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PRESCHOOL PERSPECTIVES ON NATURE – AN INTERVIEW STUDY OF CHILDREN ATTENDING OUTDOOR CLASSES

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Abstract

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Aim: The aim of this thesis is to explore views, perspectives and opinions of preschool children that attend outdoor classes about nature, animals, plants and nature's protection from humans' pollution. By conducting semi-structured interviews with preschool children, the children's voice is sought to be at the centre of research.

Theory: Posthuman theories suggest that the human and non-human should be equal and humans must seek ways in order for this equity to be implemented; daily exposure to nature is helpful to preschool students in order to develop a thinking of equality and equity between humans and non-humans.
Critical theorists argue that daily exposure to animals in parks might promote animals' manipulation and exploitation by humans. Children's voice and children's agency are central to the current research since the thesis seeks to illustrate that children, even from young age are able to communicate their needs, worries and thoughts.

Method: Qualitative research of semi-structured interviews with open-ended questions was selected as the most appropriate method for the current thesis in order for children's voice to be heard. Thematic analysis of the transcribed text of the interviews was selected in order to analyse the children's discourse.

Results: Four primary themes emerged: I) *complex knowledge about nature*, II) *association of outdoor school day with play*, III) *affinity towards animals*, IV) *protection of nature against its pollution from humans.* Children are thinking of nature in multiple ways; either as a place where they have fun or as the animals and plants in it. Play is considered very important for preschool children when they find themselves in nature. Moreover, the vast majority illustrated affection towards animals while in very few instances violence towards small ones has been uttered. Finally, all the children demonstrated knowledge about who pollutes nature, what are the harmful consequences of nature pollution with plastic and what can or should be done in order for nature to be kept pure and clean.

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Introduction

The Swedish curriculum for preschool Lfpö 18 (Skolverket, 2018, p.5) states that preschool education should form the basis for children's active participation in sustainable development; not only economic but social and environmental too. Outdoor spaces offer the opportunity for children to explore and learn about nature, animals, plants and in a broader context about sustainable development. Mikaels (2009 p.85) state that in Scandinavian countries the cultural phenomenon of dwelling or spending time in nature for recreational purposes is called friluftsliv and as a result friluftsliv as a leisure activity is deeply rooted in these countries. Skolverket (2018, p.10) argues that preschool children should be offered the opportunity to develop comprehensive mobility by spending time in different natural environments. Therefore, the Nordic concept of friluftsliv seem to drive the country's educational curriculum towards an 'as much as possible outdoor learning'. More specifically, there are many outdoor preschool classes where children from the young age of three are offered the opportunity to explore outdoor life. Friluftsliv and its connection with sustainability through outdoor learning seems to be offered to preschool children that attend outdoor classes, while concepts such us connection with nature, love for nature and animals, environmental exploration, conservation and stewardship are concepts that are promoted through these classes.

The aim for the creation of this kind of preschools is manifold and is mainly related to connection with nature and more recently with sustainability. The implementation of such a school would aim to give its students "knowledge about nature, to make them aware of the environment and help them acquire a feeling for nature" (Änggård, 2010, p.7). Thus, Änggård argues that nature connectedness is a key factor why young learners should attend such a preschool. Children taken on a daily basis into different areas and different environmental spaces are offered many opportunities to learn about nature and as a result, are offered a wide range of opportunities to feel close to nature and its surroundings. Therefore, environmental conservation and stewardship concepts might be more easily acquired by learners that have been exposed to situations that these concepts are practically needed.

In order to explore the ways preschool children, express themselves about nature, plants, animals and about nature pollution by humans, an international preschool with a lot of outdoor activities was chosen in the area of Västra Götaland, Sweden. Semi-structured interviews with open-ended questions was considered the most appropriate method to follow. Outdoor schooling at preschools can be the stepping stone of sustainability discourse implementation to young children. There are various studies that seek to present and explore the benefits of outdoor schooling for preschool children (Ashbrook;2016, Bagceli Kahraman et al;2019, Dennis Jr. et al;2014, Elliot et al;2014, Gannon;2017, Kultti et al;2016, Mikaels;2019, Pedersen;2019, Reunamo & Suomela;2013, Rice & Torquati;2013, Sandell & Öhman;2010, Somerville & Williams;2015, Änggård;2010); however, the vast majority of these researches focus on teachers' perception or perception of the researchers about children's experiences on being outdoors, in nature.

A major motivation for the current thesis was the need for children's voice to be heard, pure and innocent as it may be, without any guidance by adults' intervention, except the researcher's questions. Initial motivation was to research the type of preschool that promotes friluftsliv and the thinking of staying outdoors as much as possible. This kind of schools exists mainly in Scandinavia and sporadically in some cities in the rest of the world. The researcher found it extremely intriguing to explore to what extend preschool children that attend such a school feel compassion about nature and how they express themselves on nature pollution. The fact that this school takes children to a variety of natural landscapes and seeks to promote sustainability through these excursions, was considered a key factor for the selection of this kind of preschool to conduct the research. The current study was not motivated by the need to get answers to a specific question about sustainability, but it rather sought to explore the views of the "stars" of the educational system, i.e. the children, in order to explore if they are able to form environmentally-friendly discourse and thinking from that a young age. Listening to those children that are exposed to outdoor schooling made the research even more intriguing.

The importance of such a research lies on the fact that by listening to children's voices we can infer many things about outdoor learning, nature conservation and stewardship in the early educational years. I consider of great significance that their voices should be heard when policy makers in education form the educational curriculum; in the end, it is for the future of these children that policy makers strive to form an as good as possible educational curriculum.

According to Children's Rights International Network (2010) children have the right to express freely and no adult should seek to prevent this. Nthontho (2017, p.1) argues that children are rarely asked to participate in the development of educational programs, programs that affects their whole lives both as students and in the future, as adults. This is something that needs to be addressed; it is important to consider students as equal stakeholders in educational reform and thus, to explore their views on all matters that will affect them in the future. Nothing is more pressing currently than environmental conservation, stewardship and in general sustainable development. Consequently, the current study seeks to build on previous research in children's voice and education for sustainable development and illustrate in which ways children that attend classes in different natural environments demonstrate certain discourse, knowledge and thinking towards nature and towards its conservation and stewardship.

Through this thesis some preschool children are given the opportunity to explain their views and feelings about nature and environmental sustainability. The research questions the current paper seeks to explore are three:

- How do the children express their views of nature?
- What feelings/attitudes towards animals and plants in their surroundings do the children have?
- How do the children discuss images of litter/waste in nature environments?

These questions seek to go deep into the children's thinking and explore their views, their perspectives and their opinions both on simple matters, such as what is nature for them and on more complex ones such as what can we or they, do in situations of nature

pollution. The topic of preschool children and nature as illustrated above has been and is widely being discussed among, Nordic mainly, researchers. However, the current research questions do not only seek to explore possibilities and results from an adult researcher perspective, but instead set the child in the center of the research; the author seeks to listen to the preschool children's voice and how their daily trips in nature have affected them in the sense of sustainability discourse and thinking. In other words, through this research I seek to explore children's perception of nature and their friendly to the environment and all its living and non-living things discourse. In addition, I try to explore their use of discourse against environmental pollution and in favor of environmental conservation and stewardship.

Badmington (2007, p. 4) describes humanism as a theory that sets the person in the center of all things. He states that humanistic theory argues that the human is the "origin of meaning and history; is entirely distinct from animals, machines, and other non-human entities" (Badmington, 2007, p.4). On the other hand, post human theories critique humanism rejecting that the notion of humans as unique, distinct and being separate of all the other living and non-living things. Posthuman theories seek to decentralize the person and illustrate that he/she coexist and coevolves with and in nature. In this framework, the current research seeks to explore preschool children that are taken excursions to natural environments on a daily basis and their friendly to nature and its animals views.

Critical theorists such as Helena Pedersen, argue that to let children come in contact with animals too often might have the opposite effect; namely, that the young students, who are taken to places where animals and humans interact daily, might be exposed to situations in which the animals seem to be depended on or exploited by humans. Therefore, children being exposed to animals in nature might result in exactly the opposite intended results and be taught that humans are superior to animals or that animals depend on human's aid. Thus, the current research seeks also to explore to what extend the critical theorists' concerns about young learners being exposed to animals is harmful to the implementation of sustainability thinking to them.

Another important theoretical basis for the current thesis is children's rights, voice and agency. Article 12 of the United Nations Convention for the Rights of the Children (1989) states that children have the right to have their voice and views be heard and respected. The current thesis seeks to illustrate that children, even from the very young age of four can express themselves and therefore change and be formed by the world around them. The researcher of the current study argues that children's voice should be taken into account by the people who form the educational policy.

Furthermore, to give children of that age voice in such a matter as their views on nature, is extremely significant since they're given voice on what they think about nature and its surroundings. Maybin (2013, p.383) illustrates how important is for children to have freedom of voice but also depicts how this freedom may be obscured by many factors. Thus, giving them the opportunity through research to express their views might not only offer interesting inputs about any research subject, but also a basis to where the education system should turn its policy. In the end, they are the ones that are affected most by education policy and they are the ones that can lead the way to a more

sustainability-based education. Motivation, therefore, is based also on the researcher's strong belief that it is of utmost importance for education, that children's views should be heard and analyzed in order for education policy be led to a sustainable future. By listening to students' voice, it is aimed to understand their views and perspectives. The research's aim is to give voice to children and then analyze this voice following a thematic analysis of searching for codes and then for patterns in students' answers.

Thesis Overview

The current thesis has been separated in the following chapters: First the reader is introduced to the research motivation and to a more detailed analysis of the research aim; this is considered rather significant for the current thesis, since an understanding of the reasons that led to its formation would signify an understanding of the importance of children's voice in sustainability education and in its policy. The chapter of previous literature relative to the paper follows in order for the reader to form a broader picture on the current situation on education for sustainable development and children's views on nature. After the previous literature part, the theoretical framework of this study is presented to demonstrate the study's theory. The method that the researcher has followed is presented next. Within the methods chapter the reader is introduced to the method's design, the selection of informants, the collection of data, the analysis of these data, the research's limitation and finally the ethical considerations concerned for the current thesis. The detailed discussion part follows the analysis of the results and the thesis ends with the conclusion.

Theoretical Concepts

Below I explain how the following theoretical concepts are used in the thesis. In other words, I will explain how and in what context I use these concepts in the current study:

Environmental conservation: With this concept, the children's discourse about preserving nature clear from human pollution, is described. In other words, how children express themselves when talking about what should be done to keep nature unpolluted.

Environmental stewardship: Environmental protection from any kind of pollution is described as environmental stewardship in this paper. In other words, how children expressed on what should be done in order to protect nature from human pollution.

Sustainability discourse: As sustainability discourse I use the verbal words that the students use to explain nature conservation and stewardship, love towards nature, plants and animals, knowledge about nature's functions.

Friluftsliv: Friluftsliv as a cultural phenomenon is strong in the current research country, Sweden. With this term I speak about the preschool-based friluftsliv which in other words is outdoor learning, spending as much time as possible outdoors, enjoying nature in an all-weather education.

Previous Research

The current thesis seeks to explore preschool children that attend outdoor classes views on nature and their perceptions and feelings about it after attended outdoor classes. Therefore, the emphasis was specifically given to the search for studies about preschool children's voice, school-based friluftsliv and discourse about nature. There is a wide range of articles about preschool children and their connection to nature. However, research literature revealed few studies on conducting qualitative research (interviews) with preschool children, seeking to explore their views on sustainability or nature.

Research in outdoor learning

Chapter nine of the book International Research on *Education for Sustainable Development in Early Childhood. International Perspectives on Early Childhood Education and Development* (2016) focuses on preschool Education for Sustainable development in the country of the current research thesis, Sweden. Kultti et al. (2016, p.125) offer a brief history of the child in Sweden and state that in Sweden during the twenty-first century the concept of the competent child, namely the child that is able to express themselves and create meaning, has been widely used and developed. Kultti et al. (2016, p.126) also refer that the Swedish curriculum for preschools highlights the importance of children acquiring a caring attitude towards the environment and nature. This thesis seeks to explore this aim of the Swedish curriculum by exploring how preschool children that attend outdoor preschool classes express themselves on nature and its pollution by humans. Moreover, sustainability education in Sweden is closely related to the "educational potential of children's encounters with nature" (Kultti et al., 2016, p.127). Therefore, outdoor preschool classes might aim at the development of sustainability thinking. As a result, the current study's aim to explore children's perception on nature, might aid the research field on exploring connections of preschool outdoor learning and early sustainability education.

The concept of friluftsliv has been used in educational curricula, in Scandinavia countries, in the form of outdoor learning activities. Pedersen Gurholt (2014) conducts semi-structured interviews with Oslo students who had written essays about their relationship with local natural spaces. By combining a cultural-ecological analysis of the students lived experiences of friluftsliv, she seeks to explore how this connection with nature aided them to develop a sustainable way of living. The findings are of great importance since most of the children show a close connection with their local spaces of nature and therefore, they consider friluftsliv in a positive way. In addition, sustainable learning seems to be ensued after the complex and close encounters of learners with their local surroundings and not through cognitive construction of concepts. Conclusions imply that educators should focus on a sustainable development that seeks to unify learners with nature and its natural beings through outdoor learning and friluftsliv.

Another article that calls for a wider use of friluftsliv in Swedish schools is Mikaels study (2019), in which he argues that the current teaching of friluftsliv in Sweden can

be considered conservative and inadequate. He suggests a place-responsive pedagogy, which means that the focal point of teaching and learning should be the place and states that a huge emphasis on outdoor activities may result in focusing simply on the activity and therefore, missing the point of friluftsliv, which is the emotional connection to nature. To support his claim, he draws on empirical materials from a yearlong case study and conducts a qualitative longitudinal case study himself, including interviews with eight Physical Education and Health teachers. The case study is based on year seven to nine class students and the author seeks to explore the implementation of a place-responsive approach for teaching and learning in school-based friluftsliv in Sweden. Results suggest that friluftsliv is seen by the learners as simply an outdoor recreational activity something that limits the scope of its implementation at schools. However, the results showed that when a place-responsive education is implemented, cross curricula engagement is possible, and teachers are given the opportunity to deal with a wide variety of cross-curricular learning initiatives. In other words, both Mikaels (2019) and Pedersen Gurholt (2014) suggest an approach in education where teachers could be given the freedom to work outdoors, in order to initiate cross-curricular engagement and aid the creation of emotional connection of learners with nature deanthropocentrising it from human exploitation.

Moreover, Sandell and Öhman (2010) in their qualitative research in Sweden, illustrate that encounters with nature within education may produce moral connection of learners with nature in relation to other living beings, integration opportunities with nature and inspiration for reflection to urban lifestyle and societal development. They also argue that despite its positive connotations, friluftsliv concept within education is a contested area, since different groups want to include or exclude different activities due to political or pedagogical differences. However, they conclude that outdoor learning, can contribute to a deepened connection of learners with nature and therefore should be included in the national curriculum. Sandell and Öhman (2010) therefore, argue that outdoor learning aids the abolition of anthropocentric views within sustainable development and offers opportunities to emotionally connect with non-living things. Bagceli Kahraman et al. (2019, p.784) state that past researches have concluded that environmental education has positive effects on environmental awareness and therefore it is important that starting from preschool children need to be offered proper environmental education.

Another study is Hachey and Butler (2012, p.39) research in which they argue that exposure of preschool children to insects, spiders and other small animals is of great importance since it helps them develop a healthy and curious attitude towards them. Therefore, children that are continuously being exposed to these animals might show less disgust or fear towards these kinds of animals. Geerdts et al. (2015) also argue that children that have a pet from a young age and, thus, being exposed to animals more often, show more affinity towards them while they tend to manifest less anthropocentric views while growing.

Gannon in her study (2017) follows a post human approach to explore how the contact of students with animals (trip to wetlands) affects their environmental education and influence the deconstruction of anthropocentric views. The findings of Gannon's research enhance the notion that students should involve non-human beings in their

lives and think of them as equal factors of life; the learning that students acquired and projected in various ways after the trips (rap songs etc.) illustrate that this learning exceeds mere Syllabus-following knowledge and evokes feelings of compassion towards non-living things as well as compassion towards environmental education matters. This study therefore depicts how allowing learners to a closer connection with the non-living things, in other words an outdoor learning education, leads to the connection of learners with nature and to the promotion of sustainable thinking.

One study that follows a qualitative method of research, ethnography, in order to understand and illustrate different ways of talking about and making use of nature in everyday activities in an outdoor preschool in Sweden is Änggård (2010) research study. Video observation, interviews and local documents are analyzed in order for results to be deducted. The results depict that nature is seen in manifold ways; as a classroom since it is the place that children learn about nature, as a home since it is seen as the place to eat, sleep and play and finally as a magical place, a fairyland. Her research is very important for the current research study since it can form a basis to understand how preschool children perceive nature; that children perceive nature in manifold ways. The fact that Änggård's study (2010) was conducted on preschool children that attend outdoor classes makes the analysis and the results even more fascinating. She (2010) concludes that children perceive nature in different ways, in ways that can be considered the basis of sustainable thinking. However, the current research thesis seeks to deepen into children views and feelings about nature, its animals and its conservation. It can be considered logical that for children that spend a large amount of their school day outdoors, nature could be viewed as home, classroom and fairyland. Therefore, interviewing them about matters such as conservation and pollution might give us a further image on to what extend these children can acquire sustainable discourse and knowledge.

There are numerous studies that suggest outdoor play enhance preschool's children development. Li et al. (2014, p.61) argues that play enables social interaction while they illustrate that outdoor contexts promote children's social skill development. Miranda et al. (2017, p.525) also state that outdoor preschool environment should be designed to offer both access to natural environment and opportunities to play. Therefore, outdoor play and play in nature should be considered as a very significant aspect of preschool children's development. Additionally, Boldemann et al. (2011, p.79) concluding their research, they state that when preschool children are taken to play at varied outdoor environments, this aids their physical development. Thus, the problem of bad weather conditions could be overcome when choosing varied outdoor places in nature.

Dennis Jr et al. (2014), investigate how nature exploration and outdoor classrooms seek to create nature-based learning environments for preschool children. More specifically, it is a post occupancy study since it seeks to examine to what extend have these classrooms produced the intended outcomes, i.e affinity to nature, well-being etc. The authors (2014) reach the conclusion that outdoor learning spaces indeed can be linked with positive learning and developmental outcomes such as physical and mental wellbeing and environmental stewardship. The above research can be considered as one that promotes the notion that outdoor schooling can provide preschool children with tools, to develop environmental stewardship thinking and sustainability discourse. The

current study seeks to enhance this notion since raw preschool children voice can be heard on matters such as nature, animals, pollution, stewardship.

Theoretical Framework

The theories that this study uses are posthuman theories, critical theories and theories about children's voice and agency. Posthuman theories suggest and seek to promote the notion that humans are neither separate from everything non-living, nor they are superior to any form of life. These theories suggest that humans should consider all non-living things as equal factors of life and should learn to live in respect to this notion. Some critical theorists argue that humans will learn to be equal to the animals only when they stop being exposed to situations of animals' exploitation and manipulation. Moreover, theories that promote children's voice and agency are used in this study in order to illustrate the importance of children's voice in the educational framework.

Catling (2014, p.350) starts his paper with the argument that education is a political activity and many parts seek ways to have a saying in its policy formation. Continuing his argument, he (2014, p.351) states that adults often think childhood as a state that everybody has been once being naughty and devilish and therefore children's voice is not important and should keep their voice to themselves. Therefore, children are seen as not proper people yet and they have to grow up to have a saying. To this view of children as becoming, the opposition argues that children are smart and have opinions and they see them as benevolent, thoughtful and positive. This last view has been initiated in particular by Article 12 of UNCRC (1989) which sets out that children have the right to have their views respected once they are capable of forming them. Catling (2014, p.351) correctly argues that the argument is not that simple. Through pedagogy, adults seek to manage children in the sense that they choose what they should be taught and what is excluded from their teaching. The author implies that we should stop othering children and include them in decision making since this would "empower our pedagogy rather than inhibit it, by bringing children 'back in' to adapt, as co-learner participants, working with, not working to, their teachers" (Catling, 2014, p.351). In this framework, educational research should focus on acquiring children views and perspectives on pedagogical matters, giving them the opportunity of voice, something that this paper focuses on. Analyzing their voice, we then can proceed on taking into consideration their views and opinions in pedagogical policy.

This thesis seeks to illustrate that exploring children's views on sustainability matters such as their views on nature, could give educational researchers important inputs about education for sustainable development. As Catling, (2014), Pramling Samuelsson (2004, p.1-2) also states that it is difficult for educators and researchers to comprehend and analyze children's voice since children's voices are in need of an adult's interpretation in order to be heard. Preschool children's voices are rarer to be heard in researches and it seems as though "researchers think that children must be 'close to becoming adults' in order to be allowed to be heard and to express their perspectives" (Pramling Samuelsson, 2004, p.3). As Pramling Samuelsson (2004, p.9) suggests, we have to be aware that a child expresses only a small fragment of their total experience

or knowledge and therefore extended researches are needed from very capable educators and researchers in order to offer these young learners "opportunities to communicate" (2004, p.9) their views.

Affifi (2020, p.1435) illustrates that anthropocentrism has been widely critiqued by educators of sustainable development as promoting humans as the sole bearers of morally significant concern and value. Posthuman theories seek to dehumanize sustainable development and assign value to all nonhuman beings and processes. Affifi seeks to deconstruct this binary of anthropocentric versus deanthropocentric and argues that even implying what is good or bad for the environment "marks the imposition of humanly derived moral criteria onto the world" (2020, p.1436). To that, the author (2020, p.1436) refers, Deleuzian ethics seeks to reject hierarchies in the realm of being and radically doubt any conceptual split between humans and nature. Consequently, we should stop the wholesale condemnation of the 'human' and we should think more closely how "anthropocentrism and nonanthropocentrism combine, co-occur and coevolve in thought, feeling and action" (Affifi, 2020, p.1437). Therefore, taking young children excursions to nature has also binary consequences. On the one hand, children come in contact with natural processes, plants and animals and therefore come closer to them and learn how to view them as equal constructors of life. Students might learn how to love, nurture and co-evolve together with them.

However, on the other hand, critical theorists such as Pedersen (2019, p.211) argue that we should leave the animals alone; to not make any claims on them, since human entanglement with animals usually leads to more dependence, more oppression and more exploitation of animals. Pedersen (2019) criticizing two posthuman articles seeks to illustrate how posthuman theories, in reality lead to following anthropocentric views on animal and concludes that being away from the animals means, in reality, being with them. In other words, Pedersen (2019) does not propose a distance from outdoor learning but she rather argues that education in general and outdoor education more specifically, should not promote a human animal entanglement since this leads to anthropocentric views and rationalizes human manipulation and exploitation of animals.

Thus, the current study seeks to follow Affifi's (2020) proposal and look closely to both anthropocentric and nonanthopocentric views since in outdoor teaching, they co-occur and coevolve in thought feeling and action. Children attending outdoor preschool classes are introduced to nature and its living and nonliving things on a daily basis. Combining anthropocentric and nonanthropocentric views I seek to carefully explore children's views, perceptions and opinions on nature, animals, plants and environmental pollution and protection.

Method

Research design

In order to understand the true nature of children's experiences and attitudes, it was decided that children are the ones that need to be interviewed and not adults (parents,

preschool principals, preschool teachers). In this way, a closer exploration of their views about nature, animals and environmental pollution was thought that may offer vivid and interesting results. To understand their raw perceptions, this study uses the qualitative method of semi-structured interviews with open-ended questions in order to explore the perceptions of preschool students that attend a forest preschool in the region of Västra Götaland in Sweden. Clark (2011, p.9) argues that children play an active role both to the enculturation of their own and to the shaping of the society they live in. Therefore, to discover how they think when talking about nature is considered of great importance, according to the researcher, in order to comprehend what will make the difference in their sustainability schooling.

The researcher as a preschool teacher in an international school, came in contact with the principal of the international school that offers outdoor classes to preschool children. After getting consent from the owner/principal, informed consents for parents were formed and distributed. After the signing of the informed consents, the one-to-one interviews took place both outdoors in a park and indoors in the preschool's art room. It is important to state that children were informed that they can either decide not to take part at all in the research (even if their parents have signed) or stop the interview and leave whenever they feel uncomfortable. Fortunately, an incident like this did not occur.

Children that attend outdoor classes were asked questions about nature, animals and environmental pollution/protection; to aid them express themselves they were first asked to draw whatever they wanted about nature and before each question, they were shown pictures and asked what they could see, what they thought had happened, how they felt about them, what they wanted to do about it and the reason why. After the interviews, children were thanked and parents were told that if they wanted a copy of the research paper or their child's interview, they could contact the researcher via email.

After the interviews a thematic analysis was followed in order to find codes in children's answers. These codes formed the analysis' themes and subthemes.

Selection of informants

Ten students of two different classes of the same school were selected for the interview. All the participants live in the same city of Västra Götaland in Sweden. Since the school is an international one, participants come from different countries not only from Europe but from other continents too. The multicultural identity that the school has acquired, is illustrated in the current research since students from different cultural backgrounds were selected to take part. Moreover, to explore equally both sexes perspectives, 6 girls and 4 boys were selected.

I, being myself a preschool teacher in an international preschool, felt comfortable with the school's environment and approached the preschool's children quite easily. This aided the creation of a more friendly environment during the interviews. All the participants seemed relaxed from the first minute of the interview and eager to answer as many questions they were asked. After taking consent from the owners and principle

of the school, the researcher formed informed consents for parents and asked the teachers of these classes to distribute them to the parents. Almost all of the parents signed and gave their consent for the interview. After the consents, the researcher visited and followed the classes to their outing in nature. Some interviews took place on location in a park while others in the school. Six children were selected from one class and four from the other. The interviewees were selected based on the above-mentioned criteria. All the participants take part in classes that aim to stay out as long as possible and taken into excursions to nature spaces.

As mentioned above, the recruitment of the participants took place in the school environment and the interviews took part in the same environment also. Those who were interviewed outdoors in one of the parks they go excursions at, felt comfortable, excited and willing to answer the questions. These interviews were conducted on the ground with the aim of letting the children feel relaxed and joyful. The rest of the children were interviewed individually in the art room of the school. The art room was chosen since it was expected to bring feelings of happiness and creativity to the children. They also felt relaxed and happy to answer the question. In both, circumstances the children were interviewed in a quiet and friendly place away from interruptions, allowing children to focus on the photographs and questions.

The interviews were digitally recorded first through a recording application on the smartphone of the researcher and then transcribed verbatim. The transcription of the interviews was considered quite challenging since I considered very important to present the raw and clear views of the children as they were stated. Consequently, I went back and forth on the recordings when needed and heard the recordings many times. A total of forty-three pages of transcription was formed.

The Interview Questions

In order to make the young interviewees feel more comfortable and comprehend the questions in a better way, photographs were shown to them and they were asked to explain what they see in each of them, what they think has happened and what they think should happen next. In this way, they were more able to enrich their answers. Finally, some students enjoyed in such a positive way that they asked the researcher the following days for similar activities to be conducted. (see appendix 1 for the interview guide)

It is important to state that the interview guide (see appendix 1) served as an important tool for the interviewer. However, the researcher did not follow the interview questions strictly since when there were opportunities for further analysis of the answers, it was considered important to avert the order of the questions. Since the participants were of a very young age, when circumstances allowed it, I went deeper into asking further development of the children's answer. Interview's order was fluid but the interview guide worked as the main tool of the researcher. Nonetheless, I present the interview questions in the order that they were more commonly asked:

1) First, I am going to show some pictures and I want you to tell me what can you see and how these pictures make you feel. (The interviewer shows pictures of nearby parks, lakes and forests)

Showing one by one these photographs, I sought to introduce children to nature and since these pictures show natural landscapes that the students usually see, he aims at creating a calm, relaxing atmosphere. Questions of why follows each time a kid describes how they feel about the picture in order to extract as much information as possible. By showing familiar places the researcher sought to familiarize all the kids with what is nature and what the following questions would be about.

2) I want you to tell me about your day at school. What do you like most doing when you go outdoors with the (name of the class)?

The interviewer sought to introduce the participant to the topic of what they were going to be asked and allow the interviewee to describe how they see their schooldays. Then, they began to describe what they like doing most when they are outdoors with the class. It was considered significant to allow young learners the freedom to express what they like about being outdoors. How they view being in nature for so long and what they consider as the best part of being in outdoor environments.

3) When you are outdoors at the parks and forests, you usually find some branches and sticks. How do you use them? How do you think these branches ended up down on the ground?

With the third questions the researcher sought to go deeper and explore children's knowledge on natural phenomena as why the branch fell from the tree. Exploring the student's knowledge about this kind of phenomena was considered appropriate since almost all of the children were seen to carrying a stick with them. In this way they could associate their outdoor schooling and nature to something personal. With the first question it was also viewed as rather significant to let the young learners describe how they use or how they play with a nature's first material.

4) What nature is for you? When you hear the word nature, what do you think of?

This question was used to draw children's perceptions on nature. The previous drawings aided the answer of this question but for the children that found it difficult to answer it, the next question helped them express their views.

5) What do you do when you are in nature with the group? For example, you find an ant (researcher show the photographs of animals one by one), (photos of an ant, a bumble bee, a deer, squirrels, ducks and worms). What would you do if you had or saw them here, now?

With these series of question, it was sought to draw children's perception on animals. That is why photos of animals that they most often see on their daily excursions were used. Photographs of these animals aided the learners to express themselves more clearly and their answers were vivid and detailed. It was sought to report in a notebook the children's facial expressions or sounds of pleasure or disgust when they were shown the pictures of the animals. The intention of the last question was to let children clarify their previous answers in a real-life situation. In this way they were given the

opportunity to illustrate to the interviewer what they would do with this animal if they had it here. The reason for this task was to try and find out whether critical theorists such as Helena Pedersen are right when they argue that it is dangerous for children to be exposed to animals, since they might be exposed to situations in which animals are exploited or demonstrate need of protection by humans.

6) Children are shown photos of plastic in nature (plastic bag in a bush, plastic straws and bottles on the beach). What do you think has happened? Do they belong there? Why? What do you think we should do?

The last part of questions focused on nature and its pollution from plastic. In this part, children perspectives on pollution and therefore in nature conservation and stewardship were sought. Children's views on instances of nature pollution were asked in order to explore to what extend has nature conservation and stewardship has developed to children from such a young age. With the last question I tried to explore if the young learners could illustrate recycling thinking and knowledge. Question six, almost always, occurred in the end of the interviews in order for the children to have already talked and therefore familiarized themselves with the interview concept, i.e nature, and therefore be able to answer about more complex questions such as about pollution, in a more detailed way.

Data Collection

This study investigates "experiences, meanings and the realities of participants" (Braun and Clarke 2006, p.81). This research does not seek to understand how children's perspectives are constructed within a society but struggles to listen to children's experience and views about their daily excursion to nature and then to analyze the effect these excursions have on them. Moreover, I seek to understand the children in the context that they represent multiple realities constructed within their own environment and culture.

A qualitative approach through individual, semi-structured interviews with children in outdoor classes in preschool in Sweden was used. I conducted semi-structured interviews with open-ended questions in order for children's voice to be heard. The interviews took place during the month of March and therefore all of the interviewees have attended the outdoor class for at least 8 months. This illustrates why students were able to answer the questions in a surprisingly talkative way and therefore the results of the interviews can be considered quite valid.

The interviews lasted from 8 minutes the shortest to 15 minutes the longest, with the purpose of allowing children to express their personal views on their own pace. Children were asked to give their perceptions on nature, animals and environmental pollution and stewardship. All the interviews were digitally, audio recorded and then explicitly transcribed. Notes were kept both during the interviews and after the completion of each one separately, in order to gather more detailed data such as facial expressions and hesitation to answer. However, I was alert not to miss any reaction so I sought a detailed observation and engagement with the interviewees.

Bryman (2016, p.466-467) states that in qualitative research a greater emphasis is given on the interviewee's perspectives and point of view, something which was the case on the current research paper. Guiding questions were prepared, but as Bryman (2016, p.467) suggests, I tried not to lead participants towards any particular direction since what was important for this paper was children's raw perception of nature. Moreover, Bryman (2016, p.483) argues that researchers should not turn the semi-structured interview into a structured one but they should always pose open-ended questions. The interviewees were young children, so some questions could be answered with a yes or no; however, when at times the interviewees answered with "Yes" or "No" follow-up questions, such as "Why" or "Why do you think that" were posed to seek clarification. In instances that a deviation from the interview guide was needed it was sought to explain or paraphrase the question. In addition, when a student showed that they didn't know or they didn't want to answer a question, I continued with the next one. The reason this happened was to make the interviewee feel comfortable and do not feel any pressure throughout the interview. The interviews consisted of two main parts: 1) Interview questions with photographs of different nature landscapes and 2) Drawing Activity.

The interview

Through the form of semi structured interviews with open-ended questions, children might have felt relaxed since they were able to answer following their own pace, without any pressure. Some might have felt important since an adult was asking their views and opinions. All the interviews were conducted either outdoors in natural environments or indoors in the school's art room. Outdoor interviews were thought that they will aid to create a positive and within the topic environment, something that is now considered successful. Since not all interviews could be done outdoors, the school's art room was chosen for the indoors ones, following Bryman (2016, p.471) argument that the setting of the interview should be quiet and private in order for the interviewee to be comfortable and not afraid that someone will overhear. However, I clearly stated that both the teachers and the principal can intervene and stop the interview at any time. All the children seemed to enjoy the experience of the interview while some of them asked the researcher to do a similar activity again some time. No child seemed to feel uncomfortable while there was not any incident that the teachers, principal or parents wanted to interrupt or withdraw from the interview.

Drawing Activity

As the first part of the interview, it was asked from the participants to draw anything they would like about nature. As Brenner (2006, p.362) states when the interview starts the interviewee seeks cues about what is expected from them. Allowing them to draw anything about what they are going to be asked helps them to understand what will be expected from them during the interview. I also hoped that the children might feel more relaxed and answer more freely the questions that they would be asked. Ellis et al. (2013, p.504) argues that the drawings become a source of metaphor about the

participants experience and these ideas they draw, can serve as experiences that can aid them when they will be expected to answer the questions verbally. The researcher has acquired consent for the use of the drawings also.

Some striking drawings that children drew when asked to draw anything about nature are the following:

Figure 1: Some of the preschool children drawings about nature.

These drawings demonstrate the complex thinking the young learners illustrate when asked about nature. As shown in the pictures, it is evident that children when asked to draw about nature, they think about special places or vegetation such as forests and trees, some think about animals and others about a combination of both. Drawings succeeded in attracting children's attention and aided them focus on the topic that they were going to be asked about, from the very beginning of the interview. More analysis of the drawings lies further below on the analysis of the results.

Data Analysis

A thematic analysis was conducted on the interview data. Through thematic analysis, as Braun and Clarke (2006, p.79) suggest, I tried to seek, analyze and report patterns or in other words themes in the interviews. Therefore, as it has already been stated, the interviews were recorded digitally first via a recording application on the smartphone of the researcher and then transcribed verbatim. The result of a long-lasting transcription period was the formation of forty-three pages. Thematic analysis was used to seek and find patterns within the transcribed text. Thus, themes in data material that represents children's experience and perspectives on what is nature for them, what they think about animals and what has or should happen in instances of pollution are first named and then analyzed. This study followed Braun and Clarke's (2006, p.87) step-by-step analysis of the transcribed material:

1) First the transcribed material was thoroughly read many times, in order for the researcher to familiarize himself with the data.
2) The second step was to find codes within the data set (coding) and associate relevant data throughout the transcribed text.
3) These relevant codes then collected and formed potential themes.
4) Then it was checked if these themes are connected with the coded extract and the whole data set and a thematic map of the analysis was created.
5) The next step was to continue the thorough analysis of the themes and subthemes and then name them.
6) Finally, the report was produced by selecting characteristic examples of the interview process.

These steps were not followed one by one; rather I was going back and forth in order for a continuous analysis and check to be followed. As Braun and Clarke (2006, p.86) clarify thematic analysis is not a step by step analysis by simply moving from one step to the next but it is an analysis that movement back and forth throughout the phases, when needed, is required. Therefore, following Braun and Clarke example, the analysis of the results was seen as something fluid, where going back and forth is very important.

Thematic analysis was followed in order to extract interviewees' views of the concept of nature and if being outdoor has aided them gain discourse towards sustainability. The theoretical framework of the current study worked as a guide during the search of themes and subthemes. Through the research questions codes and themes were searched in order to explore children's views on this sustainability topic.

For ethical purposes and confidentiality, the following pseudonyms are assigned to the ten children of the research: Christina (5), Mia (4), Oliver (4), Kate (4), John (5), Elias (6), Elizabeth (5), Marianna (5), Daniel (6), Anna (5).

Research Limitations

The interviews took place during the month of March in the year 2021. Therefore, there were some limitations on the days that I had to come in contact with the children, due to the fact that there were restrictions because of the covid-19 coronavirus. As a result, all the interviews took place within a week, not allowing further field observations or the interviewing of more children. The help of the teachers of the classes played a very important role, allowing me to maneuver as it was best fitted to me and interview a wide range of children. Another hindrance because of the covid-19 restrictions was that indoors I had to wear a face mask in order to be protected and to protect the children. A couple of children seemed a little bit hesitant to answer in the beginning of the interview either because they were distracted by the mask or they simply thought it was funny. It had to be explained to the young learners why I had to wear a face mask and then I tried to avert children's attention to the drawing of a nature-like drawing. Fortunately, after a couple of minutes students seemed to getting used to the mask and were able to answer all the research questions posed.

My aim was to interview all the children in an outdoor environment, in nature. However, after discussing with the teachers this aim seemed unreachable because of the short amount of time set for the interviews to take place. I had only a week to carry out the interviews, i.e. five school days. As a result, half of the interviews took place in an indoor place; yet the quality of the interviews does not seem to be affected by this hindrance, since the answers of the interviewees do not seem to differ according to the place they were conducted.

Finally, another limitation was the fact that the signature of both parents was needed on the informed consents due to Swedish research regulations. This instantly excluded two of the kids who had one parent in another country. Due to the short time they had to answer, these parents either did not know how to sign electronically or simply did not find the email on time to answer it. The signature of one parent was only available, but following the regulations I did not conduct the interviews with these two kids. Ten children however were interviewed from two outdoor classes, something which was considered quite satisfying.

Ethical Considerations

The current research study was reviewed and approved by the principals as well as by the researcher's supervisors of the Master *Education for Sustainable Development* that is offered by Gothenburg's University, Sweden. The professors and supervisors examined the research plan and the aims of the study and gave their guidance on the ethical steps that the researcher had to follow. Since the interviews for the current study were conducted with children during the school time, indoors and outdoors of the preschool, informed consent from the principal and owner (see appendix 3) of the preschool had to be distributed and signed. In addition, informed consents (see appendix 2) were distributed to the children's guardians and from both parents was asked to sign. In case the participant child had one parent or guardian then the informed consent was signed by that parent or guardian only. Harcourt and Quennerstedt (2014, p.3) state that in Sweden the main act of regulations in research ethics is the Act on Ethical Review of Research Involving Humans (SFS 2003:460; hereinafter the Ethical Review Act or the Act). In this Act, Harcourt and Quennerstedt (2014, p.3) argue that for children under fifteen years of age the ones that are responsible to give and sign consents are the children's parents no matter if the children can read and understand what the research is about. However, it was explained to all children also that the activity (interview) is about what they think about nature and that there is not a correct or wrong answer. The informed consent of the principal and owner of the school informed them about the aim and the purpose of the study while the parents' informed consent did the same. Both informed consents were written in English since the research's preschool is an international one and all the participants could use English as their mother tongues. Ten of the children's parents signed the informed consents which was the aim and the wish of the researcher also.

In addition, I informed verbally before the interviews each participant child separately about the interviews and all of them agreed to take part. As Farrell (2005, p31) suggests, I did not rely on informed consents and continuously sought to inform the children that they could withdraw their participation at any time. The parents were also informed that if they regret their child's participation, they can either ask to withdraw them from the interviews, before they take place, or that they can ask from the researcher to not take into consideration their child's interview, after they take place. Moreover, as Bryman (2016, p.133) argues, both the principal and the parents were fully informed about the research while ambiguities about it were sought to be avoided when questions arose by them. In other words, I did not seek to deceit any of the participants and stakeholders of the research about the purposes and aims of the study. Furthermore, participants privacy and confidentiality were considered of extreme significance.

Following Farrel's (2005, p34) advice, during the interviews I was continuously searching for cues or any signs of discomfort of the students. Fortunately, no signs of distress were evident and the children seemed happy and confident to answer all the questions. Additionally, all the parents and the principal were made aware that as Farrell (2005, p.31) stresses, the only people who it is sought to benefit from this study is the researcher and the future if education, if the research will be given to the public. Furthermore, serious consideration was given on the fact that a child might feel uncomfortable about a question and as Bryman (2016, p.131) formed the question in a

way to avoid children's thinking that their privacy is being invaded. To ensure confidentiality and privacy all interviewees were given pseudonyms, so that their real names are not revealed. In addition, only the wider area that the school lies and the interviews took place is mentioned.

Results

Four primary themes emerged during the analysis of the subscribed text. The first theme is that the children illustrated a *complex knowledge of what is nature* since they used a wide variety of discourse to explain how they perceive nature. Two subthemes are evident in this theme, the one of seeing *nature as a place* and the other children's depiction of *nature as the animals and the plants*. These children that have developed such a discourse described nature either as a place where they go and do activities or as the living things that live in natural environments such as animals and plants. A second theme that became apparent is children's *association of outdoor school day with play*. Almost all the children stated that they enjoy playing when they are outdoors. *Affinity towards all animals* is the third theme that emerged throughout all of the interviews. Three subthemes emerge in this theme. The first one is that they *like and do not harm any animal*, the second subtheme is that they *do not like but do not harm them* and the third one that they *do not like and harm them*. Children showed affinity towards animal and explained that even if they do not like animal, they would probably leave it alone. The instances in which they answered that they may harm an animal are very few. Finally, the last theme is the *protection of nature against its pollution from humans*. Three subthemes are also evident in this theme. The first one is *humans as polluters of nature*, the second one is *harmful consequences of environmental* pollution and the third one is *recycling and conservation of polluted areas*. In this last theme and subthemes, the complex thinking about environmental pollution and nature stewardship and conservation is illustrated.

Main Themes	**Subthemes**	**Description**	**Examples**
Theme 1: Complex knowledge of what is nature		All children illustrated complex knowledge about nature	*Marianna: When they drink the nectar from flowers! And then they go home and they give us honey!*
	Subtheme 1.1: Nature as a place	Some kids thought about natural places when asked what is nature	*Christina: Well we go to the beach. I will draw water and we draw that we go to the beach and the pool*
	Subtheme1.2: Nature as the animals and the plants	Other kids thought nature as the animals that live there	*Marianna: I think about butterflies...!*

Theme 2: Association of outdoor school day with play		Most of them when asked what they like about their day at school, they answered that they like playing outdoors	*Christina: We sometimes play princesses and we also play hide and seek when we are outdoors and lots of play!*
Theme 3: Affinity towards all animals		All of the kids demonstrated affinity towards animals even for those that they do not like	*John: I like animals (…) They WOULD be better without us (humans)*
	Subtheme 3.1: Like and do not harm any animal	Most of the kids stated that they like animals and would not harm any	*Kate: Squirrels and reindeers are really (with emphasis) cute and nice. And (I like) squirrels because they need to store their acorns for the winter!*
	Subtheme 3.2: Do not like but do not harm the animals	Some kids stated that even they do not like some animals they would not cause them any harm	*Daniel: Leave it and run away. (In case he saw a bee which he does not like)*
	Subtheme 3.3: Do not like and harm them	Two children stated that they do not like one or two animals and they would probably harm them if they had one there.	*Kate: I (would) STEP ON IT. (In case she saw an ant which she does not like)*
Theme 4: Protection of nature against its pollution from humans		Impressively all the kids demonstrated protection of nature discourse	*Marianna: We should pick them up and put them in the rubbish bin.*

	Subtheme 4.1: Humans as polluters of nature	All the kids recognized that humans have thrown rubbish in nature (they were shown pictures)	*Oliver: Someone forgot to take some home and they left them there.*
	Subtheme 4.2: Harmful consequences of environmental pollution	*The kids illustrated knowledge about the harmful consequences the garbage has to nature and animals*	*Anna: Because you will break the nature if you throw these there.*
	Subtheme 4.3: Recycling and conservation of polluted areas	*They also stated that we should either go and collect the rubbish or we should give the rubbish back to the people that have polluted the place!*	*Elias: We would pick up and like glass we usually do these pick-ups (recycling) here with the (name of the class).*

Figure 2: Presentation of themes and subthemes formed after the thematic analysis

Theme 1: Complex knowledge of what is nature

Children seemed to have some complex knowledge about what is nature. They showed this knowledge both with their answers and some with their drawings. To the question what is nature for you, kids offered a variety of answers illustrating that nature for them is anything outdoors. Those that answered "I don't know" were given examples and then were able to answer their favourite kind of nature. However, two subthemes emerged. The first one is those that thought of *nature as a place* and those who consider *nature as the animals or plants* outdoors.

Researcher: *When you hear the word nature what do you think?*

Elias: *The outside world! An outside world is nature!*

Researcher: *OK. And do you like nature and why?*

Elias: *Yes. The best part I like about nature is you can like come down and for food and you can find places and like a bird chirps at you chirps like he actually swings on a like a really strong vine (means perch)…*

Subtheme 1.1: Nature as a place

Christina is a 5-year-old girl that is in her last year of preschool. Throughout the interview Christina demonstrated a wide variety of discourse when coming to nature. Her answers showed that outdoor schooling aided her thinking about nature since she has stated that we saw or did that when out with the outdoor group. With her drawing she illustrated that for her nature is the water when she swims when going on a beach with the group while gave a totally different answer when asked about what does she think when she hears the word nature.

Another child that draw about a place when asked to draw about nature was Daniel who associated nature with his summer place. He drew what he sees there, a place like a park with tall trees and grass.

Researcher*: I want you to draw me anything about nature.*

Christina: *Well we go to the beach. I will draw water and we draw that we go to the beach and the pool and swim (starts drawing). I draw the water!*

Researcher: *Can you tell me what are you drawing?*

Christina: *That is me and this the water and I am swimming!*

Her answer indicates that when she thinks about nature and her day at school, she thinks about one of the most fun days she had there. The drawing is a depiction that she can understand the concept of nature and that she focuses on the element of water. The group's knowledge about natural elements is shown by the fact that they have recently made crafts about the five elements and now and then they are asked about them.

Researcher: *When you hear the word nature, what do you think?*

Christina: *I think about mountains but with snow and we can slide down and snow races and that…*

Christina has associated nature with outdoor places and activities she does there. With the outdoor group the kids are often taken to visits on hills and climbing is a regular activity that they take up. During snow time the park that they are usually taken is seen as a place where the class goes and slides down its hills. Therefore, Christina seems to think of her outdoor class when she thinks about the concept of nature.

Subtheme 1.2: Nature as the animals and the plants

Marianna is also a 5-year-old girl that illustrated sophisticated knowledge of what is nature and how nature works throughout the interview. Her answers focused on animals in nature and plants. She answered that she likes all the animals when shown pics of different ones while when asked what does she think about nature she again answered with her favourite animal.

Researcher: *Do you know what is nature?*

Marianna: *Yes*

Researcher: *What do you think when you hear the word nature?*

Marianna: *I think about butterflies...!*

(…)

Researcher: *(shows pic of a bumblebee) You like bees?*

Marianna: *Yes*

Researcher: *Can you tell me what do you like about bees?*

Marianna: *When they drink the nectar from flowers! And then they go home and they give us honey!*

Marianna's answer shows that despite her age, she has developed a complex thinking, knowing that bees drink nectar and they give us the honey.

Some kids when asked about nature, they thought of plants. Their immediate thinking was trees which they see every day during their daily outings. Anna is also a 5-year old-girl and when she was asked about nature her thinking went to plants. She also demonstrated good knowledge about the source of the fallen branch on the ground.

Researcher: *The sticks, where do you think they came from?*

Anna: *The wood.*

Researcher: *The wood…maybe from?*

Anna: *From the trees.*

Researcher: *And why do you think they fell?*

Anna: *Cause…like leaves falling off!*

Researcher: *Ok. Nice. When you hear the word nature, what is the first thing you can think of?*

Anna: *I like the colorful leaves!*

The first theme vividly illustrates that the interviewees think of nature in multiple ways. Some of the children when listening the word nature think of places, they were taken either from parents or the preschool; for them nature is parks, beaches and mountains. Other children think nature as the animals and the plants; for these, nature is depicted on animals, trees and flowers.

Theme 2: Association of outdoor school day with play

Play time is considered significantly important for the majority of children that took part in the interviews. When asked what they like about their day at school, most of them answered that they can play outdoors, in nature and in playgrounds all the time. Children not only can enjoy their time at school but also at the same time they can be

offered opportunities to social and physical growth. Playgrounds, animals and natural spaces as parks, ponds are involved in the discussion when they talk about outdoor play.

Oliver's (4) interview took place when the group was out in the park they usually go. He had a stick during the interview and he stressed that he likes the (outdoor group) because he can play outdoors with his friends and do physical activities like cycling. As a kid Oliver seemed a little bit shy but when asked about the day with the group, he enthusiastically gave his answer.

Researcher: *What do you like about being outdoors?*

Oliver: *I like … that I can go bicycling and that I can play with..friends.*

Anna, (5) an active girl when asked about the day at school in nature she also answered with enthusiasm that she likes doing physical activities and play. One of these activities is climbing in nature, something that illustrates that nature can be also viewed as a place for the children to play. She also stated that it is fun something that illustrates her satisfaction of being in an outdoor environment.

Researcher: *Why do you like going outdoors?*

Anna: *I like playing (outdoors).*

Researcher: *Why?*

Anna: *It's fun and cause you can climb when you are out…*

Elias (6) illustrated vividly how he plays outdoors in nature. More specifically, when asked about the sticks they found on ground and still have he described with passion what he can do with it, how he can play with the stick outdoors. Imagination and pretend play are more than evident in his description of activities with the stick.

Researcher: *When you go outdoors with the (name of class), what do you like most doing?*

Elias: *I like playing tag and I like skis (probably means slides in snow). (expresses wish that he misses old friend to play with)*

Researcher: *Ok. I can see that you have a stick. How do you play with it?*

Elias: *You can walk with it, you can jump with it and play like attack animals with it and you can make it into a…a you can put it on a fireplace and burn like a little piece of fire so you can go in caves and you can cook it like throwing into a fireplace where you can cook some food and you can…*

Elias expresses that he likes playing outdoors while he confides in the researcher that he misses one of his classmates that has left the school to go abroad with his family. He also expresses vividly how he pretends playing with a stick as he describes that he plays as using it to protect himself from animals' attack or attack a dangerous one. Another pretend play is to use it as a fire log and then cook food with it. Finally, through imagination, he shows great knowledge of how to use a stick in real life situation. Therefore, we can conclude that the children enjoy playing into nature something that might aid their social, emotional and physical development.

The second theme illustrate that play is very important for preschool children when they find themselves in outdoor environments. Children showed that one of the reasons they enjoy being in nature is because they have more opportunities and time to play. Through play, they think of nature as something positive which offers them fun.

Theme 3: Affinity towards all animals

The wide majority of the children of the outdoor class showed that they love all the animals or that they wouldn't harm an animal even if they do not like them or even if some makes them feel uneasy when near them. Children were shown a wide variety of animal pictures and were asked how they feel about them and what they would do in case they had one near them. The findings showed that children seemed to enjoy seeing animals while some stated that they do not like ants and worms. However, only 2 children out of ten showed hostility towards these animals since the majority stated that if they did not like an animal they would just go away and leave it alone. Theme 1, subtheme 2 analysis illustrates this distinctly.

Researcher: *Do you like bees?*

Marianna: *Yeah!*

Researcher: *Why? What do you like about bees?*

Marianna: *I like when they drink the nectar. And then they go home and they give us honey!*

Researcher: *Yeah! If a bee was flying here what would you do?*

Marianna: *I would run away*

The complex thinking that these children have developed towards animals' functionality to earth systems is vividly illustrated by their answers. I decided to use this example here also since I found it quite striking. A discourse that illustrate that sustainability discourse and knowledge about ecosystem services have been instilled to these children. Many adults ignore the importance of bees in our life; however, Marianna seems to have developed such a sophisticated thinking so as to explain what strikes her about bees.

	Like	**Do not like**	**Harm**	**Do not harm**
Ants	6	4	1	9
Bees	6	4	2	8
Squirrels	9	1	0	10
Ducks	8	2	0	10
Deers	9	1	0	10
Worms	5	5	1	9

Figure 3: Illustration of children's answer when asked about these animals.

The above table illustrates the answer of the kids that were interviewed and attend the outdoor preschool program. Despite that most of the children demonstrated friendly to nature discourse, this is just a minority of the children and therefore we cannot infer wider conclusions with certainty. From their answers, the majority showed that they like or even love animals while some animals were less popular than others. Just three children answered that they would harm some animal in case it was near them. This shows the rationale behind the three subthemes presented in table 1, i.e *Subtheme 1: Like and do not harm any animal, Subtheme 2: Do not like but do not harm them* and *Subtheme 3: Do not like and harm*.

Subtheme 3.1: Like and do not harm any animal

The huge majority of the students expressed feelings of likeness or even love towards animals. Deers and squirrels were the animals that all kids expressed likeness towards them. The reasons they like the animals vary from outdoor appearance to feelings that they evoke, to connections to Santa Claus.

Researcher: *Next photo*

Christina: *Reindeer! (with enthusiasm)*

Researcher: *You like them?*

Christina: *Yes. Because they remind me of Santa!*

Researcher: *Who?*

Christina: *The Santa!*

Christina (5) expressed her likeness towards deers since they evoke memories of Christmas holidays to her. She has made the connections of deers to Santa and therefore to happy memories and presents.

Researcher: *Do you know this animal?*

Kate: *Squirrels*

Researcher: *Do you like them?*

Kate: *Yeah! But.. this is a reindeer! (showing the researcher the other picture of a reindeer)*

Researcher: *Yeah*

Kate: *Squirrels and reindeers are really (with emphasis) cute and nice. And (I like) squirrels because they need to store their acorns for the winter!*

Researcher: *Yeah?*

Kate: *Yeah. To have something to eat.*

Kate (4) also expressed that she likes reindeers as well as squirrels. She stated that she likes them because their physical appearance. However, when talking about the squirrels she showed complex knowledge about their actions to save food for winter. This knowledge about squirrels' routines to save food may well illustrate that preschool children might be able to comprehend more complex sustainability situations than adults think them as able to do. By saying this I do not argue that all preschool children may have the same ability to understand complex nature routines, but I seek to promote the argument that preschool children when given the right conditions might be able to develop their sustainability thinking and knowledge.

Subtheme 3.2: Do not like but do not harm the animals

The children did not express dislike or disgust about any of the animals. Either they thought the animals could hurt them or they found them ugly. However, when asked what they would do if they had one near them, they stated that they would either leave them alone or run away. Almost, everybody that said that they do not like an animal, they did not state aggressive behavior towards them. This might illustrate that children of these two classes have come in contact with these kind of small animals either at school or at their place; despite that fact, they have not felt the need to express themselves with violence when described what they would do if they had such an animal in the place of the interview. In spite of the fact that this sample of interviewed children is very small, it can offer hopeful conclusions about preschool children in outdoor preschools. This optimism lies on the fact that even though they do not like being or even seeing some animals, usually small ones, most of them never expressed ferocity towards them.

Researcher: *Do you like bees?*

Daniel: *No because they can sting you.*

Researcher: *And?*

Daniel: *It hurts.*

Researcher: *And what would you do if there was one here?*

Daniel: *Leave it and run away*.

Daniel (6) expressed that he does not like bees due to his fear of them. He described them as animals that they can harm you by stinging. However, he did not express any hostility towards them and said that he would simply leave the animal and run away.

Subtheme 3.3: Do not like and harm them

Only three kids expressed hostility towards animals when asked what they would if they had one near them. One kid illustrated aggressiveness towards ants and bees, another one towards bees and one towards worms. However, these three kids manifested love for all the other animals that were asked. Therefore, the reasons that

they showed hostility towards just as specific animal might be a personal experience, they encountered with them.

Researcher: *Do you like ants?*

Kate: *No!*

Researcher: *Why? What would you do if there was one there?*

Kate: *We… I STEP ON IT* (bangs her foot on the floor showing how she would smash it)

Researcher: *Ok.. And what about these* (shows bumblebee)?

Kate: *No. They sting and…*

Researcher: *And what would you do if there was a bumblebee?*

Kate: *We we do, when get them we have to do like this (shows how she would get them away with her hands and blows with her mouth). And bug taser!*

Kate (4) despite that she liked all the other animals when asked about ants and bees expressed a strong feeling of dislike towards them. She aggressively illustrated how she would smash an ant and said that she would use a bug teaser for the bee. These feelings of aggressiveness illustrate that even when children are exposed to small animals in a daily basis, there might be situations that they would still feel repulsion towards some of them. However, this does not mean that outdoor learning and exposure to all kinds of animals should be avoided. On the contrary, it is a call for an even greater exposure in order for the children to feel more comfortable when around of all kinds of animals.

The third theme illustrate that children feel love and sympathy towards animals. They answered positively when asked about different types of animals and only in few instances they demonstrated animosity towards some of them. These feelings of aggressiveness towards animals might be product of personal experience in their private lives. However, in the vast majority children showed affinity towards the different types of animals they were shown, something that can be considered hopeful for outdoor learning.

Theme 4: Protection of nature against its pollution from humans

Offering an outdoor class with trips to parks, forests and islands seems to contribute to the need for a proper environmental education in preschool in order to raise environmental awareness. One way to investigate if children understand concepts such us environmental pollution is to expose them to it and ask them questions about it. A striking development on environmental stewardship discourse is illustrated by their answers. During the last part of the interview, children where shown photographs of polluted places with plastic bags, straws and metallic cans. From their answers three subthemes emerge; *Subtheme 1: Humans as polluters of nature*, *Subtheme 2: Harmful consequences of environmental pollution* and *Subtheme 3: Recycling and conservation of polluted areas*.

Subtheme 4.1: Humans as polluters of nature

When asked what they can see and what they think has happened all of them were able to explain that they can see plastic on different places and that someone, people or more specifically naughty people have thrown them there or forgot to pick them up. Children might have already been exposed to situations in which humans throw rubbish on the streets or nature. This is illustrated by their answers in which they all state or assume that humans have left the plastic in nature.

Researcher: *Ok. Can you tell me what can you see in these pictures?*

Oliver: *That one? That blue thing?*

Researcher: *Yes, in all of them.*

Oliver: *Like a balloon? And these plastic bottles?*

Researcher: *Yeah. Does it belong there?*

Oliver: *No!*

Researcher: *What do you think has happened?*

Oliver: *Someone forgot to take some home and they left them there.*

Oliver is a 4 years old boy, in his first year in the outdoor group. Despite the fact that he was a little bit shy answering the previous questions, when shown and asked about the pollution photographs, he excitingly answered showing knowledge that people are those that has polluted these natural places. However, unlike other children he does not accuse these people of pollution but he rather states that they have forgotten to take them and unwillingly they polluted the environment. He illustrates knowledge of who pollutes the environment but he refuses to state that bad people have thrown dirty things polluting the environment.

Researcher: *What can you see here?*

Anna: *A plastic bag. It's in the bushes*.

(…)

Researcher: *How do you think these things ended up there?*

Anna: *People that have been naughty throw them.*

Anna (5) immediately recognized the plastic bags in the bushes and the plastic on the beach and forest and her facial expressions showed discomfort and disgust by these pictures. When asked what she thinks has happened and who might have thrown these there, she illustrated knowledge of human pollution. A thing that stroke the researcher was that she characterized these people as naughty. As people that have done something extremely bad and for that reason, they had to be negatively assigned the adjective naughty. An adjective that suggests that somebody has acted in a wrong way, in a way that made others uncomfortable. Children might be called naughty when they do not listen to their parents or teachers or someone superior with wisdom. In this way Anna

assigned this adjective to them in order to illustrate that they are not wise when polluting a sacred place such as nature.

Researcher: *Last photographs. What can you see?*

Christina: *Trash!*

Researcher: *Where are they?*

Christina: *Sometimes I see them when I go on like a trip or something.*

Researcher: *On these photos?*

Christina: *Trash on the beach.*

Researcher: *What do you think has happened?*

Christina: *Someone I do not know throw them there.*

Researcher: *People?*

Christina: *Yes. I don't know them!*

Christina (6) recognized the plastic items as trash. She manifested discourse relevant to environmental education as for her, plastic on natural places is trash. With this word she sought to assign negative connotations on plastic being in nature. When asked about the source of the plastic she answered that someone that she does not know threw them there. She defensively answered that she does not know that someone that dared to pollute the places. She stated that she has seen trash like this when going on a trip but tried to distance herself from this kind of behavior repeating that she does not know these "someones".

Subtheme 4.2: Harmful consequences of environmental pollution

Some children when asked about their feelings of showing photographs of plastic in nature answered with concern that it might be harmful both for the environment and the animals. This shows that children might be able to develop friendly towards the nature thinking when exposed to nature in a daily basis.

Researcher: *How does these photos make you feel?*

Anna: *Eee hmm*

Researcher: *Does these make you feel nice?*

Anna: *NO!*

Researcher: *Why?*

Anna: *Because you will break the nature if you throw these there.*

Anna (5) in the beginning did not know how to answer. She of course felt bad. The reason she uttered is striking; she argued that people that throw plastic in nature, they destroy it. Anna showed that the answer is so obvious and, in the beginning, did not

know if she should answer the obvious. Explaining her dislike of the photographs she manifested love for nature. For her, those that threw this trash on the ground break the nature. She did not use the word place but instead she used the word nature. This discourse might illustrate that the daily exposure to parks and forests might have aided the development of nature friendly knowledge.

Another kid that manifested concerns about nature and its pollution is Mia. Mia is a 4 years old girl that is very excited about trips into natural areas. When asked to explain her views on why plastic on nature is bad, she responded that she is worried about animals. Her affection of animals is depicted in her worries that an animal might eat the plastic and die. She illustrated knowledge about the dangers of plastic and trash in nature.

Researcher: *Ok. Last question. Look at these pictures and tell me what can you see.*

Mia: *Trash on the beach…and on the forest.*

Researcher: *Do they belong there?*

Mia: *No.*

Researcher: *Why?*

Mia: *Because if a bird eat it, then it is gonna go sick and die…*

Daniel (6) also explained that plastic in nature is dangerous for animals. His discourse manifests a deeper knowledge of nature, concerns that he has about its pollution and why it is specifically bad for other creatures than human, i.e. the animals. Pollution's effects to nature and animals have been told or taught to Daniel. Being outdoors every day, has come in contact with lots of animals and seems that he knows what is dangerous for them.

Researcher: *Yeah, now what about these pictures? What can you see? (*showing the photographs of bottles, plastic and straws).

Daniel: *It is a natural plastic here and plastic straws there.*

Researcher: *How do you feel about it?*

Daniel: *That is not good. Because the animal can eat it and then…die. First it will get sick and then die.*

Subtheme 4.3: Recycling and conservation of polluted areas

All children when asked what we should do for the plastic and trash on natural spaces, they answered that we should pick them up, recycle them or even give them back to the ones that left them there. The outdoor school seemed to have implemented in them knowledge and discourse that is hopeful for nature's future. Fortunately, there were no child that did not know what to answer or did not have to say something about it. Clearing natural places from trash is a step towards environmental awareness.

Researcher: *Why do you think that happened?* (people throwing garbage outdoors)

Elias: *Maybe because they cannot find the garbage bin and they ehh they cannot put in their pocket and they can go throw them in the trash.*

Researcher: *And where do they belong?*

Elias*: In their home. OH! In the factory, the garbage factory. The garbage factory is a place where actually is a stinky place and there are a lot of bugs there.*

Researcher: *If you saw the garbage, what would you do?*

Elias: *We would pick up and like glass we usually do these pick-ups (recycling) here with the (name of the class).*

Elias knowledge of recycling factories and recycling is impressive. He states that the reason that people do not throw garbage in the bin is because they are not able to find one. As a result, they leave it there. This is, though, not good and this trash should be at the homes of the polluters. However, he then alters his answer and responds that trash belongs to the garbage factory where trash is recycled and nature is clean, pure and conserved. When asked a personal question about trash he chooses to answer using the first plural "we", which is referred to the outdoor class. He clearly states that with the class they recycle quite often something that has led him to utter these opinions. Therefore, the outdoor class' significance for him is rather important. They, as a class go to recycling hunts and pick up trash such as glass.

Researcher: *What can you see?*

Elizabeth: *It's plastic bag. It fell from a tree?*

Researcher: *I do not know. Is it its place there?*

Elizabeth: *No. It should have been in a rubbish been.*

Researcher: *And these pictures?*

Elizabeth: *Yeap, they should have been in a rubbish bin also.*

Researcher: *And what should we do?*

Elizabeth: *We should throw them into the bin!*

Elizabeth (5) was confused in the beginning about the source of the plastic bag. However, when asked if bushes, parks and beaches is the place for trash to be she answered with the modal perfect should have. This indicates that she believes that something should have happened but unfortunately it didn't. Despite the fact that these trashes place is in the rubbish bin, they lie in nature. Elizabeth argues that this is not good and they should have been in the bin. Consequently, when asked what should we do, she answers that we should pick them up and put them in their correct place, the recycling bin.

Researcher: *What do you think has happened?*

Marianna: *Someone throw the plastic bag and rubbish there. It isn't nice.*

Researcher: *And what should we do?*

Marianna: *Pick it up and throw them. We should put them in the rubbish bin.*

Marianna's (5) facial expression showed discomfort and even anger when shown the pollution pictures. She repeated twice that it is not nice without being asked to reveal her feelings. She manifested absolute certainty that trash belongs to the rubbish bin and we must pick them up and throw them there. In this way nature will be pure and untouched again. The groups recycling campaigns seems that have positively affected Marianna as well and her encouragement to pick them up is encouraging for the future.

The above results illustrate that children, coming from international background and attend outdoor classes, might have developed sustainability discourse in the sense that they are able to describe nature, natural environments and animals as well as speak about environmental conservation and stewardship. The first theme and its subthemes depict in detail that these children have developed a complex thinking about nature, either considering it as specific natural places or animals that live there. The second theme shows that play is very important to them and as a consequence very important to encourage outdoor learning. The third theme and its two first subthemes illustrate these children's love, affinity or respect to all kinds of animals. The subtheme 3.2 can be considered a small minority where two of the children used discourse that might be harmful against three small types of animals (bees, ants and worms). Last theme and subthemes are evidence that children that attend outdoor classes have developed friendly to nature discourse since all of them were against plastic on natural spaces.

In the fourth and last theme, children demonstrated complex knowledge about nature pollution. They depicted humans as the sole polluters of the nature while illustrated knowledge about the fatal consequences of nature pollution. Finally, they offered ways of cleaning and recycling the rubbish in the polluted areas something which can also be considered as hopeful for the future.

Discussion

The aim of the current thesis was to explore the views, perceptions and opinions of preschool children that attend outdoor classes in order to understand and illustrate what they think about nature, plants and animals after their daily exposure to all of them. In addition, to explore their feelings about animals and plants and seek to study their discourse about nature pollution and nature protection from plastic. Through the qualitative research of semi-structured interviews, the researcher sought to give voice to the young learners of an international preschool in the region of Västra Götaland in Sweden, arguing for the importance of wider research of this kind in the field of education for Sustainable Development.

Since, many Swedish kids are taken into natural environments by their parents, in order to connect with open air life, friluftsliv, choosing an international preschool that offers outdoor classes was important in the sense that these children might not have grown up in an environment that promotes outdoor living. Therefore, for most of them, outings to outdoor environments and exposure to nature might usually be something that takes place during the school day. The researcher having the background of living in Greece,

can argue that preschool children in some countries are not given the opportunity of being outdoors daily or taken often to natural places. As a result, we can infer for the children of the current thesis that their perspectives on nature might mainly be formed within the school environment and therefore might constitute an enhancement of the validation of the results of the research. Moreover, I argue for wider research with children and outdoor learning, in order for the sustainability policy educators in countries that do not follow school-based friluftsliv, to see the benefits of such an education.

The above results illustrate in a very clear and vivid way that preschool children, even from the very young age of four, when attending outdoor classes can develop friendly to nature and to animals discourse as well as they can demonstrate nature conservation and stewardship knowledge. In addition, the findings depict that young learners can voice their views, perceptions and opinions in a detailed and complex way and therefore contribute to the educational policy discussion. The topic of children's voice and to what extend they have acquired sustainability and conservation discourse is answered by the findings of the interview, in the view that these findings offer a constructive way to researchers and educational policy makers to consider how preschool children think, express themselves and argue on complex matters. The current study gave the opportunity to these children to voice their views and to the researcher the opportunity to explore these views under the light of nature and nature conservation and stewardship. Since these learners find themselves outdoors into nature environments daily, their perception of nature bears even more weight in the sense that their views about nature are also constructed during the school day.

In the first theme we can infer that all children have a quite developed image of what is nature. Outdoor preschool classes offer the opportunity for children to experience nature, plants and animals daily. They offer the opportunity for sustainable teaching from a young age since there is not a more proper place for them to be taught about nature that nature itself. All of the kids illustrated complex thinking when asked about nature. For some nature was viewed as a place. A place of plants trees or even sea, while for other students' nature was seen as the animals that live there. This variety of perceptions can be considered as something very positive for education for sustainable development. My conclusion is that these classes offer experience of nature first hand and young learners have demonstrated that they have taken the first step. which is to form a base of understanding the beauty and complexity of nature.

The results of this thesis contribute to previous researches in a very constructive way. Theme two contributes to the researches about outdoor play, as it illustrates that children of the outdoor preschool class considers play very important. They view that play in nature is the main reason why outdoor spaces are fun to be. They refer to natural objects as wooden sticks, to express how they use nature during their play time. Creating a fun and a positive atmosphere during outdoor classes is of utmost importance in order for the children to create positive connotations about nature and animals. It is important also because a positive atmosphere creates feelings of stewardship and conservation since anyone would probably seek to protect the space that creates such jovial feelings to them.

Children, even before shown the photographs of animals, manifested affinity towards them since they kept talking about them when asked about nature or even drew animals when asked to draw anything about nature. In the third theme, children demonstrated that they not only have a friendly attitude towards animals, but also knowledge that can be described as complex about them. All this possibly due to their daily exposure to animals of all kinds during their outdoor classes at pre-school. This means that children have developed feelings of likeness and affection even towards animals that might be considered, from other children or adults, as disgusting. For example, most of the children stated that they like worms, despite the fact that in the picture they were looking dirty and slimy, and that they would either play with them or let them go away unharmed. Furthermore, some of the children demonstrated knowledge that can be considered complex, since they illustrated knowledge about some animals' function in nature. A distinctive example is the knowledge Marianna displayed when stating that she likes bees because they drink nectar and produce the honey we eat. Critical theorists such as Pedersen views that they might be exposed to situations of exploitation or violence are not supported by the current research. Despite the fact that it is a small-scale research, it can be inferred that only two out of ten children expressed with negativity and violence towards two animals.

The current thesis' findings supports Bagceli Kahraman's argument that starting from preschool children need to be offered proper environmental education, since it is more than evident that children have developed nature conservation and stewardship instincts. As it is analyzed in Theme 4 and its subthemes, all interviewed students have displayed knowledge about environmental pollution, who causes it and what should be done in order for natural environment to remain clean. More specifically, the young learners recognized humans as the sole polluters of nature since they all answer that some people threw the plastic there and this garbage do not belong there. Then they stated that we should go and pick them up or give it back to the 'polluters'. More interestingly, some students did not accuse people of throwing but said that the rubbish might dropped by accident by them. Most of them, though, said that some "naughty people" polluted the spaces shown. These findings might illustrate, according to the researcher of this thesis, that children when exposed daily to nature, develop nature conservation and stewardship thinking and thusly, it is important to consider this kind of classes as role models for sustainability education.

The current study's findings seem to agree with posthuman theories that suggest that children might feel closer to animals and plants when being exposed to them on a daily basis. Children did not demonstrate that they consider themselves superior to the animals or plants and even answered that they would leave them alone if they saw an animal they do not consider of their likeness. This notion is enhanced when they argued that they would protect nature from pollution since they seem to view nature as something of their own. Being in nature daily they might have developed a sense of belonging in it and therefore they answered they will act on protecting it. Critical theorists' argument that children might be exposed to situations of manipulation of animals, is probably enhanced by the answers of two children which showed animosity towards some types of animals. However, the vast majority illustrated feelings of affinity towards all animals.

In conclusion, the results of this study can support the idea that children should be asked and should be heard both by those forming sustainability educational policy and in general by those that form the environmental policy. In this study it is suggested that children's voice is important and large-scale qualitative researches should be aided by the ministries of education of states, in order students' views, perceptions and opinions be taken into account when forming the environmental educational curriculums. This research illustrates that even very young learners can voice their opinions about sustainability matters. Education for sustainable development policymakers can be immensely aided by research with children, on and about children. From a young age they can voice their opinions, perceptions and even concerns. Therefore, the current research thesis illustrates that preschool children's ability to speak about nature can become a driving force towards a sustainability turn in preschools everywhere.

Conclusion

The participant children in the interviews used a wide variety of discourse that is friendly to nature, its plants and animals, demonstrating an impressive ability to use sustainability discourse after taking part to outdoor classes. They all illustrated that they have formed a strong basis for sustainability learning since they all used, either verbally or with their drawings, knowledge about nature. For some nature is seen as a place of green and blue and for others nature is the animals that live in these blue and green spaces. The preschool children stated that they are happy attending an outdoor school, since they have the opportunity to spend more time outdoors, playing in different natural environments, using various nature's toys such as sticks. When asked and shown pictures about different kinds of animals they encounter in their daily outings, the vast majority of the young learners illustrated a close affinity to them stated either that they like them or even if they do not like them they would let them go or they themselves would leave. Only two students expressed hostility towards only three small animals. In the final part of the interview all outdoor preschool students demonstrated that they can think in a complex way when they have to think about nature conservation and stewardship. All of them recognized humans as the polluters of earth, argued that pollution is harmful to nature and finally argued for picking up of rubbish, recycling or even return garbage to those that have thrown them. Therefore, the image of a very well-developed thinking about conservation and stewardship is depicted in these children's utterances.

The findings of the current thesis, can possibly demonstrate that outdoor preschool classes can play an important role to education for sustainable development. Children of these two classes seem to have formed a strong basis on using friendly to nature and animals discourse while illustrated complex thinking on matters of environmental conservation and stewardship. Young learners being taken daily to natural environments, spend a large part of their school day interacting both with themselves but also with a large variety of animals. As a result, they seem to be happy playing in nature and therefore it is natural that they want to preserve this place clean and pure from pollution. Outdoor learning, in other words, offer to its students a valuable lesson; the lesson of loving nature, plants and its animals and since they learn to love it, they

learn to protect it also. The developed knowledge about conservation and stewardship they have demonstrated, depicts how outdoor schooling can aid children's development on sustainability matters. Therefore, the current study offers a very hopeful image for outdoor learning and preschools that offer outdoor classes. Of course I do not argue that all children that will be offered outdoor classes will develop sustainability thinking, or all outdoor classes will have the same results; however, this thesis' results illustrate that these classes can play an important role towards an educational turn towards concepts such as love of nature, its plants and its animals, nature conservation and stewardship from such a young age.

The current study's results add to previous researches on outdoor preschool classes, on the Nordic concept of friluftsliv and on matters of educational policy. Previous researches on preschool have also focused on teachers' or parents' views of outdoor classes. Others have focused on older children's perspectives on nature. This study adds to these researches but focuses on the voice of preschool children; on those children that attend outdoor classes and therefore offers a raw image of their thoughts and perceptions. Friluftsliv does seem to offer opportunities for environmental learning in preschool while these outdoor classes do seem to offer many opportunities to friluftsliv learning.

Wider Context and Recommendations

To set the current thesis to a wider context, a very important thing to consider, after reading the current study, is preschool children's voice in education for sustainable development research. As mentioned in the introduction part, the Swedish curriculum for preschool Lfpö 18 states that preschool education is very important and should seek to develop sustainable thinking to its children, while outdoor learning can offer the opportunity for children to explore and learn about nature. In the current study, it is shown that preschool children are able to express themselves either verbally or through their drawings; therefore, there is no reason why researches cannot seek to research their views on sustainability matters. Children's pure and raw perceptions offer an immense opportunity for the educational policy makers to see, to analyze and in the end extract valuable results about future educational policy. I do not propose that children's views should be the only factor on forming educational sustainability policy, but that it should play a major factor to take into consideration. Children's views can offer not only hope and proposals about their future as adults, but in many instances, they can offer alternative perceptions to current problems that both society and environmental policy needs.

Thus, the current study calls for a shift of environmental educational policy to focus on children's voices, views, opinions and perceptions. Researchers could have the opportunity of an inside look, since they will be able to view, analyze and understand what these students consider positive and what is considered negative. Researchers could have the ability to infer and draw interesting conclusions about what should be done in order for these kids to be offered the best environment possible in order to develop sustainability thinking. This shift does not mean that other areas of research should lose focus; what is suggested is that research with children on education for

sustainable development should be aided with the aim of having richer input to further develop the field. Concluding, therefore, this study calls for wider and further research to be conducted with children on the matters of education for sustainable development in order to explore ways to develop and improve its teaching in preschools throughout the world.

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FACULTY OF EDUCATION
DEPARTMENT OF PEDAGOGICAL CURRICULAR AND PROFESSIONAL STUDIES

Appendices

Appendix 1: Interview Guide

In the beginning I will start the conversation with small talk about how they are and how their day was.

Drawing activity

Now I want you to draw me something about nature. Maybe what do you think nature is or what do you like more about nature.

Photos followed by the questions:

Children are first shown photos of nature. All the pictures shown are of a park close to their school where they were being taken almost daily.

1) Now I want you to tell me about your day at the school. Do you like being outdoors? What do you like most about being outdoors?

Children are shown photos of ants, bees, squirrels, ducks, deers and worms separately, and question 2 is followed for each of these animals.

2) Ok, in your trips, you see lots of animals. What do you think about this animal? Do you think we should protect animals? What would you do if we had one of these here?

Photos of a plastic bag in a green bush, plastic straws and rubbish on a beach and plastic bottles on a place seems like a beach. Kids are shown these pictures and the questions 3,4,5,6 follows.

3) What do you think has happened here? Why?

4) Who do you think threw these there? Why do you think this happened?

5) What should or can we do now? Can we do anything?

6) Does nature need are protection? Why do you think that? When you are with your teachers, do you do anything to protect nature?

Thank you very much_____! I really enjoyed our conversation!

Appendix 2: Informed Consent (Parent)

Contact: giorgos.aavr4@gmail.com

Dear Parent or Guardian,

I am Georgios Avramidis, a student in the Education for Sustainable Development master's programme at Göteborgs University, Sweden. I request permission for your child's participation in the following research study that I am conducting for my master thesis:

Preschool perspectives on Nature – an interview study of children attending outdoor classes

The study is seeking to explore children's views on Nature which means on all the living and non-living things that exist there. I hope the findings of this study will contribute to a better understanding of children's views on nature and to what extend outdoor classes have aided the creation of ethical perspectives on nature.

I will ask your child to participate in an interview where he/she will have the opportunity to talk about what they do during the school day outdoors, what they think about plants, the forest and the animals that live there. This interview will last about 10-20 minutes and I will ask questions to find out about their ethical considerations about nature. Furthermore, one of my requests will be for them to picture what they think nature is or show them photographs of nature and ask how they feel about these pictures. I seek to use these drawings on my thesis.

In addition, I will follow the group in their outdoor excursions for a week maximum, conducting field observations. The aim of the field observations is to observe how they interact with nature and how they acquire ethical consideration towards it.

In order to hear your child's personal perspective, I believe it is best to conduct the interview alone with your child with the teacher or principal of the preschool in close proximity. However, they may sit in during the interview or enter at any time. The interview will be audio recorded to allow for a further analysis and assessment of what your child said after the interview has been conducted.

Participation in this study is completely voluntary. You may choose to withdraw your child's participation in this study at any time. In the case you decide to withdraw your child's participation after the interviews, this material will not be used in the paper.

The purpose of the study and the interview process will also be clearly explained to your child and he/she will participate only if he/she willing to do so. You may decide to end your child's participation at any time either before or during the interview. The same applies to your child and I will personally inform him/her of this possibility.

The study is completely anonymous. Names will not be used in any of the documents. Moreover, the only geographical reference to the participants will be Västra Götaland, Sweden, while no name of a local city or school will be mentioned in the findings.

At the conclusion of this study, the final thesis that discusses the findings will be made available. Please contact me if you wish to have a copy of this thesis.

Please indicate whether or not you wish to allow your child to participate in this project by checking one of the statements below and signing your name.

- o I do grant permission for my child to participate in the *Preschool children that attend outdoor class perspectives on Nature*

- o I do not grant permission for my child to participate in the *Preschool children that attend outdoor class perspectives on Nature*

Signature Signature

Printed Parent/Guardian Name Printed Parent/Guardian Name

Appendix 3: Informed Consent (Principal/Owner)

Contact: giorgos.aavr4@gmail.com

Dear principal,

I am Georgios Avramidis, a student in the Education for Sustainable Development master's programme at Göteborgs University, Sweden. I request permission for your child's participation in the following research study that I am conducting for my master thesis:

Preschool perspectives on Nature – an interview study of children attending outdoor classes

The study is seeking to explore children's views on Nature which means on all the living and non-living things that exist there. I hope the findings of this study will contribute to a better understanding of children's views on nature and to what extend outdoor classes have aided the creation of ethical perspectives on nature.

I will ask your children to participate in an interview where he/she will have the opportunity to talk about what they do during the school day outdoors, what they think about plants, the forest and the animals that live there. This interview will last about 10-20 minutes and I will ask questions to find out about their ethical considerations about nature. Furthermore, one of my requests will be for them to picture what they think nature is or show them photographs of nature and ask how they feel about these pictures.

In addition, I will follow the group in their outdoor excursions for a week maximum, conducting field observations. The aim of the field observations is to observe how they interact with nature and how they acquire ethical consideration towards it.

In order to hear your children's personal perspective, I believe it is best to conduct the interview alone with your children, with the teacher or you in close proximity. However, they may sit in during the interview or enter at any time. The interview will be audio recorded to allow for a further analysis and assessment of what your child said after the interview has been conducted.

Participation in this study is completely voluntary. You may choose to withdraw your children's participation in this study at any time. In the case you decide to withdraw your children's participation after the interviews, this material will not be used in the paper.

The purpose of the study and the interview process will also be clearly explained to your children and they will participate only if they are willing to do so. You may decide to end your children's participation at any time either before or during the interview. The same applies to your children and I will personally inform them of this possibility.

The study is completely anonymous. Names will not be used in any of the documents. Moreover, the only geographical reference to the participants will be Västra Götaland, Sweden, while no name of a local city or school will be mentioned in the findings.

At the conclusion of this study, the final thesis that discusses the findings will be made available. Please contact me if you wish to have a copy of this thesis.

Please indicate whether or not you wish to allow your children to participate in this project by checking one of the statements below and signing your name.

- o I do grant permission for my children to participate in the *Preschool children that attend outdoor class perspectives on Nature*

- o I do not grant permission for my children to participate in the *Preschool children that attend outdoor class perspectives on Nature*

Signature

Principal/ Owner Name

Appendix 4: Example of a transcribed interview with a child

(small talk)

-Draw something for me about nature. Do you know what nature is?

-yes

-ok. Draw me anything and then I will so you some pictures

-ok (starts drawing)

-You finished?

-Yeah(nods). I made a tree.

-Nice. Where do you see these trees? Have you seen anywhere these trees?

- On our summer place. It is there, a bit more straight up (shows out of the window).

-Near here? Like.. in (name of a park they are taken daily to)?

-No in n in…

-near your house?

-No, on our summer place!

-Oohh. Nice.

- I want to make a grass!

-Yeah sure. Of course, you can.

-It's nice like this the grass. And on the floor ... is like green.

-Yeah the floors are green, in nature.

-I need to do all the way over here (the grass). I will do on the other side also!

(small talk)

-Look! A tree! Can I keep drawing?

-Perfect. Yes. Now I will show you some pictures and I want you to tell me what are they and how do you feel like these pictures or whatever you want to tell me about these pictures. Ok?

-Yeah(nods)

- First this picture. (show photos of parks)

- I just know this place, but not this place.

-Which place do you think it is?

-It's this place near our house where I go. It's … a road.

-It is near the house where you go? Near the new one? (He is moving house)

-Yeah!!. And and is close. More close to the school.

-And you can go with your bikes?

-(Nods yeah enthusiastically)

-(Show next photos of parks). Do you like these places?

-Yeah. I have only been to this place.

-What do you like about them?

-I played football there. I played tennis there (shows pic). And I also play tennis here and here (show another two pics of nature).

-You place tennis everywhere? **(nods yes).** Nice!

-These pics we can say, show nature **(Interviewee says yes!).** How nature make you feel? How do you feel when you are in nature?

-Good. Because I like nature.

-You like trees and the animals there?

-Yeah. (**He asks to draw something in another paper "Ninjago". I give paper and continue the interview while he draws).**

- Q2: Day at school

-**Good**

-Do you like being outdoors? (**Nods yes)** What do you like about it? Do you prefer it than being in here for example?

-I prefer outdoors because I like being outdoors.

-what do you like about it?

-I play all day when I am outside.

-I know when you are outdoors you find a lot of branches **(He says yes).**

-**They fall.**

- How do you use these?

-I use it (enthusiastically), I use it, like throwing them.

-Nice. And how do you think these branches have ended up there? Down on the floor.

-Because they were ... I think they were old.

-So, from where do you think they came from?

-From the trees! And they fall maybe because they were old.

(small talk about drawing)

-Ok What is nature for you? What do you think when you hear the word nature?

-I don't know…

- Trees maybe? Animals, rivers, lakes?

-TREES! Or a mouse!

-Mouse? You think of mouse when you think the word nature?

-Yeah!

-Have you seen lots of mice in nature or parks?

-No. (nods no). I only see them on places and under the ground.

-Excellent. You know in nature there are animals big and small (He says Yeah). For example, ants like this (shows the pic.) Have you seen ants like this?

-They are not yellow! (in the pic there is sun on the ant and it seemed yellow)

-You are right they are black. What do you do with ants? If you find an ant what will you do?

-Ehh I don't know.

-Would you play with it or leave it?

-Leave it.

-Leave it? You don't like ants?

-No.

-Ok. Let's show you another. Like these. Do you know these? (showing bumblebee)

-I don't like bees either.

-Why?

- Because they stick like this (showing with his finger how they sting).

-And what happens if they sting?

-It hurts me.

-Ok Let's show you some more pics of animals. I want you to tell me how you feel about these pics. Ok? **(Nods OK)**

(small talk about the drawing)

-ok what do you see in that pic?

-I have never seen that picture!

-I know. What do you see now?

- Eeehh, I don't know.. A bag.

-And where is it?

-In a tree…

-Is it it's place there?

-(nods showing sad no)

-Where is its place?

-In the garbage.

-Yeah perfect. Now what about these pics? What can you see? (photo of plastic bottles and plastic straws on a beach).

-It's a natural plastic here, and plastic straws there.

-Yeah like the ones you have in your bottles at school. How do you feel about it?

-That is not good. Because the animal can eat it and then..die. First get sick and then die.

-You're right…and what should we do about it?

-(We should) throw them in the garbage bin.

-Last question.

-Next time can I do another activity like this? (means the interview)

-Aha. We will ask your teachers. Now I will show you some animals. In your trips with school I suppose you see lots of animals.

-Yes.

-That's good. And you probably have seen these animals. And I want you to tell me how you feel. I remember you didn't like the ants and..

-Bees!

-Yeah. It's a squirrel and a deer (I show him the picture)

-I like deers.

-Why?

-Because I have seen them so many times on on when it was snowy.

-You feed them you said?

-No, I said I have seen them.

-Squirrels?

-Yeah I have seen them also.

-In (name of the local park)?

-No. On our summer place!

-Wow. And you liked them.

-**Yeah**.

-And these last ones. First this one (ducks and then worms).

-DUCKS!

- yeah you like ducks? Where have you seen ducks?

-On our pond and another pond.

-Near your summer house?

-No. It's near where I live. And I feed them all day! (laughs)

-Haha

-I saw one that was fat. (laughs)

-And you fed it again?

- Yeah. To become more fatter (laughs).

-Ok. The last one? (pics of worms). Have you seen worms? You like them?

-No.

-What would you do if we had worms here?

-I am scared of them! I would leave them alone and…leave.

-Yes? So, you don't like them?

-Nods no! I just don't like them.

Ok. Thank you very much!