintojen aikana?
  - Osaako nimetä yksittäisiä oppimistilanteita/aiheita/retkiä/keskusteluja, jotka ovat muuttaneet omaa ajattelua?

Keskustelun aloitus: yksi sana tai fiilis siitä, millaisena kukin näkee oman suhteensa luontoon tällä hetkellä.

Teema 1: opintojen vaikutus luontosuhteeseen/-asenteeseen

- Miten luontoalan opinnot ovat tähän mennessä vaikuttaneet siihen, mitä ajattelette luonnosta?
- Onko jokin yksittäinen asia, esim. kurssi, teema, retki tai opettajan kommentti jäänyt erityisesti mieleen ja muuttanut ajattelua?
- Jos jokin kokemus vaikutti, mistä arvelette sen johtuneen?
  - Olivatko mukana tunteet?
  - Ryhmän tuki?
  - Uusi tieto?
  - Jokin ”herättävä” hetki luonnossa?

Teema 2: luonnon hoivaaminen, mitä se tarkoittaa opiskelijoille?

- Kun kuulette sanan ”luontoa hoivaava toiminta”, mitä se tuo teille mieleen?
- Mitkä teot koette merkityksellisiksi luonnon hyvinvoinnin kannalta?

Tarkentavia kysymyksiä (jos on aikaa)

- Millaisia pieniä arjen tekoja teette luonnon hyväksi?
- Onko jokin teko tai tapa, johon olette erityisen sitoutuneita?
- Onko luonnon hoivaaminen joskus ristiriitaista tai vaikeaa? Miksi?

Teema 3: Positiiviset teot, konkreettisia esimerkkejä

- Oletteko tehneet jotain käytännön tekoa luonnon hyväksi, josta olette ylpeitä?
- Onko opinnoissa ollut hetkiä, jossa olette kokeneet tekevänne ”jotain hyvää luonnolle”?
- Millaiset teot jäävät usein huomaamatta, mutta ovat silti tärkeitä?

Tarkentavia kysymyksiä (jos aikaa on)

- Mikä motivoi teitä tekemään näitä tekoja?
- Onko joku toinen inspiroinut teitä?
- Oletteko huomanneet, että muiden käyttäytyminen vaikuttaa omaan (mallioppiminen)?

Teema 4: Ajattelun muutokset ja tulevaisuus

- Miten haluaisitte itse vaikuttaa luonnon hyvinvointiin tulevaisuuden työssänne?
- Onko jokin taito, tieto tai kokemus, joka on antanut teille varmuutta toimia luonnon puolesta?
- Onko opiskelujen kautta syntynyt ajatus siitä, millaista ”hyvää jälkeä” haluaisitte jättää luontoon?

Tarkentavia kysymyksiä (jos aikaa on)

- Missä asioissa koette, että muutos omissa ajattelutavoissa on vielä kesken?

Loppureflektio:

- Mitä keskustelusta jäi mieleen?
- Opitteko toisiltanne jotain?
- Mikä teille on tärkeintä luonnon hyvän tulevaisuuden kannalta?

APPENDIX 3: Final reflection questionnaire

10.2.2026

Vastaukseksi riittää 2–5 lausetta / kysymys:

1. Miten ymmärrät nyt luontopositiivisuuden verrattuna jakson alkuun? (Jos ei ole muuttunut, kerro miksi.)
2. Mikä tässä kokonaisuudessa (luennot, keskustelut, tehtävät yksin tai ryhmässä, konkreettinen tekeminen: linnunpöntöt, hyönteishotellit, talipallot, metsään vienti) vaikutti eniten ajatteluusi? (Voi olla myös kriittinen tai negatiivinen.)
3. Miten tämä näkyy (tai ei näy) tavassasi toimia luonto-ohjaajana jatkossa?
4. Millaista viestiä haluaisit/et haluaisi viedä aiheesta asiakkaille tai muille?
5. Onko jotain muuta, mitä haluaisit vielä sanoa tähän liittyen?

APPENDIX 4: Script of the final group discussion

10.2.2026

- Oliko tässä kokonaisuudessa jotain, mikä yllätti sinut?
    - Oliko yllätys enemmän myönteinen, kielteinen – vai se, ettei mikään yllättänyt?
- Mikä tuntui kaikkein konkreettisimmalta tässä tekemisessä?
    - Oliko se tekeminen itse, tieto, joka tuli esiin vai jokin käytännön rajoite?
- Muuttuiko jokin pieni asia siinä, miten suhtaudut tällaisiin tekoihin luonto-ohjaajana?
    - Jos muuttui, mihin suuntaan – tai jos ei, miksi ei?

Tässä oli viimeinen aineistonkeruukerta. Kiitos, että olette osallistuneet. Kaikki vastaukset käsitellään nimettöminä, eikä yksittäisiä opiskelijoita voi tunnistaa gradussa.