

ENVIRONMENTAL EDUCATION

IN THE NETHERLANDS

"Creating the willingness to act"



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1. EXECUTIVE SUMMARY

The purpose of this dissertation is to document research conducted at The Hague University of Applied Sciences on the topic of environmental education in secondary schools in the Netherlands. As pointed out by the United Nations in 1977, environmental education is necessary to further sustainability. To find out what the role of environmental education can be, the following research question has been developed; *“How can environmental education cultivate children’s environmental awareness in secondary schools in the Netherlands?”*. The need for a collaboration of all possible actors is necessary to reach the Sustainable Development Goals set by the United Nations (UNESCO, 2017).

In order to answer the central question, different research methods have been chosen. Secondary quantitative and qualitative data have been collected through desk research. This was necessary to establish the appropriate theoretical framework. The variables from the literature review have been used for the collection of primary data through semi-structured interviews. The interviews have taken place with secondary schools, Eco-Schools, local municipal governments and Greenpeace. This was necessary to find out what the current efforts are and what is required to improve this.

The results have shown that there are different interpretations on the concept of environmental education, nevertheless, the goal is to cultivate environmental awareness. In addition, the benefits of environmental education is generating targeted pro-environmental behaviours. The most effective tools for cultivating children’s environmental awareness appeared to be inquiry-based learning and the use of natural and ecological resources; outdoor education. Furthermore, current efforts in the Netherlands are insufficient; the policy area is fragmented and the concept itself is vague. As a result, secondary schools have difficulty to take ownership of the implementation of environmental education. The incorporation heavily relies on keen teachers and students. Government efforts exist, but due to the right to Freedom of Education, these efforts have not been structurally implemented. Lastly, NME departments develop educational tools with a clear link to policy themes and the school curriculum, but do not exist in all municipalities.

This leads to the conclusion that environmental education can cultivate children’s environmental awareness best through inquiry-based learning, experiential education and outdoor education. However, before this can be done, a structural approach towards environmental education should be enforced by the national government and integrated, mandatory or optional, into the school curriculum. Further research is recommended on the contribution of the private sector industry, and a closer look should be taken on how to make use of popular culture and online media platforms for stimulating pro-environmental behaviours.

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LIST OF ABBREVIATIONS

CTS	= Cognitive Theory of Stress
DESD	= Decade for Education for Sustainable Development
EE	= Environmental Education
EU	= European Union
EfS	= Education for Sustainability
ESD	= Education for Sustainable Development
ISH	= International School of The Hague
KADO	= Kabinetsbrede Aanpak Duurzame Ontwikkeling
LfSD	= Learning for Sustainable Development
LvM	= Leren voor Morgen/Learning for tomorrow
NME	= Natuur- en Milieueducatie/Nature and environmental education
PMT	= Protection Motivation Theory
UNESCO	= United Nations Educational, Scientific and Cultural Organization
SDGs	= Sustainable Development Goals
SWOT	= Strengths, Weaknesses, Opportunities and Threats
UN	= United Nations
WNF	= World Naturopathic Federation

PREFACE

I would like to thank my supervisor Ms. Minkman for supporting me and believing in me throughout the process of writing my thesis. I also wish to thank the interviewees from the municipal governments of Leeuwarden, Rotterdam and The Hague, the secondary schools, Eco-Schools and Greenpeace, without these interviewees it would not have been possible to conduct this research. Lastly, I would like to thank my mother Stephanie, without your unconditional support and critical view I would not have been able to deliver this dissertation.

2. INTRODUCTION

“Environmental education must look outward to the community. It should involve the individual in an active problem-solving process within the context of specific realities, and it should encourage initiative, a sense of responsibility and commitment to build a better tomorrow. By its very nature, environmental education can make a powerful contribution to the renovation of the educational process”

(Gillett, 1977, p. 245).

In the context of reaching the Sustainable Development Goals (SDGs) set by the United Nations, this dissertation will focus on, as described by the UN, one of the most powerful tools to cultivate awareness and a better recognition of environmental problems; education (Gillett, 1977).

Over 190 world leaders agreed on the 2030 Agenda for Sustainable Development (United Nations Development Programme, 2015). This agenda has formulated 17 SDGs for the promotion of the maintenance of the planet earth and sustainability. The guidelines and goals of the SDGs have been integrated by the European Union (EU), and implemented at the national level of the Member States. However, as formulated by the UN (1977), in order to become truly sustainable, citizens should be educated on the interdependence of the natural environment and man-made environment through environmental education (EE) (Gillett, 1977). The United Nations Educational Scientific and Cultural Organisation (UNESCO) developed the UN framework for EE during the first intergovernmental conference on environmental education in Tbilisi, Georgia (USSR). This framework can be adopted on a local, national, and international level, and is applicable inside and outside the formal school system (Gillett, 1977).

History shows that the UN is one of the key stakeholders when it comes to the promotion of sustainability and environmental awareness. In 2005, the relevance of environmental education was, again, pointed out by the United Nations, by publishing Decade of Education for Sustainable Development 2005-2014 (DESD). The object of DESD is to integrate the principles of environmental awareness and sustainable development into education, with the aim to promote behavioural changes (UNESCO, 2017). In order to further zoom in on efforts concerning the environment, the decision has been made to focus on the Netherlands in this dissertation.

The Dutch government has great ambitions concerning the environment. The goals of the coalition agreement 2017-2021 of the Dutch government concerning environment and sustainability are higher than the goals set by the European Union, which can be read in the coalition agreement 2017-2021,

Chapter 3: “Nederland wordt duurzaam” (the Netherlands becomes sustainable) (Ministerie van Algemene Zaken, 2017). Several provinces in the Netherlands have developed specialized departments within local municipal governments. These efforts of municipal governments are called NME (Natuur- en Milieueducatie), Nature and Environmental Education. NME is not a statutory task of municipal governments, and is not integrated into the secondary school curriculum. NME provides knowledge and perspectives of nature and the environment, and establishes the foundation for an environmentally conscious lifestyle. The national NME programme is a joint initiative of the Ministry of Agriculture, Nature and Food Quality; the Ministry of Education, Culture and Science; and the Ministry of Housing, Spatial Planning and the Environment (Kuypers, Tuit, & Olbertijn, 2010). More information on NME departments can be read in Appendix 1.

2.1 RESEARCH QUESTIONS

To find out why EE is perceived as a crucial step for creating an awareness by the UN, this dissertation aims to explore the field of environmental education in the Netherlands. In order to research this area, the central question of this dissertation is as follows;

How can environmental education cultivate children’s environmental awareness in secondary schools in the Netherlands?

Before the central question can be answered, it is necessary to find out what the exact definition of EE is, what the motivation and benefits of the incorporation exactly are, and if the existing efforts in the Netherlands are sufficient conforming the to be conducted literature review, and if improvements are required. The following sub-questions have been formulated to find out:

1. *What is environmental education?*
2. *What are the benefits of incorporating EE in secondary schools?*
3. *What are the current efforts in the Netherlands?*

2.2 RELEVANCE RESEARCH

Further analysis of the aforementioned developments provides significant observations concerning efforts of nation states becoming sustainable. National governments and the private sector are perceived as the key actors in the process sustainability. In the process of becoming truly sustainable as a country, the Dutch government requires active participation of the private sector. The integration of sustainability creates new economic possibilities in the circular economy, and economic interests of the private sector is generated by introducing sustainability as an innovative game-changing solution

(Balkenende, & Van Ommen, 2014). As pointed out by the Decade of Education for Sustainable development (2017), the collaboration of all possible actors is deemed necessary; “education alone will not be enough to attain a sustainable future, but this goal can never be achieved without education and learning for sustainable development” (UNESCO, 2017). In order to stimulate genuine environmental concern and behavioural changes, environmental awareness should be stimulated from an early age on. Environmental education exists, free material is available, guidelines of what EE should look like were already established by the Tbilisi Declaration of 1977. The implementation of EE seems to be missing. Therefore, environmental education at secondary schools in the Netherlands will be researched to find out how EE can cultivate children’s environmental awareness.

2.3 KEY TERMS

This paragraph will define the key terms used in this dissertation.

Environmental education (EE)

Within this research, the concept of environmental education will be based on the definition provided by “Research on Assessment System for Junior High Schools in Taiwan to Select Environmental Education Facilities and Sites” (2016); “Environmental education is promoted to teach citizens about the mutual dependence among individuals, society, and the environment, thereby fostering in them an awareness to sustain the ecological balance in the environment and respect to other species. Environmentally aware citizens and environmental study communities are also cultivated and established to facilitate the achievement of sustainable development” (Ho, Chen, & Hsu, 2016, p. 1486). Throughout this research paper the abbreviation of EE will be used.

Environmental awareness

There are different terms for environmental awareness: environmental consciousness, environmental concern. Environmental awareness refers to the attitude towards environmental consequences of human behaviour; reacting to environmental issues in a certain manner (Ham, Mrčela, & Horvat, 2016). Lianne Fisman (2005), stated that “awareness” is a broad concept, subject to various interpretations. In this dissertation when environmental awareness is being discussed, there will be referred to the cultivation of environmental concern, becoming aware of the impact human beings have on the environment, show what the consequences are of behaviour of previous generations on the world, and how important it is to be sustainable, to ensure future generations of being able to meet their needs. The goal of EE is cultivating environmental awareness, providing the children of a

sense of responsibility. Changes in behavioural patterns of citizens cannot be reached by government policy only. Real change will be achieved through the cultivation of sincere environmental concern.

Sustainability

Within this research the term sustainability refers to the definition provided by the United Nations (1987); “sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations General Assembly, 1987, p. 37).

This report will start with explaining the methods used in conducting this research (Ch.3), followed by the literature review, establishing the appropriate theoretical framework (Ch. 4). The literature review will be followed by the results of this research (Ch.5). The results will be analysed in the discussion (Ch. 6), followed by the conclusion of this dissertation (Ch. 7). Finally, a recommendation will be given on the future and potentiality of environmental education on secondary schools in the Netherlands (Ch. 8).

3. METHODOLOGY

In this chapter, the research methods of this dissertation will be explained. Different research methods have been selected to answer the research question: the collection of secondary quantitative and qualitative data, a qualitative analysis of the secondary data, desk research, primary data, semi-structured interviews and a qualitative analysis of the interviews. Below an in-depth elaboration on the research methods will be provided.

3.1 SECONDARY QUANTITATIVE AND QUALITATIVE DATA

The first research method which has been used, is the collection of secondary quantitative and qualitative data through desk research. This research method has been crucial in establishing the appropriate theoretical framework for EE in the literature review, and to create an understanding towards different perspectives on the definition of EE.

The secondary data consists out of existing case studies, pilot studies, and research reports from journals. The sources originate from Turkey, Taiwan, New Zealand, China, England, and Israel. The variety of different sources has been necessary to gather different perspectives on approaches and implementations of EE in different countries. Subsequently, the focus has been laid on how EE can cultivate children's environmental awareness in secondary schools in the Netherlands.

To find out what type of EE would be most suitable, the acquired variables from the literature review have been used to establish themes of discussion for the semi-structured interviews. The themes derived from the literature review are, first of all; the concept of EE, in other words; different understandings of EE. The second theme used in the semi-structured interviews has been the implementation of EE; current efforts concerning the implementation of EE. The third discussed theme has been about the benefits of EE; the initial goal and purpose of EE, what is the desired outcome. The last discussed theme has been the obstacles; which factors form obstacles for secondary schools in the implementation of EE.

Furthermore, the report of UNESCO on national journeys towards education for sustainable development (2011), has been used for outlining results based on the current efforts of the Dutch national government.

3.2 PRIMARY DATA

Semi-structured interviews

Moreover, the research method used in the second part of this dissertation has been the collection of primary data through semi-structured interviews. For conducting the semi-structured interviews, three local municipalities have been selected: Leeuwarden, The Hague and Rotterdam. The interviews have taken place with departments of the local municipalities, directors and/or teachers of secondary schools in the area of the municipalities, and Greenpeace. An in-depth elaboration on all the participating stakeholders can be found in Appendix 1.

The first stakeholders have been the NME departments of Rotterdam and The Hague. The interview with NME Den Haag has taken place with Lindske van Hulst and Rémon Dammers from the specialized department for secondary schools. In addition, for NME from the municipality of Rotterdam, Gerard Ton (policy advisor Sport, Recreation, Nature and Environment) has been interviewed. Moreover, the NME department of the municipality of Leeuwarden does no longer exist, therefore, an interview with Senior Policy Advisor Sustainability; Gerk Jan Kuipers, has taken place. These interviews were necessary to provide a clear image of the efforts of municipalities concerning EE. Moreover, in order to understand the role of organizations like Greenpeace, education expert Elize van Berkel from Greenpeace has been interviewed. Greenpeace provides free educational methods and tools for primary- and secondary schools.

Furthermore, six secondary schools have been selected beforehand. The interviews with secondary schools were necessary to provide an image of the current situation at secondary schools and for discussing the future of EE at secondary schools. In addition, two out of six secondary schools are so-called Eco-Schools.

The interviews with Eco-Schools have been crucial to provide an example of the integration of EE and sustainability into the curriculum of secondary schools. These interviews were necessary to draw a comparison between existing efforts of regular secondary schools and Eco-Schools.

The interviewed Eco-Schools are Nordwin College vmbo-groen Leeuwarden and Gerard Zuiderdijjn, facility manager of The International School of The Hague. The interview of Nordwin College involved three interviewees: Meile Zijlstra, team leader of the school; Tom Huijgens, teacher sociology and part of the Eco-team; and Gerard van Loon, facility manager. Topics of questions had been prepared but the general discussion has taken place between the interviewees, in which the interviewer has guided the conversation.

The remaining four schools are based on different pedagogical foundations. The participating interviewees of the secondary schools in this dissertation are: Radboud Burgsma, teacher social sciences and project leader of educational projects Montessori High School Leeuwarden; Sietske

Asselbergs, deputy headmaster of De Vrije School Den Haag; Erik Harinck, team leader of GSR Rotterdam; Peter Nienkemper, department leader of Dalton Lyceum Barendrecht. More information on the philosophies of the schools can be found in Appendix 1. It was not crucial for this dissertation to specifically gather the perspectives of these divergent schools. However, it is really interesting to see how, based on different values, schools have different approaches towards, and understanding of, the incorporation and promotion of EE. The purpose of this research has not been about the generalization of different perspectives of secondary schools in the Netherlands, rather to find out what has motivated secondary schools to provide EE, or what is creating obstacles. This dissertation has analysed and compared the motivations and needs of diverging secondary schools concerning environmental efforts.

“Due to the environmental friendly nature of this dissertation, the full transcripts of the ten interviews can be found in the digital version of this dissertation”

3.3 LIMITATIONS

In the process of conducting research, it is important to mention that several limitations have occurred. The initial plan of this research paper was interviewing three regular secondary schools and three Eco-Schools in the areas of Leeuwarden, The Hague and Rotterdam. Two Eco-Schools have been interviewed in Leeuwarden and The Hague. Due to the lack of response and unwillingness to cooperate, different secondary schools in Rotterdam had to be chosen. The only secondary school qualified as Eco-School is the Rotterdam International School (RIS). The RIS has been contacted several times, but no response has been given. It was not possible to choose another Eco-School because RIS was the only regular secondary school with the Eco-School flag. Therefore, an additional regular secondary school in Barendrecht has been contacted and interviewed. Furthermore, due to the limitations of this research, there was no chapter dedicated to the stakeholders in the private sector. The research outcomes have not been negatively influenced by the limitations, but as a result less diverse opinions have been gathered from Eco-Schools and the influence of the private sector.

4. LITERATURE REVIEW

In this chapter the most relevant literature will be discussed and key terms will be further defined. The role of EE in secondary schools, implementation methods and motives are subject to numerous studies. Several existing studies on EE and secondary schools have been selected to provide a theoretical framework.

First of all, the concept of EE will be reviewed based on different academic researches. Secondly, the stimulating factors in implementing EE will be discussed based on the results from three different case studies. Furthermore, the benefits, desired outcome, based on predictors and stimuli of pro-environmental behaviours of EE will be outlined. Lastly, the main obstacles encountered at government level, and based on results derived from one of the case studies will be briefly discussed.

4.1 THE CONCEPT OF ENVIRONMENTAL EDUCATION

The term EE is being referred to by different terminologies such as Education for Sustainable Development (ESD) or Education for Sustainability (EfS). Author Yosef Jabareen (2012), suggests that there appears to be confusion in literature between environmental education and sustainability education. The author points out that EE mainly focuses on educating earth's population on the relationship between human beings and planet earth. The concept of EE has changed over the years; the concept of sustainability has become a more important concept within the notion of EE (Jabareen, 2012).

Therefore, the DESD has suggested that EE should become "Education for Sustainable Development" (Khademi-Vidra, 2017). The difference between these terminologies is that ESD/EfS also includes societal considerations of sustainability (Brignall-Theyer, Allen, & Taylor, 2009). In addition, Brignall-Theyer, Allen, & Taylor (2009), argue that "EE" is not necessarily preferred over the terms "ESD/EfS", but the terms are the direction in which EE is moving. Nevertheless, some form of EE should exist before there can be spoken of ESD or EfS. The DESD indicates that "Education is a motor for change" and education should enable citizens to realize what the challenges of the present and future are, and; "leaders to make relevant decisions for a viable world" (Jabareen, 2012, p. 2248).

Moreover, the use of the term EE appears to be most common in existing literature and research. As outlined in the previous chapter, the definition of EE in this dissertation is based on the definition provided by Ho et al. (2016). The aforementioned study developed a quantitative assessment system and relevant indicators to serve as future references for secondary schools in choosing environmental educational methods, EE facilities and sites. The study defines EE as the promotion of teaching citizens

about the mutual dependence between individuals, society, and the environment, and developing an awareness to sustain ecological balance in the environment and the respect to other species. The goal of EE is to facilitate the achievement of sustainable development (Ho et al., 2016, p. 1486).

The Tbilisi Declaration (1977), laid down that EE, “should prepare the individual for life through an understanding of the major problems of the contemporary world, and the provision of skills and attributes needed to play a productive role towards improving life and protecting the environment with due regard given to ethical values” (p. 24). In the Tbilisi Declaration, there is described that EE demonstrates the interdependence between national communities, member states, and the cruciality of solidarity (UNESCO, 1978, p. 24).

4.1.1 Research on the implementation of environmental education

The study on “Environmental awareness level of secondary school students: A case study in Balıkesir (Türkiye)” (2014), identified in what way family, school and media, influence the level of active participation in environmental activities of secondary school students. The results of this study demonstrated that efforts concerning EE by schools are insufficient. Furthermore, this research shows that students prefer gaining knowledge through mass media (Altın, A., Tecer, S., Tecer, L., Altın, S., & Kahraman, B.F., 2014). The conclusion of this case study indicated that a high level of environmental awareness does not lead to an increase of active participation, but sets environmental attitudes instead. The key tools in stimulating this awareness appeared to be education at schools and the influence of mass media.

On the other side, the authors of “Child-orientated environmental education influences adult knowledge and household behaviour” (2013), argue that research on the topic of EE is often biased through qualitative analysis of perceptions, hindering the potentiality to draw conclusions on the influence of EE on exhibited behaviour of children (Damerell, Howe, & Milner-Gulland). Nevertheless, Damerell et al. (2013) provide strong support, suggesting that the results of cultivating children’s environmental awareness and concern, enables the transferral of that concern between generations, and most importantly, it indirectly generates targeted behavioural changes (p.1).

The case study on child-orientated environmental education was carried out with help of fifteen wildlife clubs. The participating children were divided into two groups; group one received next to regular EE, “experiential education”, by helping the wildlife clubs by working on wetlands; The second group worked on alternative subjects. The goal of this research (Damerell et al., 2013), was finding out in what way these different educational methods would contribute to the environmental awareness of these children. In order to find out what the difference would be in the level of

environmental awareness of these children, self-administered questionnaires were taken. The results have shown that the children of group number one scored significantly higher on levels of knowledge on the environment, in comparison with group number two. In addition, the model of group number one has shown that the children with practical experience, fieldtrips, had a positive effect on parents learning about the environment through their children. The children studying wetland education had a positive impact on water use behaviour of their households (Damerell et al., 2013).

In addition, Ho et al. (2016) found in a recent study that the most important indicators appeared to be *natural and ecological resources*. In other words, secondary school students appear to learn best when EE is combined with a practical approach, where the students are enabled to learn through outdoor education.

Furthermore, Brignall-Theyer, Allen, & Taylor (2009), conducted a scoping study about education for sustainability in the New Zealand secondary school system. In order to identify different perspectives around the key elements of sustainability in education, semi-structured interviews have taken place with people with different roles in the secondary school system (Brignall-Theyer et al., 2009). The results of the interviews showed that the drivers behind the implementation of EE consisted mostly out of voluntary initiatives from teachers and students. Despite the establishment of Environmental Education Guidelines, the interviewees felt that the driving force behind the implementation of the guidelines were missing because it has a non-compulsory status (Brignall-Theyer et al., 2009). The variety of perspectives showed that the incorporation of EE and sustainability into the school curriculum generally depends on keen teachers instead of the school's philosophy (Brignall-Theyer et al., 2009). In addition, the results showed that the respondents felt that sustainability was not integrated well in the everyday operation of the school. The respondents saw the need for the development of a strategic plan and link between the everyday operation of the school and the curriculum, to enhance the learning capabilities of the students; sustainability being visible throughout the whole school (Brignall-Theyer et al., 2009).

4.1.2 Benefits of environmental education

Motivation as a force to initiate behaviour

According to Varela-Candamio, Novo-Corti, and García-Álvarez (2018), EE includes various components such as: environmental awareness, knowledge, and attitudes towards environmental problems. EE should lead to the development of skills to identify these problems and stimulate behaviours to help resolve them, but it does not necessarily result in teaching children about what kind of viewing point should be held with regards to the environment and the planet (p. 1566). EE educates individuals how

to critically look at different sides of environmental issues, thereby, enabling the stimulation of developing their own problem-solving and decision-making skills (Varela-Candamio et al., 2018). The research on “The importance of environmental education in the determinants of green behavior: A meta-analysis approach” (Varela-Candamio et al., 2018), explains that most literature concerning the influence of intrapersonal factors on pro-environmental behaviour can be categorized in three theoretical groups: moral, rational choice, and non-rational choice. The Protection Motivation Theory (PMT) argues that the predictors of pro-environmental behaviours can be derived from attitudes towards climate change and the intentions of the people (Varela-Candamio et al., 2018). On the other hand, there is the Lazarus and Folkman’s Cognitive Theory of Stress (CTS). This theory argues that when environmental stressors such as environmental pollution, are perceived as a threat, in conjunction with self-efficacy, it would automatically result in pro-environmental behaviour. Valera-Candamio et al., indicated that this could be another explanation for the motivation behind pro-environmental behaviour. The study (Varela-Candamio et al., 2018), identified that EE and intention should be categorized as the most important predictors of green behaviour, taking the indirect influence of attitudes, social norms, and awareness into account (Varela-Candamio et al., 2018, p. 1569).

EE proves to be a powerful tool to cultivate green behaviour of citizens. The study did not focus on formal EE. However, the authors argue that similar effects are expected, and that these results “could suggest that the establishment of mandatory pro-environmental subjects in the educational system by the policy-makers could determine improvements related to green behaviours in the current society” (Varela-Candamio et al., 2018, p. 1571).

4.1.3 Obstacles government

Lastly, the research paper “Developing public environmental education: Improving community-based environmental management” (Xue, Hong, Zhang, Xu, & Shen, 2006), highlights three obstacles in motivating citizens to take initiatives in environmental conservation. The authors argue that, first of all, legislation on community participation is vague. Secondly, the required efforts such as time, energy, and expenses may lead to simplification of community participation. Lastly, there is a lack of promotion of communication concerning environmental management between the public and the government (Xue et al., 2006, p. 105).

Xue et al. (2006), argue that sustainability cannot depend on legislation alone and substantial changes can be achieved into cultivating this sense of environmental awareness of children in secondary schools. Moreover, in 2009, Brignall-Theyer et al. found out that the main barriers reported by participants of the study included: *lack of support from all parts of the system, funding, time and resources*.

5. RESULTS

The discussed literature in the previous chapter has helped to clarify the theoretical relevance and definition of EE. In this chapter, the secondary data collected from UNESCO (2011), and the results derived from the conducted interviews will be outlined. First, the current efforts and benefits of incorporating EE in the Netherlands will be discussed on two different levels: national level and municipal level. Furthermore, the current efforts and future of EE will be discussed based on the interviews with secondary schools and Eco-Schools.

ENVIRONMENTAL EDUCATION IN THE NETHERLANDS

“Dutch society is committed to finding sustainable solutions to such issues as climate change, social inequality, the deterioration of ecosystems and biodiversity, global poverty, and lack of education and healthcare around the world”

(UNESCO, 2011, p. 78).

5.1 NATIONAL LEVEL

In 2011, UNESCO published a report reviewing national efforts towards Education for Sustainable Development (ESD). This report provides an analysis of national efforts of Chile, Indonesia, Kenya, the Netherlands and Oman. The author of chapter “The Netherlands”, Marlon van der Waal, indicated that efforts concerning EE, or ESD, has been guided by a national programme; “Learning for Sustainable Development” (UNESCO, 2011).

The first form of EE in the Netherlands was mainly focused on nature conservation education. The National Foundation for the Protection of Nature, the Dutch National Forest Service and local governments, all played a key role in providing nature conservation education while raising environmental awareness (UNESCO, 2011). At the end of the 1960s, nature conservation education went through a shift towards EE, which is nowadays known for NME (in the Netherlands).

As explained in section 4.1, NME is not a statutory task of a municipality, but is perceived as necessary because it serves as the foundation for sustainable development in the Netherlands (Kuypers et al., 2010). The shift towards EE has been motivated by the increase of evidence of environmental pollution, and the focus had been laid on how to change people’s environmental behaviour (UNESCO, 2011).

On the national level, a set list of mandatory, and optional, educational outcomes is provided by the Ministry of Education. Schools in the Netherlands have the freedom to provide different educational content and choose their own methods in achieving these educational outcomes. Numerous schools in the Netherlands have chosen to incorporate international (ESD) frameworks such as Eco-Schools, Green-flag schools, and UNESCO-profile schools. However, as a result of the principle of Freedom of Education, EE has not been structurally implemented (UNESCO, 2011). In the next paragraph a further elaboration on government efforts will be provided.

5.1.1 The Dutch National Sustainable Development Strategy (2008)

Five key strategies and principles have been identified in the Dutch National Sustainable Development Strategy. The programme aims to (1) “develop a common agenda in environmental education at the local, provincial and national level”, (2) “develop a more demand-driven environmental education”, (3) “focus on children and youth as the prime target group”, (4) “focus on experience-based learning”, and lastly, (5) “increase administrative collaboration by focusing on leadership and control, and on the development of a more effective environmental education strategy” (UNESCO, 2011, p. 80).

The national action plan for the DESD consists out of the Learning for Sustainable Development (LfSD) Programme. According to the LfSD principles, competences for the incorporation of sustainable development, should be identified by the key stakeholders; individuals, government, civil organizations and corporate institutions. (UNESCO, 2011, p. 81). The LfSD programme consists out of three pillars:

1. Teaching individuals
2. Teaching organizations
3. Teaching society

The first ambition is to create a sense of awareness of the students. In order to achieve the goals of this ambition, sustainable development should be integrated through strategic operations and system changes. The second goal is to provide help for civil servants and society leaders to “acquire the competences to engage in responsible ecological, social and economic decision-making” (UNESCO, 2011, p. 82), focused on national, provincial and local municipal governments. Lastly, the programme has a facilitating role and focuses on “social learning” (UNESCO, 2011, p. 82-83).

5.1.2 Core Curriculum Learning for Sustainable Development

In 2007, Stichting Leerplan Ontwikkeling, the Dutch institute of Curriculum Development, developed the Core Curriculum Learning for Sustainable Development, for formal education to explore the

possibilities of embedding sustainable development in the traditional curriculum (UNESCO, 2011). However, the report on the national journeys from UNESCO, indicated that there is not enough information available with regards to the implementation of the core curriculum in schools.

Nevertheless, in the period between 2008-2011, LfSD turned to a customized strategy for each department (Remmerswaal, Willems, Vader, Wals, Schouten, Weterings, 2012). Earlier in this period, the Balkenende Cabinet launched the “Kabinetsbrede Aanpak Duurzame Ontwikkeling (KADO). On the request of the control group, the customized strategy merged with KADO. KADO has been supported and furthered by LfSD. Due to the new strategies introduced by the new cabinet, Cabinet Rutte 1, the government wide approach (KA), let go of sustainable development (DO), and a new direction was taken. As a result of the dissolution of KADO, the core establishment of LfSD disappeared.

Sustainable policy transformed into new formats such as “Sustainability Agenda”, “the Green Deals”, “the top sectors and the business letter” (Remmerswaal, Willems, Vader, Wals, Schouten, Weterings, 2012, p. 66).

5.1.3 Freedom of Education

Within the report on the national journeys towards education for sustainable development a SWOT-Analysis on the implementation of ESD in the Netherlands has been conducted. The most relevant outcomes of the analysis suggest that, “the establishment of strong networks in formal education would accelerate the process of embedding sustainable development in the formal education sector” (UNESCO, 2011, p. 98). Moreover, the discovered weaknesses of the implementation of ESD in the Netherlands highlight the obstacles formed by the right of Freedom of Education. This freedom makes it difficult to establish top-down influence from the national governmental level on the formal school curriculum. The threats indicate that EE is often not prioritized by secondary schools. Schools often experience time pressure due to the mandatory curricular activities required by the national government within the educational content of the schools. Therefore, secondary schools lack time to implement extra programmes concerning EE (UNESCO, 2011).

5.2 MUNICIPAL GOVERNMENTS

The image created on the national level might differ from existing efforts in local municipalities. In this section a summary will be provided of the most important outcomes of the interviews with Gerk Jan Kuipers (Kuipers, G., personal communication, October 10, 2018), senior policy advisor for the municipality of Leeuwarden; Lindske van Hulst and Rémon Dammers (Van Hulst, L., & Dammers, R., personal communication, October 11, 2018), consultants for NME Den Haag secondary education; Gerard Ton (Ton, G., personal communication, October 22, 2018), Policy Advisor Sport, Nature and

Recreation, NME department of the municipality of Rotterdam. In order to understand the current situation and efforts of municipalities, different questions have been asked in a semi-structured way.

The results derived from the interviews will be categorized in the following way: NME departments, existing efforts, obstacles, government influence, future.

5.2.1 NME departments

The national programme of NME is a joint initiative of three different ministries. NME does not have a legal task within local municipalities, and does not belong to compulsory education in primary- and secondary schools. Therefore, the numbers of requests of materials mostly depends on the interest of the schools, and the existence of NME departments within municipal governments cannot be called self-evident. More background information on NME can be found in Appendix 1.

NME DEN HAAG

NME Den Haag originates from the year of 1919. The department for secondary education exists for 20 years now. This department offers a selection of different projects, activities and materials, which can be delivered upon request. Moreover, workshops with different themes are being organized twice a year, clustered into five themes: waste and raw materials, green and biodiversity, climate and energy, water, and food. Simultaneously, NME Den Haag serves as a policy instrument to bring environmental policy under the attention of the citizens. Lastly, in the Netherlands there is a national coordinator for Eco-Schools, of which NME Den Haag is a subcontractor (Van Hulst, L. & Dammers, R., personal communication, October 11, 2018).

NME ROTTERDAM

The NME department of the municipality of Rotterdam will be privatized from January 2019 on. Up until now, Mr. Ton has been working on playground policy, NME policy, and strategic policy of Rotterdam. NME policy belongs to the cluster Social Developments, Management Sport, and Culture. The department Sport consists out of three sub-departments: Sport, Nature, Recreation. NME belongs to the sector Nature. The NME of Rotterdam generally includes children's farms, education centres for primary education, and educational gardens for primary schools. The privatized NME department will receive subsidies on a yearly basis. One of Mr. Ton his responsibilities will be account managing and granting subsidies to the new NME organization. In addition, the policy framework of NME Rotterdam from 2013 has become obsolete, therefore, a new policy framework will be established in 2019. Mr. Ton plays an important role in the development of the new policy framework (Ton, G., personal communication, October 22, 2018).

5.2.2 Existing efforts

First of all, Mr. Kuipers from the municipality of Leeuwarden explained that environmental policy aims to find a balance between people, planet and profit. Sustainability consists out of three main themes: mitigation, adaptation and circular. The NME department of the municipality of Leeuwarden has been dissolved as a result of necessary cutbacks by the city council. In the past, the NME department developed special learning materials, “boxes”, which schools could pick up. The developed NME materials have been passed on to the Frisian nature museum. The Frisian nature museum holds the responsibility for providing NME materials and educational classes to primary- and secondary schools. Mr. Kuipers indicated that most of the existing efforts take place on school levels and several initiatives initiated from the municipality exist, such as “Himmelwieke”, which is about cleaning up the surrounding environment of the school and collecting trash in the area (Kuipers, G., personal communication, October 10, 2018).

The municipality of The Hague is more active in offering support to secondary schools. The department of Ms. Van Hulst and Mr. Dammers develops educational tools for secondary schools. The developed materials have a clear link with current policy themes and the school curriculum. In order to guarantee this, NME Den Haag holds dialogues with policy advisors about relevant themes. In addition, based on these dialogues, the department researches if the existing materials need to be adjusted or new materials should be developed. After this has become clear, schools will be approached to test the materials. The interviewees explained that by establishing a clear link between policy themes and the school curriculum, it becomes more accessible for schools to adopt the offered materials. On a yearly basis, NME Den Haag receives individual requests of schools as well, which is roughly 60% of the secondary schools in The Hague. Mr. Dammers explained that an increase of “customer” loyalty is being noted when a “total package” of tools, trips, information, instructions is being offered (Van Hulst, L., & Dammers, R., personal communication, October 11, 2018).

Moreover, NME Den Haag aims to stimulate experiential education. In stimulating children’s environmental awareness, NME Den Haag argued that different perspectives on decision-making procedures should be demonstrated, and how citizens can contribute to sustainable development. Ms. Van Hulst and Mr. Dammers see the process of cultivating awareness as essential, “otherwise you are just an information leaflet”, “then it should not be called education” (Van Hulst, L., & Dammers, R., personal communication, October 11, 2018).

Up until today, NME Rotterdam has been mainly focused on primary schools. In the area of sports, NME Rotterdam attempted to implement an existing model, for primary schools, on a secondary school, but it turned out not to be a fitting model for secondary schools. Current efforts exists in

offering children on primary schools at least one opportunity to participate in programs offered by children's farms, and receive a special educational class at least one time. There are also learning centres present at the children's farms, where children receive classes about farm animals, animals of the sea, and more. In addition, the municipality has complexes with educational gardens where children learn about the whole process of sowing, taking care of the plants, and harvesting. This program includes the whole growing season, from spring to fall. In Rotterdam the focus is laid on primary schools and age categories below that; day-care (Ton, G., personal communication, October 22, 2018).

In the municipality of Rotterdam, the same efforts will remain after the privatization. It is noteworthy that there is an increase of "green initiatives" in Rotterdam: neighbourhood gardens, vegetable gardens, neighbourhood meeting gardens. There are a lot of projects, and even more are being launched. The entity that will come into existence, will have to collaborate with external projects, which has not happened so far. NME is more internally oriented rather than externally, therefore, activities will be organized outside the children's farms in the neighbourhoods, and partnerships will be established. How this should be organized and established is unclear at the moment, and Mr. Ton explained that; "we will experiment, and try what works and what is effective". In the daily life in Rotterdam, a lot of attention is actually given to the promotion of sustainability. Mr. Ton explained; "You can see, with the whole energy transition, climate adaptation, greening of the city, all sorts of projects and objectives are arising". Mr. Ton indicated, that the municipality now also starts to look at the societal component of sustainability; how civilians can become more involved, and provide nature- and EE of a role within the society (Ton, G., personal communication, October 22, 2018).

5.2.3 Obstacles

Obstacles exist in the workload of schools and the uncountable responsibilities. Mr. Kuipers was not aware that schools can be a certified Eco-School, and questioned the added value of the establishment of all the different kind of labels. Next to all the obligations schools have, extra labels and projects would create an extra burden according to Mr. Kuipers. The incorporation of EE takes place, but is often periodical due to a lack of time. It is noteworthy that current efforts lay in the hands of environmental-minded teachers; "It is of great importance, who your children meet, who touches this string of creating awareness" (Kuipers, G., personal communication, October 10, 2018). Mr. Kuipers argued that it might more helpful to turn EE into a monthly project, and suggested that vegetarian products in the cafeteria of the school needs to be included in this discussion as well. Finally, Mr. Kuipers agreed that the environment and sustainable development belong in the schools, and programs of the schools (Kuipers, G., personal communication, October 10, 2018).

Furthermore, as indicated by Ms. Van Hulst, the core of EE relates to all school subjects, which is why it is often difficult for teachers to take ownership of EE. However, the interviewees felt that the implementation of EE has improved recently (Van Hulst, L., & Dammers, R., personal communication, October 11, 2018).

Another obstacle appeared to be the communication between the municipality and secondary schools. Mr. Ton indicated, within the whole direction, there seems to be a struggle to come into contact with secondary schools, and to develop programs for secondary schools. Collaboration with secondary schools in the area of NME in Rotterdam is an area which has not been explored yet. The policy framework from 2013 focuses on primary schools. However, in 2019, a new policy framework for NME Rotterdam will be established, and Mr. Ton indicated that the potential collaboration with secondary schools will possibly be reviewed. If secondary schools would be involved in the new policy framework, new educational tools will be established (Ton, G., personal communication, October 22, 2018).

The interviewees indicated that the most common obstacles exist in high workload, lack of time, implementation relies on motivated teachers, ownership of EE, and communication between the municipality and secondary schools.

5.2.4 Government influence

Mr. Kuipers argued that it is not always the task of the municipality to initiate efforts concerning EE, and explained that it is important to value the Freedom of Choice of schools. The attention paid by the government in the field of EE is often sporadically (Kuipers, G., personal communication, October 10, 2018).

Moreover, there were more municipalities contributing to NME for secondary schools, but after the necessary cutbacks of municipalities, a decrease of these efforts has been noted. However, Ms. Van Hulst indicated that a slow increase can be noted as well. NME is an instrument which can be implemented to increase the level playing field. This is where NME Den Haag sees a really clear task; making it clearer how NME contributes to the overall sustainability and sustainable behaviour of citizens. The municipality formulated key policy objectives concerning sustainability. In order to achieve these objectives, the contribution of the citizens should be stimulated (Van Hulst, L., & Dammers, R., personal communication, 10 October, 2018). Ms. Van Hulst argued that if people are not aware, nothing will actually change. Education is an important part of creating this awareness. The State is responsible for achieving the Sustainable Development Goals, because when these goals are not achieved, the citizens will be negatively affected. The Duty of Care is gaining more support, and this task should be taken more seriously if it was up to Ms. Van Hulst. Sustainability should become

the norm, and should be intertwined within the society (Van Hulst, L., & Dammers, R., personal communication, October 11, 2018).

Mr. Ton believes that there should always be some type of collaboration between national, municipal and local governments. In the Netherlands, there is an association for municipal sustainable development, where there is room for collaboration and exchange of expert knowledge. Inside this association several opportunities for subsidies and pilots exists. Mr. Ton suggested that the national government could provide more financial support for pilots and the stimulation of similar projects. The responsibility of the environment and sustainability is somewhat fragmented within the national government; different ministries are responsible for education and environment, creating a distance between these departments and efforts. Environment-related topics are often being categorized under Sustainable Development, which is not a negative occurrence, but attention from national level remains limited (Ton, G., personal communication, October 22, 2018).

5.2.5 Future

Mr. Kuipers believes that the solution to an increase of active involvement of schools should not become something compulsory. It is needless to say that an increase of EE is desirable, but it is important to leave it up to the schools. In addition, Mr. Kuipers acknowledged the importance of providing outdoor education to stimulate children's environmental awareness (Kuipers, G., personal communication, October 10, 2018).

Furthermore, according to Mr. Dammers, education only is not sufficient enough to stimulate active participation, more tools are required to achieve behavioural changes. It should be a mix of tools: education, participation, information, as well as the design and use of public space. Mr. Dammers referred back to the conversation that took place before the interview started in which the interviewer talked about the sustainability in Norway. Mr. Dammers elaborated; "In countries like Norway, it is probably a bit easier for people to separate their waste in public spaces than it is over here, which is another stimuli of behaviour" (Van Hulst, L., & Dammers, R., personal communication, October 11, 2018). EE is part of the complete package to further sustainable behaviour. Ms. Van Hulst explained; "NME brings you closer to real policy themes, in which children can be taught about the dilemmas in decision-making, and the interests of different stakeholders" (Van Hulst, L., & Dammers, R., personal communication, October 11, 2018). This is a really important part of sustainability issues, learning about one another's opinion and interest in certain issues, and discuss how the best solution can be found while balancing different interests. This is the main goal of NME; providing action perspectives and creating the willingness to act (Van Hulst, L., & Dammers, R., personal communication, October 11, 2018).

Mr. Ton suggested that EE and sustainability might not be the number one priority of secondary schools in Rotterdam because the results of secondary schools lay below the national average. Moreover, Mr. Ton agrees with the statement that EE should be integrated in the subjects of secondary schools rather than creating a new subject. After all, the goal of NME is to provide the students of experiential education and outdoor learning, this experience gives another dimension to EE. On school, relevant information is retrieved in class, however, knowledge cultivated through outdoor education and experiential education, teaches students in a different dimension about the environment. Mr. Ton suggested that similar activities should be developed for secondary schools. However, inside the school there might be limited space to organize such activities, therefore, there should be looked at organizing activities outside school. These activities could be established with clubs like WNF. This initiative has been discussed within the NME department of Rotterdam, according to Mr. Ton, it might be too difficult to change secondary schools and the curriculum; “I see this as an opportunity, extracurricular activities” (Ton, G., personal communication, October 22, 2018).

5.3 GREENPEACE

In order to provide another perspective on the topic of EE, developer of education programs Greenpeace, Elize van Berkel has been interviewed (Van Berkel, E., personal communication, October 15, 2018). The interview will be summarized in the following order: The concept of environmental education, existing efforts, obstacles, future.

Greenpeace develops education programs for roughly 20 years now. The development of education programs by Greenpeace have been paused for some time. The current program offered by Greenpeace is being worked on for six years. Ms. Van Berkel explained that by offering free educational methods, Greenpeace hopes to further stimulate teachers to integrate sustainability into the classrooms. In addition, when teachers search for certain information on free educational methods, the materials can be easily retrieved and downloaded from the website of Greenpeace. The teaching materials are available from primary school class 6 (according to the Dutch system), and secondary education (Van Berkel, E., personal communication, October 15, 2018).

5.3.1 The concept of environmental education

As previously discussed, the goal of offering educational tools is to make the integration of EE-related topics more accessible. Children gain new knowledge on school and at home. Ms. Van Berkel explained that education has an important role in cultivating children’s environmental awareness. Moreover, in this process, it is important that children are motivated by their own curiosity. The most effective tool

to cultivate awareness are educational trends like inquiry-based learning, design through research, technical and scientific education (Van Berkel, E., personal communication, October 15, 2018).

Furthermore, conforming the statements made by NME Den Haag, Ms. Van Berkel believes that EE cannot be categorized under one type of class or method. Greenpeace aims to contribute to providing children of the accurate information and different perspectives on environmental topics. There are a lot of issues caused by previous generations, which have to be taken care of by the next generation.

5.3.2 Existing efforts

Among others, Greenpeace tries to contribute to EE by providing educational tools and guest speakers. It is not possible to say how many schools have been using these tools because it can be downloaded from the website. The guest speakers visit different schools, however, this usually takes place in the central part of the Netherlands because Greenpeace is located in Amsterdam. Therefore, less guest speakers visit secondary schools in provinces such as Limburg or Friesland (Van Berkel, E., personal communication, October 15, 2018).

LEARNING FOR TOMORROW

Moreover, Greenpeace works together with other establishments through a corporation called “Leren voor Morgen” (LvM) (Learning for Tomorrow). Two years ago, the corporation LvM was established by different organizations interested in making education more sustainable. The goal of LvM is to offer support to teachers and schools. Support is offered through, for example, answering questions from schools. This is interesting because the corporation consists out of organizations with divergent purposes. This might be really helpful for schools because different perspectives on the same theme are being offered. It should become easier for schools to get answers to questions like; “I do not exactly know how..”, and organizations part of this corporation can refer schools to the right contact person in the relevant sector. Lastly, it is important that this connection to EE is being looked for by secondary schools themselves, and then look at how societal issues and developments can be linked to certain subjects, and enable students to look at the world through inquiry-based learning (Van Berkel, E., personal communication, October 15, 2018).

5.3.3 Obstacles

As has been noted by the municipal governments, the topic of EE, sustainability and environmental policy is fragmented on the national level. Ms. Van Berkel indicated that the vagueness of the topic and subject of EE, leads to further fragmentation of the nature and understanding of EE. As a result, the existence of EE is often unclear to the students, and providing a clear definition for EE becomes

even more difficult. For example, when a closer look is being taken at the energy transition during geography, this issue is not limited to the subject geography, it is also about economics (Van Berkel, E., personal communication, October 15, 2018).

5.3.4 Future

If EE would be integrated into the school curriculum, it would contribute to furthering the sustainability of the Netherlands and to achieving the SDGs. However, Ms. Van Berkel does not believe that EE should become one specific course, it should serve as a guideline throughout the whole school. Taking the obstacles into consideration, Ms. Van Berkel suggested that a win-win situation should be created; themes related to EE should acquire a place within different subjects, or different subjects could be connected through the theme of EE. The creation of a new subject would lead to an increase of workload not only for the schools, but for the students as well. It is important to show schools how EE can be implemented, at the same time making sure that the workload does not increase, but to show teachers how EE can be integrated into their current teaching material; “Schools need to know how EE fits into the school curriculum” (Van Berkel, E., personal communication, October 15, 2018).

5.4 SECONDARY SCHOOLS

This section will zoom in on the efforts of secondary schools in the municipalities of Leeuwarden, The Hague and Rotterdam. In order to understand the influence of current efforts on national- and municipal level, four secondary schools have been interviewed: Mr. Burgsma (Montessori High School), Ms. Asselbergs (De Vrije School Den Haag), Mr. Harinck (GSR Rotterdam), and Mr. Nienkemper (Dalton Lyceum Barendrecht).

Below, a summary will be provided of the most relevant outcomes from the semi-structured interviews. First, the different understandings on the concept and integration of EE will be discussed. Secondly, the existing efforts of secondary schools will be outlined. Thirdly, the most common obstacles hindering schools from integrating EE, and the needs for overcoming these obstacles will be discussed. Lastly, different perceptions and suggestions on the future of EE will be provided.

5.4.1 The concept of environmental education

First of all, it is worth mentioning that none of the interviewees were familiar with the existence of Eco-Schools. All interviewees had different understandings of the concept of EE. Mr. Burgsma indicated to be more familiar with sustainable education rather than EE (Burgsma, R., personal communication, October 18, 2018). Moreover, Ms. Asselbergs was familiar with EE, but indicated not to make use of support offered by NME Den Haag (Asselbergs, S., personal communication, November 1, 2018). On

the other hand, Mr. Harinck, heard about the concept of EE but did not know the details (Harinck, E., personal communication, November 21, 2018). Lastly, Mr. Nienkemper was not aware of the existence of EE (Nienkemper, P., personal communication, November 30, 2018).

Second of all, there are various views on the incorporation of EE into the school curriculum. Currently the attention paid to EE and sustainability solely takes place at the level of the teachers. The integration of EE into the school curriculum would motivate teachers to spend more time on EE-related topics. Moreover, Mr. Harinck provided another angle on the integration of EE and referred to the draft documents established by curricula.nu (Harinck, E., personal communication, November 21, 2018). In addition, Mr. Nienkemper explained that, currently, teachers tend to be more focused on the required end terms, which are part of the exam. As a result, less attention is paid to environmental-related topics (Nienkemper, P., personal communication, November 30, 2018). All interviewees, except De Vrije School, stated that if there exists a clear link between EE and the school curriculum, an increase of the incorporation could be expected. However, Mr. Burgsma explained that if EE would be integrated into the school curriculum, teachers would be likely to only spend the required time on EE-related topics rather than adopting EE as a school-wide approach (Burgsma, R., personal communication, October 18, 2018).

In contrast to the statements made by the other interviewees, which presents the view that the incorporation of EE by secondary schools are perceived as necessary, Ms. Asselbergs agreed partially, and argued that the basis should come from home (Asselbergs, S., personal communication, November 1, 2018).

Moreover, Mr. Harinck provided a more elaborate explanation on the incorporation of EE. Due to the fact that Mr. Harinck is member of the local city council, GSR Rotterdam has been included in the consultation rounds for the development of the new curriculum. As explained by Mr. Harinck, the Secretary of Education has requested a revision of the general curriculum, including civic education. During this process, a closer look is being taken at the core objectives of civic education. Civic education generally includes knowledge of democracy. Mr. Harinck indicated that the term “sustainability” has been reviewed in determining the core objectives (Harinck, E., personal communication, November 21, 2018).

The school curriculum exists out of a mandatory part and an optional part. If EE would be included in the optional part, an increase of EE would be expected. Some schools will mainly focus on the main subjects such as mathematics and the languages. The schools who add more value to teaching the students about the environment and sustainability, could decide to implement the entire curriculum,

and other schools could decide to solely focus on the main subjects (Harinck, E., personal communication, November 21, 2018).

5.4.2 Existing efforts

Montessori High School is the only school who offers project weeks including themes related to sustainability. These project weeks are being organized on a yearly basis. Different workshops can be followed by students, the themes include: Friesland, Europe, the world. Sustainability categorizes under the theme “poor and rich” (Burgsma, R., personal communication, October 18, 2018). Another important factor is receiving subsidies from the government. In order to be eligible for subsidies, Montessori High School had to further the sustainability of the school. In this process, the students were asked to come up with ideas. Subsidies were received to make the schoolyard more environmental friendly (Burgsma, R., personal communication, October 18, 2018).

Moreover, the project weeks at De Vrije School ceased to exist due to a lack of time. The projects revolved around sustainable development themes such as clothing or nutrition. Students were stimulated through inquiry-based learning in the form of groupwork. It is worth mentioning that Ms. Asselbergs believes that EE goes beyond the formal concept of education; the products sold at cafeterias from schools should also include biological and environmental friendly products (Asselbergs, S., personal communication, November 1, 2018).

Furthermore, the content of the project weeks offered at GSR Rotterdam depend on the teachers. One example given by Mr. Harinck was the collection of littering in the neighbourhood. Moreover, the subject biology includes a yearly “clean-beach programme”, where students collect littering, and the collected amount will be analysed and weighted. Mr. Harinck argued that projects taking place outside school might be helpful, but a closer look should be taken at how to improve the environment of the school itself. GSR Rotterdam makes use of guest lectures provided by external parties. Guest lectures are usually linked to existing projects (Harinck, E., personal communication, November 21, 2018).

Dalton Lyceum Barendrecht does not offer project weeks. The projects that existed in the past have been consciously ended. Environmental issues are being discussed during biology and geography, but are not part of other subjects. At the technasium department of Dalton Lyceum, more time is spent on environmental-related topics, and EE is gaining a more important role. Children work together in groups on projects from different courses. Interestingly enough, Mr. Nienkemper explained that, next to his function at Dalton Lyceum Barendrecht, Mr. Nienkemper works with youth groups. This is relevant because litter would not be thrown on the streets by these children. Mr. Nienkemper was asked to explain why this is not considered to be normal within these groups, and explained; “Because

these children see it from each other; if one throws something on the ground, the others will say something about it” (Nienkemper, P., personal communication, November 30, 2018).

Mr. Burgsma and Ms. Asselbergs indicated that it is difficult to incorporate different themes and certificates taking the available time into consideration. Secondary schools in the Netherlands have the opportunity to earn certain certificates. In order to obtain certificates such as “Healthy School” or “International School”, the relevant themes should be part of the desired educational outcomes. Due to the wide range of certificates, schools have to determine its preference (Asselbergs, S., personal communication, November 1, 2018). For instance, Montessori High School offers a broad selection of international study programs and extracurricular language proficiencies. Moreover, De Vrije School adds more value to art-related projects. The nature of the school determines which themes and certificates are being offered.

5.4.3 Obstacles and needs

EE can be successfully incorporated when schools receive guidance and ready-made methods. Mr. Harinck explained that educational methods and programmes should be developed to “plug and play” (Harinck, E., personal communication, November 21, 2018). GSR Rotterdam joined the “Peace Master” programme for three years. The school stopped to offer this programme because it was not developed to plug and play (Harinck, E., personal communication, November 21, 2018). Mr. Burgsma confirmed the statement made by Mr. Kuipers, that the workload of teachers might be too high to develop these materials (Burgsma, R., personal communication, October 18, 2018). Ms. Asselbergs argued that there is simply no time, no support, and the workload is too high. Ms. Asselbergs believes that in order to incorporate EE, other subjects need to be removed (Asselbergs, S., personal communication, November 1, 2018).

Furthermore, financial support is required to realize projects concerning EE. The project weeks organized for sustainable development themes disappeared due to a lack of time. Mr. Harinck confirmed the statements made about ready-made methods in combination with the workload of teachers. On the other hand, Mr. Harinck explained that organizing guest lectures does not cost the school extra time, and are planned in the schedules of the students (Harinck, E., personal communication, November 21, 2018). In addition, Mr. Nienkemper argued that, a big problem exists in the occurrence that, currently, the attention paid to EE is sporadically, and “until now there is no exam for environmental sciences” (Nienkemper, P., personal communication, November 30, 2018).

5.4.4 Future

On one side, Ms. Asselbergs suggested that the future of EE does not necessarily mean that an entire new programme or approach should be developed, little changes in existing programmes could be sufficient enough (Asselbergs, S., personal communication, November 1, 2018). All interviewees confirmed the relevance of implementing educational methods as showed by the case study on Child-orientated EE.

On the other side, unlike the other interviewees, Mr. Harinck argued that EE should be incorporated into the general school curriculum. If EE or the theme sustainability would not be initiated by the government, the implementation will depend on whether or not teachers have interest in providing this type of education (Harinck, E., personal communication, November 21, 2018). Mr. Nienkemper agreed with the statement made that, in the process of the Netherlands becoming truly sustainable, it is important that EE is taken into consideration (Nienkemper, P., personal communication, November 30, 2018).

Mr. Nienkemper provided another perspective on the form of EE, and argued that the government should call a separate subject for EE into existence (Nienkemper, P., personal communication, November 30, 2018). The separate subject of EE should include experiential education where children are taught about environmental impacts on the local environment. Mr. Nienkemper elaborated, and explained that windmills used to be a hot topic, and in similar cases, children should be informed about what the interests of different parties are; the pro's and con's. In this manner, the role of sustainable energy in the future will be demonstrated (Nienkemper, P., personal communication, November 30, 2018).

Furthermore, Mr. Burgsma highlighted the importance of the collaboration of different stakeholders of the private sector industry in order to teach the children how the private sector attempts to contribute to sustainable development (Burgsma, R., personal communication, October 18, 2018). However, financial resources should be made available to further the stimulation of these efforts, on a national level, or even on a European level as stated by Mr. Burgsma (Burgsma, R., personal communication, October 18, 2018).

Lastly, Mr. Nienkemper was the first interviewee who addressed the relevance and influence of popular culture and social media. Mr. Nienkemper suggested that famous Youtubers like Enzo Knol or people famous on social media, could be approached to take the role of an ambassador to further promote and increase environmental awareness of children. Mr. Nienkemper elaborated; "people who everybody knows, who asks questions like; Did you already think about..", "children would rather

accept and understand a message brought by people like Enzo Knol, than when you or I would stand in front of a class and talk about environmental issues” (Nienkemper, P., personal communication, November 30, 2018).

5.5 ECO-SCHOOLS

This last section of the results will summarize the most important outcomes of the semi-structured interviews with two Eco-Schools. The interviews will help to establish a valuable recommendation for the municipalities and secondary schools, based on the implementation of EE. The interviews with Eco-Schools have been conducted with Gerard Zuijderduijn, facility-, building-and site manager of The International School of The Hague (ISH), and Nordwin College vmbo-groen Leeuwarden. Three interviewees took part in the conversation with Nordwin: Mr. Zijlstra, team leader of the school; Mr. Huijgens, teacher sociology and part of the Eco-team; Mr. Van Loon, facility manager.

The results derived from the interviews with the Eco-Schools will be outlined below. First, a brief explanation of the purpose of Eco-Schools will be outlined and the most relevant from the ISH will be discussed based on answers categorized in outdoor education and feasibility. The interview with Nordwin will be summarized accordingly.

Eco-Schools is a worldwide platform, the Eco-School programme can be adopted by primary- and secondary schools. The programme is based on the principle of “student-led-change”, students are being stimulated to research concrete actions to make the learning and living environment more sustainable. Separate projects of different subjects are brought together under the umbrella topic of EE or sustainability. Eco-Schools aims to further an integral approach of sustainability on schools through the “whole-school approach” (Eco-Schools, 2018). More details on the purpose of Eco-Schools can be found in Appendix 1.

5.5 The International School of The Hague

In the transition phase of the ISH becoming an Eco-School, a special project team was established. The ISH is a green school and earned the “Green School Certificate”. The ISH has several student committees such as, the student council, the green committee, commission GIN, global awareness group. The ISH makes use of the standard study programme, and initiated projects belonging to different subjects. Students are obliged to take part in Global Awareness in year 9. Mr. Zuijderduijn explained that Global Awareness is a part of three different subjects: humanities, geography and science. Within these projects, students have approximately two months to get the information from the teacher about how the building is structured, and to come up with suggestions on how to further the sustainability of the school. One example of one of those projects is the development of energy-

generating steppingstones at the entrance of the school. In addition, projects solely focused on the green energy challenge exist within the curriculum (Zuijderduijn, G., personal communication, October 17, 2018).

Mr. Zuijderduijn indicated that students are stimulated through inquiry-based learning. Students are included in furthering sustainability. For instance, for one of the projects from the arts department combined with science, biology, chemistry and physics, students were asked to come up with ideas for an eco-islet, without pesticides. The ideas of different classes were collected and developed into one plan together with a few designers. At this islet, biological fruits and vegetables are cultivated. The islet has its own irrigation system which collects rain water and pumps it into the breeding ground. Moreover, next to the school used to be a greenspace; “a piece of land which belonged to nobody and the municipality did not want to fix” (Zuijderduijn, G., personal communication, October 17, 2018). The ISH has fixed the ground with a piece of swamp and a piece of flowers hills, this was done by the science department (Zuijderduijn, G., personal communication, October 17, 2018).

Furthermore, Mr. Zuijderduijn explained that, next to stimulating cultivating children’s environmental awareness theoretically, it is important to demonstrate how this can be implemented in the local environment (Zuijderduijn, G., personal communication, October 17, 2018). For example, the positive impact of the installed solar panels are demonstrated at the entrance of the ISH on a digital screen, this screen illustrates the CO2 reduction. There are 440 solar panels installed at the roof of the ISH. Subsidies for the purchase of solar panels can be received from the municipality. Moreover, support for the purchase of solar panels can be offered by companies (Zuijderduijn, G., personal communication, October 17, 2018).

When the question was being asked whether or not all the secondary schools should start to actively contribute to the environment in the way the ISH is doing, Mr. Zuijderduijn answered that financial resources and time should be available. Moreover, Mr. Zuijderduijn explained that; “At school, a lot of attention is paid to create this sense of awareness”, “which is why the Green-team received the Green Flag, a lot of conditions have to be met, separate waste treatment, etcetera” (Zuijderduijn, G., personal communication, October 17, 2018). The conditions are tested on a yearly basis. There is no separate subject for EE, it is difficult to choose for a “biological green lesson”, but it is integrated within various departments (Zuijderduijn, G., personal communication, October 17, 2018).

5.6 Nordwin College vmbo-groen

Nordwin College vmbo-groen is an Eco-School in Leeuwarden. The interviewees explained that, in the process of becoming an Eco-School, steps had to be taken to meet several conditions (Van Loon, G.,

Zijlstra, M., & Huijgens, T., personal communication, November 15, 2018). Mr. Huijgens has been recently asked to lead the school's Eco-team.

Eco-teams, of Eco-Schools in general, exists out of approximately ten students, two teachers, the concierge of the school and one member of the management of the school. At Nordwin College this team meets on a regular basis. One example of what the Eco-team recently organized, is the day of sustainability on school. Being part of the Eco-team will replace the mandatory societal internship. The school does not make use of educational tools offered by external parties, expert knowledge exists within the school itself. Numerous teachers graduated on the green consortium in Wageningen, and are competent with sustainability (Van Loon, G., Zijlstra, M., & Huijgens, T., personal communication, November 15, 2018).

Moreover, at Nordwin, practical subjects are combined with fieldwork. Students take samples and collect littering in the local environment of the school. Mr. Huijgens explained that, during "people and society", classes are provided outside the schoolgrounds, and the environment is made use of, "which is basically EE at that moment" (Van Loon, G., Zijlstra, M., & Huijgens, T., personal communication, November 15, 2018).

Furthermore, it might be easier for Nordwin to go on fieldtrips and little excursions in comparison with other schools, because Nordwin has a little van. Mr. Huijgens explained; "Nordwin is aware that most of the future farmers are currently being educated at Nordwin, which is why there is actively anticipated on providing the students with the appropriate tools to become a sustainable and circular farmer" (Van Loon, G., Zijlstra, M., & Huijgens, T., personal communication, November 15, 2018).

It is noteworthy that, as explained by Mr. Huijgens, if value is added by parents of children, schools start to anticipate on this interest. Mr. Huijgens explained that, during the information session for primary schools, questions are being asked about what kind of role the environment and sustainability has within education (Van Loon, G., Zijlstra, M., & Huijgens, T., personal communication, November 15, 2018).

The school aims to demonstrate the sustainable nature of the school to the children. On the roof of the school 660 solar panels are installed. Sustainable efforts will be demonstrated to the children by installing digital screens in the canteen where children can see the emissions saved by the school converted into how many trees can be planted. From January until now, emissions converted would result in 209 trees. When the question was being asked if it requires extra time for a school to spend time on EE, Mr. Van Loon answered that it has become part of the school's routine; "It is not the case that it is extra work. It is just part of it" (Van Loon, G., Zijlstra, M., & Huijgens, T., personal

communication, November 15, 2018). Moreover, Mr. Zijlstra indicated that EE is integrated in the teaching material of the practical subjects. Nevertheless, Mr. Zijlstra explained that it is less difficult for green schools to implement such themes than it might be for other schools. Mr. Huijgens added to that, it is relatively easy to integrate those themes in subjects like sociology, but indicated that, the questions asked by the students about nuclear power plants, plays its part as well, because students are aware that the school is a green school (Van Loon, G., Zijlstra, M., & Huijgens, T., personal communication, November 15, 2018).

Lastly, in the process of integrating EE, financial resources should be made available. Subsidies can be requested and go often hand in hand with valuable ideas and man-hours (Van Loon, G., Zijlstra, M., & Huijgens, T., personal communication, November 15, 2018). Mr. Zijlstra elaborated; “Subsidies can also be used to hire an extra teacher for this”. Mr. Huijgens stated that students should be involved because; “Students know, and are more involved with the environment than you might think, and also have ideas and suggestions” (Van Loon, G., Zijlstra, M., & Huijgens, T., personal communication, November 15, 2018).

6. DISCUSSION

In this chapter, the results outlined in the literature review and Chapter 5 will be analysed in order to answer the proposed research question; *How can environmental education cultivate children's environmental awareness in secondary schools in the Netherlands?*

Based on the literature review and the results derived from the semi-structured interviews, this analysis will discuss the concept and incorporation of EE, main obstacles, the need for a structural implementation, the establishment of a clear link with the curriculum.

First of all, the nature of EE appeared to be more unclear than expected. As outlined by UNESCO (2011), not only the fragmentation of environmental policy within the government itself has created unclarity, the shift to a new cabinet has also changed the initial approach towards EE. The fragmentation of the policy area and attention paid to EE has made it difficult for secondary schools to define EE. As previously discussed, EE cannot be categorized under one specific subject. When this difficulty of categorizing EE is combined with the fragmentation of policy area and implementation levels, as argued by NME Den Haag, it becomes more difficult for teachers to take ownership of the implementation. As a result, as explained by Ms. Van Berkel, the existence of EE is also unclear to students. Nevertheless, the right to Freedom of Education also plays an important part in the existing integration of EE on secondary schools, as explained by Mr. Kuipers. The discussed results derived from the conducted interviews and UNESCO (2011), have confirmed the findings from the literature review; Jabareen (2012), suggested that there appears to be confusion in literature about the concept, definition and name of EE. This confusion proved to exist. As pointed out by Xue et al. (2006), legislation on participation is vague, which can be seen in the fragmentation of the policy area.

Secondly, the main obstacles have been discussed with the interviewees. The results have shown that Mr. Kuipers, Ms. Asselbergs, and Ms. Van Berkel, all indicated that the workload of schools and students would increase if a mandatory framework for EE would be established. In addition, the results have shown that the most common obstacle is *lack of time*. The lack of time to integrate EE has led to further simplification of the integration of EE and the project weeks. The obstacle of lack of time goes together with the experienced obstacle of time pressure. As indicated by Ms. Asselbergs and Mr. Burgsma, due to the high workload of the schools and the integration of different themes within the classes, schools experience difficulties to decide which theme can be integrated. As can be read in Chapter 5.1, according to UNESCO (2011), the main obstacles experienced by secondary schools in the Netherlands are time pressure and lack of time.

Moreover, another obstacle appeared to be a lack of financial resources. The results of the interviews have shown that the availability of financial resources and resources from external parties are crucial in the process of integrating EE. Conforming Brignall-Theyer (2009), the main barriers include lack of support from all parts of the system, funding, time and resources. As pointed out by Xue et al. (2006), lack of time and resources leads to further simplification of participation, which can be noted in the disappearance of the project weeks. However, in contrast to the discussed theory and interviews, as discussed in section 5.5, Nordwin College and the ISH indicated that there are numerous possibilities for requesting subsidies, assistance from advisory bodies, and sponsorship from companies. The interviewed secondary schools appeared not to be aware of the existence of the numerous possibilities and options for requesting subsidies, advise, and acquiring educational tools.

Furthermore, one of the discussion points has been about the integration of EE into the curriculum and whether or not it should be offered as an optional part of the curriculum or as mandatory. Valera-Candamio et al. (2018) argued that pro-environmental subjects should be established by policy makers. The opinions on the possible mandatory nature of EE have been diverse among the interviewees. On one side, EE should not be enforced by the government due to the right to Freedom of Education. Top-down influence from the national government on the incorporation of EE into the curriculum is questioned by this freedom. On the other side, as explained by NME Den Haag, integrating EE into the curriculum falls within the scope of the duty of care from the State.

In addition, as explained by Mr. Nienkemper, EE should acquire its own place inside the curriculum, if not, teachers will focus more on the required end-terms of mandatory subjects for the central exam. In addition, as highlighted by Mr. Harinck, integrating EE into the curriculum would serve as an external motivator for teachers to spend more time on it. As previously discussed in Chapter 5.4, most interviewees indicated that the use of EE heavily relies on environmental-minded teachers, and the implementation of EE takes place at the level of the teachers rather than the whole school. However, in either way, teachers attempt to focus solely on the required end-terms for the central exams. The results are conforming the outcomes of the research of Brignall-Theyer et al. (2009); the implementation of EE into the school curriculum depends on keen teachers. Most of the schools indicated that EE should be provided in the format of projects. It is difficult to argue whether or not EE should become a specific subject or should function as an umbrella topic. Before the most effective tools to cultivate children's environmental awareness will be discussed, the need for structural implementation will be reviewed and analysed.

Building on the idea that EE should acquire its own place in the curriculum, this paragraph discusses the need for strategic planning and structural implementation. The results have shown that the

interviewees have different understandings of how EE should be structurally implemented. On one hand, as argued by Greenpeace and NME Den Haag, the end goal of structural implementation should be the development of the appropriate skills to contribute to sustainability, which is being referred to as “creating the willingness to act”. In addition, as indicated by NME Den Haag, in order to reach this goal, it is necessary to establish a clear link with policy themes. The need for the development of the appropriate skills are conforming with the findings of Varela-Candamio et al. (2018), Jabareen (2012), Ho et al. (2016), which can be read in the literature review. Moreover, the clear link with the curriculum and policy themes is conforming with the research of Brignall-Theyer et al. (2009). Nevertheless, both stakeholders indicated that education only will not be sufficient enough to reach this goal. Therefore, as argued by UNESCO (2015), formal education should be combined participation and information in non-formal education. On the other hand, the role of secondary schools to structurally implement EE has been questioned by Ms. Asselbergs. In contrast to the presented view of Ms. Asselbergs, which can be read in section 5.4.1, the theory provided by Damerell et al. (2013), showed that children actually positively influence household-behaviour after receiving EE.

After discussing the main barriers it has become clear that, based on the conducted interviews and conforming to Altin et al. (2014); efforts concerning EE at secondary schools are insufficient. By clarifying the concepts of EE on a national level and structurally integrating EE into the curriculum, the implementation of EE will become more accessible to secondary schools. In the next paragraph, different educational methods to cultivate children’s environmental awareness will be discussed.

Furthermore, as explained by Ms. Van Berkel, children’s environmental awareness can be cultivated through different educational methods, such as inquiry-based learning, outdoor education, design through research. All interviewees acknowledged the importance of experiential education, providing outdoor education, when cultivating children’s environmental awareness. Moreover, EE should exist throughout the whole school conforming the whole-school approach integrated by Eco-Schools. Mr. Zuijderduijn from the ISH explained that EE-related projects have an umbrella function of initiated projects belonging to different subjects. EE functions as an umbrella subject connecting other subjects through projects, so the need for establishing a separate subject, as suggested by the theory of Valera-Candamio et al. (2018), could be questioned.

The methods of Eco-Schools, and arguments provided by Greenpeace and NME Den Haag, have showed that students are best stimulated through inquiry-based learning and learning about the local environment and the sustainability of the school. The aforementioned results are conforming the results of the research of Ho et al. (2016), and Damerell et al. (2013), which can be read in section 4.1.1. The most valuable methods appeared to be outdoor education, experiential education and

inquiry-based learning. Eco-Schools involve students in furthering the sustainability of the school (inquiry-based learning and the whole-school approach), and demonstrate the positive impact and results of solar panels by translating saved emissions into planting trees. The last paragraph will discuss relevant predictors for the stimulation of pro-environmental behaviours.

Lastly, Varela-Candamio et al. (2018), argued that, the most important predictors for stimulating pro-environmental behaviours are EE and intention, while taking the influence of attitudes, social norms, and awareness into consideration. Conforming the PMT-Theory, the appearance of national efforts in the Netherlands has been motivated by an increase of empirical evidence for the impact of environmental pollution. Moreover, Ms. Van Hulst and Mr. Dammers explained that sustainability should become the norm and green behaviours will be part of the routine. In addition, Mr. Nienkemper highlighted the importance of turning pro-environmental behaviours into the norm. Mr. Van Loon from Nordwin College explained that the school did not experience an increase of workload as a result from the integration of EE into the school, it became the norm and it is part of the routine now. Finally, as indicated by the research of Altin et al. (2014), the tools to increase children's environmental awareness appeared to be EE at schools, and the influence of mass media (Altin et al., 2014). Mr. Nienkemper provided new insights with regards to the influence of media in the area of EE and sustainability, and addressed the importance of the popular culture and social media. Conforming Altin et al. (2014), Mr. Nienkemper argued that, social media could be used to increase children's environmental awareness by making use of popular platforms and public figures.

7. CONCLUSION

After discussing the results in Chapter 6, it could be concluded that EE can cultivate children's environmental awareness best through actively involving the children through inquiry-based learning, experiential education, outdoor education and functioning as an umbrella topic for projects of different subjects working together, conforming the whole-school-approach of Eco-Schools. However, before the conclusion of the central question can be fully understood, the sub-questions will be answered.

THE CONCEPT OF EE

First of all, the confusion in literature of the definition of EE proved to exist; there is no fixed definition. Nevertheless, based on the results of the semi-structured interviews, the conclusion can be made that the core of EE does align with the definition provided by Ho et al. (2016); environmental education teaches citizens about the mutual dependence between individuals, society and the environment. Environmental education should lead to the cultivation of environmental awareness and should facilitate the achievement of sustainable development (p. 1486).

BENEFITS

Secondly, the incorporation of EE in secondary schools leads to the cultivation of children's environmental awareness. All interviewees indicated that EE leads to the development of active contribution to sustainable development. The results have shown that the benefits of incorporating EE in secondary schools could be perceived as a logical step in furthering sustainable development. As recent research of Varela-Candamio (2018) has shown, EE is necessary to learn children how to critically look at different sides of environmental issues, which in turn leads to the cultivation of green behaviour of citizens. Nevertheless, the incorporation of EE should not be perceived as a simple step waiting to be taken; as explained by Mr. Van Loon and conforming Varela-Candamio et al. (2018), the process of incorporating EE requires the integration of pro-environmental behaviours into the normal routine, which is an important concept within the whole-school approach.

EFFORTS NATIONAL GOVERNMENT

Furthermore, results have shown that the fragmentation of environmental policy at the national level makes this topic even more unclear. As found out in the results section 5.1, harmonized policy on EE seems not exist in the Netherlands. Due to the democratic nature of the Netherlands, municipalities have the freedom to establish a NME department on a voluntary basis. Therefore, not all municipalities have NME departments. However, the existence of NME departments does not automatically result in the implementation of EE at secondary schools, as seen in Rotterdam and The Hague. In addition, the

right to Freedom of Education heavily influences the role of the government in providing EE. However, NME Den Haag argued that the State has the mandate to take care of its citizens, and should enforce EE or offer the possibility to integrate EE into the curriculum. The conclusion could be made that on national level, current efforts exist but are insufficient due to the vague legislation and communication with the citizens. This statement conforms the research conducted by Xue et al. (2006), which can be read in section 4.1.3.

EFFORTS SECONDARY SCHOOLS

Moreover, the vagueness of the concept of EE, policy fragmentation and Freedom of Education have influenced the current efforts of secondary schools. The fragmentation of environmental policy within the national government makes it difficult for schools to take the ownership of an vaguely known area. It has become clear that several efforts exist on national-, municipal-, and the school level. The results of the interviews proved that the implementation of EE often gets confronted with several obstacles; time pressure, lack of time, lack of financial resources, lack of support from the whole system. These obstacles are conforming the discussed literature from Xue et al. (2006), and Brignall-Theyer (2009), which can be read in section 4.1.3. The insufficiency of current efforts of secondary schools can be derived from the vagueness of EE and fragmentation of legislation.

Lastly, as mentioned in the introduction of this chapter, the required tools to incorporate EE in secondary schools and to cultivate children's environmental awareness would be most successful through inquiry-based learning, experiential education, outdoor education and the whole school-approach. Before this can be done, it is necessary to establish a uniform approach and educational tools by the national government. EE should be integrated into the school curriculum.

8. RECOMMENDATIONS

In order to make EE more accessible to implement at secondary schools, it is advised that several steps should be taken.

First of all, a clear goal and definition of EE should be established by government, municipalities and secondary schools. However, despite the fact that advice on how to implement EE has been provided by the DESD of UNESCO, potential interested parties appeared not to be aware of the concept of EE and how to implement it. In order to stimulate society to be more sustainable, different stakeholders should work together. It is important to make sure that formal education is part of a bigger picture. It should go together with information and participation, design and use of public space by the public.

Moreover, people seem to be unfamiliar with the details of sustainability. Before there can be actively worked on cultivating this awareness, to introduce the topic of EE, an information day/evening for different secondary schools should be organized. This can be done by, for example, collaborating with existing platforms like *Leren voor Morgen*. In this way, different options are explained to the schools. Before children's environmental awareness can be cultivated, this sense of awareness should be established at the secondary schools itself. If EE would acquire its own explicit place within the curriculum, mandatory or not, an increase of incorporation of EE could be expected. It is important to provide the secondary schools, in a clear way, of the options that exist of how to incorporate EE. In developing and providing the appropriate educational tools at the municipal level, it is important to consult other municipalities to identify what kind of methods would be best achievable and reachable.

Nevertheless, if the private sector industry could be more involved in providing different perspectives on the environment, an overview should be made of the most relevant companies and efforts concerning EE. This will be helpful for the municipalities as well as the secondary schools. The influence of the private sector industry can be linked to marketing strategies and sociologic theories to incentivise companies to become more involved in providing educational tools and support, taking the media image of companies into consideration. This support would provide another dimension to the concept of EE. However, further research is recommended on the contribution of the private sector industry.

Lastly, a closer look should be taken at how to make use of popular culture and online social media platforms like YouTube. Within this research, little attention was paid to the influence and use of media platforms in combination with EE. Mr. Nienkemper was the only interviewee who addressed the positive impact, on children, which could be generated through the use of popular culture and online

media platforms. Therefore, it would be recommended to further research how this would work in theory.

9. REFERENCES

- Altin, A., Tecer, S., Tecer, L., Altin, S., & Kahraman, B. F. (2014). Environmental awareness level of secondary school students: A case study in Balıkesir (Türkiye). *Procedia - Social and Behavioral Sciences*, 141, 1208–1214. <https://doi.org/10.1016/j.sbspro.2014.05.207>
- Asselbergs, S. (2018, November 1). Personal communication.
- Balkenende, J. P., & Van Ommen, P. A. (2014). Sustainable Innovation. Game-changing solutions for the world's grand challenges. Dutch Sustainable Growth Coalition. Retrieved from http://dsgcpublication.online-magazine.nl/userfiles/usersdata/986/library/7551/p1/game_changing_solutions_to_the_world_s_grand_challenge_2014.pdf
- Brignall-Theyer, M., Allen, W., & Taylor, R. (2009). *Education for sustainability (EfS) in the New Zealand Secondary School System: A scoping study* (Landcare Research Internal Report: LC0809/123). Retrieved from https://www.landcareresearch.co.nz/publications/researchpubs/education_report_allen.pdf
- Burgsma, R. (2018, October 18). Personal communication.
- Chan Kim, W., & Mauborgne, R. (2017, June 20). From Trash to Treasure: Sweden's Recycling Revolution. Retrieved from <https://www.blueoceanstrategy.com/blog/trash-treasure-sweden-recycling-revolution/>
- Dalton Lyceum Barendrecht. (n.d.). Onze school. Retrieved from https://daltonbarendrecht.nl/index.php?page=Onze_school&pid=250
- Damerell, P., Howe, C., & Milner-Gulland, E. J. (2013). Child-orientated environmental education influences adult knowledge and household behaviour. *Environmental Research Letters*, 8(1), 015016. <https://doi.org/10.1088/1748-9326/8/1/015016>
- De Vrije School. (n.d.). Over de school. Retrieved from <https://vo.devrijeschooldenhaag.nl/over-de-school>
- Eco-Schools. (2018). Eco-Schools. Retrieved from <https://eco-schools.nl/english>
- Economic Commission for Latin America and the Caribbean, & Iizuka, M. (2000). *Role of environmental awareness in achieving sustainable development* (LC/R.1961). Retrieved from https://repositorio.cepal.org/bitstream/handle/11362/31562/S00111003_en.pdf?sequen

- European Commission. (2017, January 25). EU's implementation of the Sustainable Development Goals (SDGs) - Environment - European Commission. Retrieved from http://ec.europa.eu/environment/sustainable-development/SDGs/implementation/index_en.htm
- Fisman, L. (2005). The Effects of Local Learning on Environmental Awareness in Children: An Empirical Investigation. *Journal of Environmental Education*, 36(3), 39–50.
- Gillett, M. (1977). The Tbilisi Declaration. *McGill Journal of Education / Revue des sciences de l'éducation de McGill*, 12(2). Retrieved from <http://mje.mcgill.ca/article/view/7156/5095>
- Greenpeace. (2018). Our values - Greenpeace International. Retrieved from <https://www.greenpeace.org/international/values/>
- GSR. (n.d.). Kernwaarden | GSR. Retrieved from <https://gsr.nl/kernwaarden>
- Ham, M., Mrčela, D., & Horvat, M. (2016). Insights for measuring environmental awareness. *EKONOMSKI VJESNIK / ECONVIEWS*, 29(1), 159–176. Retrieved from <https://hrcak.srce.hr/ojs/index.php/ekonomski-vjesnik/article/view/3661>
- Harinck, E. (2018, November 21). Personal communication.
- Ho, S., Chen, W., & Hsu, W. (2016). Assessment system for junior high schools in Taiwan to select environmental education facilities and sites. *EURASIA Journal of Mathematics, Science and Technology Education*, 13(5), 1485–1499. <https://doi.org/10.12973/eurasia.2017.00681a>
- Jabareen, Y. (2012). Towards a sustainability education framework: challenges, concepts and strategies—The contribution from urban planning perspectives. *Sustainability*, 4(9), 2247–2269. <https://doi.org/10.3390/su4092247>
- Khademi-Vidra, A. (2017). Curriculum planning of the environmental education. *Journal of Central European Green Innovation*, , 65–80. Retrieved from <http://ageconsearch.umn.edu/record/266484/files/KhademiVidra.pdf>
- Kothari, C. R. (2004). *Research Methodology: Methods and Techniques* (2nd ed.). Retrieved from <http://www.modares.ac.ir/uploads/Agr.Oth.Lib.17.pdf>
- Kuipers, G. (2018, October 10). Personal communication.
- Kuypers, B., Tuit, M., & Olbertijn, S. (2010). *Meer bereiken met NME: een praktische handreiking om te leren arrangeren* (1PNME1006). Retrieved from

- https://www.duurzaamdoor.nl/sites/default/files/Meer_bereiken_met_NME_door_te_leren_arrangeren.pdf
- Matthews, R. (n.d.). Welcome from the Secondary Principal. Retrieved from <https://www.ishthehague.nl/page.cfm?p=501>
- Ministerie van Algemene Zaken. (2017, November 6). Regeerakkoord 'Vertrouwen in de toekomst'. Retrieved from <https://www.rijksoverheid.nl/regering/regeerakkoord-vertrouwen-in-de-toekomst>
- Montessori High School. (n.d.). Mavo/Havo School - Montessori High School. Retrieved from <https://www.piterjelles.nl/montessorihighschool/mavo-havo-school/>
- Nienkemper, P. (2018, November 30). Personal communication.
- Nordwin College. (n.d.-a). Leerwegen VMBO. Retrieved from <https://www.nordwincollege.nl/vmbo-groen/ons-onderwijs/leerwegen-vmbo>
- Nordwin College. (n.d.-b). Duurzame Innovatie. Retrieved from <http://koers.nordwincollege.nl/duurzame-innovatie>
- Rand Corporation, & National Defense Research Institute (U.S.). (2009). *Data Collection Methods: Semi-structured Interviews and Focus Groups*. Retrieved from https://www.rand.org/pubs/technical_reports/TR718.html
- The International School of The Hague. (n.d.). Placement in Secondary. Retrieved from <https://www.ishthehague.nl/page.cfm?p=513>
- Ton, G. (2018, October 22). Personal communication.
- UNESCO. (1978). *Intergovernmental Conference on Environmental Education*. Retrieved from <http://unesdoc.unesco.org/images/0003/000327/032763eo.pdf>
- UNESCO. (2011). *National Journeys towards Education for Sustainable Development*. Retrieved from <http://unesdoc.unesco.org/images/0019/001921/192183e.pdf>
- UNESCO. (2013). *National Journeys towards Education for Sustainable Development*. Retrieved from <http://unesdoc.unesco.org/images/0022/002210/221008e.pdf>
- UNESCO. (2017). Decade of Education for Sustainable Development (DESD) | United Nations Educational, Scientific and Cultural Organization. Retrieved from

<http://www.unesco.org/new/en/santiago/education/education-for-sustainable-development/decade-of-education-for-sustainable-development-desd/>

United Nations Development Programme. (2015, September 25). World leaders adopt Sustainable Development Goals [Press release]. Retrieved from <http://www.undp.org/content/undp/en/home/presscenter/pressreleases/2015/09/24/undp-welcomes-adoption-of-sustainable-development-goals-by-world-leaders.html>

United Nations General Assembly. (1987). *Report of the World Commission on Environment and Development: Our Common Future*. Retrieved from https://www.are.admin.ch/are/en/home/sustainable-development/international-cooperation/2030agenda/un-_milestones-in-sustainable-development/1987--brundtland-report.html

Van Berkel, E. (2018, October 15). Personal communication.

Van Hulst, L., & Dammers, R. (2018, October 11). Personal communication.

Van Loon, G., Zijlstra, M., & Huijgens, T. (2018, November 15). Personal communication.

Varela-Candamio, L., Novo-Corti, I., & García-Álvarez, M. T. (2018). The importance of environmental education in the determinants of green behavior: A meta-analysis approach. *Journal of Cleaner Production*, 170, 1565–1578. <https://doi.org/10.1016/j.jclepro.2017.09.214>

Xue, X., Hong, H., Zhang, L., Xu, X., & Shen, S. S. (2006). Developing public environmental education: Improving community-based environmental management. *Aquatic Ecosystem Health & Management*, 9(1), 105–110. <https://doi.org/10.1080/14634980600561508>

Zuijderduijn, G. (2018, October 17). Personal communication.

Öhman, J. (2011). New Swedish environmental and sustainability education research. *Utbildning & Demokrati*, 20(1), 3–12. Retrieved from <https://www.oru.se/globalassets/oru-sv/forskning/forskningsmiljoer/hs/humus/utbildning-och-demokrati/2011/nr1/johan-ohman---new-swedish-environmental-and-sustainability-education-research.pdf>

10. APPENDICES

APPENDIX 1: STAKEHOLDERS

In this paragraph an overview of the participating stakeholders of this dissertation will be provided.

NME Municipalities

The first stakeholders are the NME departments of municipal governments in the Netherlands. NME stands for Natuur- en Milieueducatie, nature- and environmental education. In 2010, NME published a general report on the purpose of NME. The report describes that NME has a special place in municipalities. The national NME programme is a joint initiative of the Ministry of Agriculture, Nature and Food Quality, the Ministry of Education, Culture and Science, and the Ministry of Housing, Spatial Planning and the Environment (Kuypers, Tuit, & Olbertijn, 2010). NME is managed by members of national government, provinces, regional water authorities and municipalities (Kuypers et al., 2010).

However, it is not a statutory task of a municipality, nor a mandatory subject in the primary or secondary education in the Netherlands. There are many who think that NME is necessary because it provides the foundation for sustainable development. Efforts to create sustainable residential areas, logically contribute to sustainability. However, true sustainability should exist in the life style of people. The importance of NME is clear, but it is not a mandatory theme in the Netherlands. This situation makes it difficult to promote its importance. It is necessary for NME to contribute to the subjects that are mandatory in schools. In order to respond in a strategically clever way, the party responsible for subsidizing the municipal NME departments, which is in most cases the municipality, should provide this playing field (Kuypers et al., 2010, p. 5).

The municipalities have the assignment to carry out, in the most effective way possible, its core tasks. Themes as social, economic, and environment themes (water, environmental services, climate) are usually the priority of policy themes. Unfortunately, not every municipality realizes the role which NME could play to achieve environmental themes (Kuypers et al., 2010, p. 5). The NME departments of the municipalities of The Hague and Rotterdam will be interviewed to provide a clear image of the efforts of municipalities concerning environmental education and to find out what the current efforts are. The NME department of Leeuwarden dissolved about 10 years ago, therefore, an interview with Sustainability senior policy advisor will take place.

Greenpeace

The second stakeholder is Greenpeace. Greenpeace is an international non-governmental organization operating in 55 countries worldwide. Greenpeace believes that a green and sustainable world is needed, better and achievable. Greenpeace uses “peaceful, creative confrontation to expose global environmental problems, and develop solutions for a green and peaceful future” (Greenpeace, 2018). Greenpeace believes that the future of the planet lays predominantly in the hands of the children and youth of today. This is the reason why Greenpeace provides free educational methods and tools for primary- and secondary schools. In order to create a better understanding of the role of organizations like Greenpeace, an interview with education expert Elize van Berkel will take place.

Secondary schools

Secondary schools in the Netherlands enjoy the right of Freedom of Education. It is essential to speak with different secondary schools in the Netherlands to find out what the current efforts concerning environmental education and sustainability have been over the recent years, and discover the motivation of these schools. Furthermore, different questions will be asked based on results of the literature review, and perspectives will be gathered about the future and potential of secondary schools in the process of the Netherlands becoming truly sustainable.

Montessori High School

Montessori High School is an internationally-oriented mavo/havo school, with approximately 300 students in Leeuwarden. The school offers (English) bilingual education mavo and havo (Montessori High School, nd.). The school works on the pedagogical basis of Maria Montessori. The school has been qualified with the label of “Gezonde school” (Healthy school). Moreover, this secondary school is known for its efforts concerning internationalization. Montessori High School will be one of the stakeholders in exploring the (potential) role of secondary education to cultivate children’s environmental awareness.

De Vrije School Den Haag

“Becoming who you are” (De Vrije School, n.d.). De Vrije School counts at least 800 students. The aims to stimulate all kinds of talents of the students. Next to the regular classes, de Vrije School offers painting, woodworking, music and theatre. The pedagogy of the school is based on Rudolf Steiner. De Vrije School was the first free school of the Netherlands.

GSR Rotterdam

GSR stands for “Gereformeerde Scholengemeenschap Randstad”, Reformed School Community Randstad. The location in Rotterdam offers education on vmbo, havo, and vwo level. There are

approximately 1100 students on this location. The foundation of the schools philosophy is built on Christianity. The GSR has four core values: curiosity, result, sharing religion, and love (GSR, n.d.).

Dalton Lyceum Barendrecht

Dalton Lyceum is located in Barendrecht. The school counts 1,600 students, divided into gymnasium, vwo, havo, mavo, and technasium. The school works on the characteristics of Dalton education: collaboration, freedom and responsibility, effectiveness, independence and reflection. Next to the regular classes, so-called “Dalton-hours” are being offered, these hours are planned by the students themselves. In addition, the school offers the opportunity to follow extra classes such as intensive language education in French or German, and art classes. Students discover the importance of an independent working attitude, to collaborate with others and to take responsibility for their own choices (Dalton Lyceum Barendrecht, n.d.).

Eco-Schools

The interviews with Eco-Schools are crucial to set an example of the integration of environmental education and sustainability into the curricula of secondary schools. In the Netherlands there are regular secondary schools, but also “Eco-Schools”. Eco-School is a worldwide platform, and the programme can be adopted by primary- and secondary schools, and an international reward for sustainability can be received (Eco-Schools, 2018). Eco-Schools is based on the principle of “student-led change”. Concrete actions to make the learning and living environment more sustainable are researched by students. More and more schools focus on sustainability. Eco-Schools aims to bring separate projects together under one umbrella, and further an integral approach of sustainability on schools; “whole-school approach”. Seven steps should be followed in the transition of becoming an Eco-School or receiving the “Green Flag” award. In this process The Eco-team has the leading role. The Eco-team consists of 10-15 students, at least two teachers, the concierge and one member of the management of the school. Over the time span of one year the focus will be laid on at least two themes. Once the themes have been selected, the Action Plan will be formulated. This Action Plan presents the to be tackled issues. The goals tied to the presented issues are ought to be Specific, Measurable, Actionable, Relevant, Time-bound (SMART). (Eco-Schools, 2018).



(Eco-Schools, 2018).

This dissertation analyses and compares the motivation of diverging secondary schools concerning environmental efforts. Eco-Schools are relevant to this research because by conducting interviews with Eco-Schools and regular secondary schools, different motivations of secondary schools will become clear.

The International School of The Hague

The International School of The Hague offers both primary- and secondary education. The total number of students is approximately 2,000. The students exist out of “children from other countries who are part of the mobile international community” and “children from Dutch families who have been internationally mobile and need to be educated in an international school to ensure continuity of education” (The International School of The Hague, n.d.). ISH is known for its broad offer in extra-curricular activities such as, the International Schools Sports Tournament, Model United Nations, and green activities to make the ISH greener have led to the achievement of the Green Flag (Matthews, n.d.).

Nordwin College vmbo-groen Leeuwarden

“Green = the future” (Nordwin College, n.d.-a). Nordwin College vmbo-groen in Leeuwarden has approximately 600 students. Students can graduate in one of the four different levels of vmbo. Nordwin aims to help the students to develop and discover different kind of tools for sustainable development. This will increase the added-value of the students, as human beings and civilians; for the region, for each other, and for society (Nordwin College, n.d.-b). In general, Nordwin College operates from the principal of the “Whole School Approach to Sustainability”.

APPENDIX 2: INFORMED CONSENT FORMS

Informed Consent Form**Informed Consent Form*****Environmental Education at Secondary Schools in the Netherlands***

This project researches *how environmental education can cultivate children's environmental awareness in secondary schools in the Netherlands*. The practical part of research will be focused on discussing the potential role the secondary educational system can play with regards to the Netherlands becoming sustainable. Literature describes that environmental education should lead to the development of skills to identify environmental problems and stimulate behaviours to help resolve them. In order to answer the main question, several interviews will be conducted with secondary schools, municipal governments, and GreenPeace.

If you agree to take part in this study please read the following statement and sign this form.

I am 16 years of age or older.

I can confirm that I have read and understood the description and aims of this research. The researcher has answered all the questions that I had to my satisfaction.

I agree to the audio recording of my interview with the researcher.

I understand that the researcher offers me the following guarantees:

All information will be treated in the strictest confidence. My name will not be used in the study unless I give permission for it.

Recordings will be accessible only by the researcher. Unless otherwise agreed, anonymity will be ensured at all times. Pseudonyms will be used in the transcriptions.

I can ask for the recording to be stopped at any time and anything to be deleted from it.

I consent to take part in the research on the basis of the guarantees outlined above.

Signed: _____

Date: _____

9 okt 2018

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Date: 11/10/18

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Date: _____

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Signed: _____

I. Zuyderland

Date: _____

17/10 '18

[Signature]

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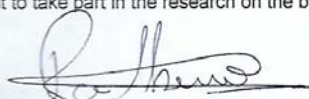
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Date: _____

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Signed: _____



Gerard Ton

Date: _____

22 oktober 2018

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S. Asseberg

Date: _____

1-11 '18

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Signed: _____

Date: _____

15-11-15

A handwritten signature in blue ink, consisting of a series of loops and a long horizontal stroke at the bottom.

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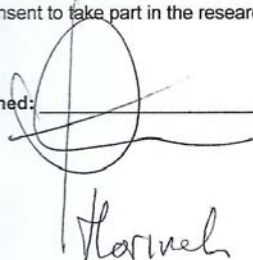
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Date: _____

21-12-2019

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Signed: _____

Date: _____

30/11/19

APPENDIX 3: STUDENT ETHICS FORM

Student Ethics Form**European Studies
Student Ethics Form****Your name:** Kinga Feenstra**Supervisor:** Ms. Minkman**Instructions/checklist**

Before completing this form you should read the APA Ethics Code (<http://www.apa.org/ethics/code/index.aspx>). If you are planning research with human subjects you should also look at the sample consent form available in the Final Project and Dissertation Guide.

- a. ☒ Read section 3 that your supervisor will have to sign. Make sure that you cover all these issues in section 1.
- b. ☒ Complete sections 1 and, if you are using human subjects, section 2, of this form, and sign it.
- c. ☒ Ask your project supervisor to read these sections (and the draft consent form if you have one) and sign the form.
- d. ☒ Append this signed form as an appendix to your dissertation.

Section 1. Project Outline (to be completed by student)**(i) Title of Project:**

Environmental Education in the Netherlands

(ii) Aims of project:

This project researches how environmental education can cultivate children's environmental awareness in secondary schools in the Netherlands. The practical part of research will be focused on discussing the potential role the secondary educational system can play with regards to the Netherlands becoming sustainable. Literature describes that environmental education should lead to the development of skills to identify environmental problems and stimulate behaviours to help resolve them. In order to answer the main question, several interviews will be conducted with secondary schools, municipal governments, and Greenpeace.

- (iii) Will you involve other people in your project – e.g. via formal or informal interviews, group discussions, questionnaires, internet surveys etc. (Note: if you are using data that has already been collected by another researcher – e.g. recordings or transcripts of conversations given to you by your supervisor, you should answer 'NO' to this question.)**

YES / NO

If no: you should now sign the statement below and return the form to your supervisor. You have completed this form.

This project is not designed to include research with human subjects. I understand that I do not have ethical clearance to interview people (formally or informally) about the topic of my research, to carry out internet research (e.g. on chat rooms or discussion boards) or in any other way to use people as subjects in my research.

Student's signature _____ - date _____

If yes: you should complete the rest of this form.

Section 2 Complete this section only if you answered YES to question (iii) above.

(i) What will the participants have to do? (v. brief outline of procedure):

The participants will be interviewed. No special procedure is required. Several themes of discussion have been established based on the literature review. Interviewees will be asked to provide examples and opinions/perspectives on relevant themes. The interviews will take approximately 30 minutes.

(ii) What sort of people will the participants be and how will they be recruited?

The participants are government officials from Leeuwarden, Rotterdam and The Hague. Directors and teachers of secondary schools and Eco-Schools in Leeuwarden, Rotterdam and The Hague. In addition, in order to find out why organisations like Greenpeace develop and offer educational tools for EE, an education expert from Greenpeace will be interviewed. The interviewees have been recruited based on the selection of the three municipalities. Secondary schools with different pedagogical understandings have been chosen to give the results an extra dimension. NME departments of Rotterdam and The Hague have been selected because these departments offer support and materials to schools in that region. NME departments do not exist in every municipality, which is why, for the municipality of Leeuwarden, the decision has been made to conduct an interview with Senior Policy Advisor Sustainability. Lastly, in order to make the comparison between secondary schools more interesting, two Eco-Schools have been selected to provide an image of the incorporation of environmental education in practice.

(iii) What sort stimuli or materials will your participants be exposed to, tick the appropriate boxes and then state what they are in the space below?


Questionnaires[]; Pictures[]; Sounds []; Words[]; Other[x].

The participants will not be exposed to anything. The interviewer will provide questions/themes/topics to discuss.

(iv) Consent: Informed consent must be obtained for all participants before they take part in your project. Either verbally or by means of an informed consent form you should state what participants will be doing, drawing attention to anything they could conceivably object to subsequently. You should also state how they can withdraw from the study at any time and the measures you are taking to ensure the confidentiality of data. A standard informed consent form is available in the Dissertation Manual.

(vi) What procedures will you follow in order to guarantee the confidentiality of participants' data? Personal data (name, addresses etc.) should not be stored in such a way that they can be associated with the participant's data.

The data of the participants will not be used unless permission is given to use the names of the participants. Further data will not be part of any document. All interviewees will be asked to sign the informed consent form, and the questions will be repeated on the record for extra confirmation.

Student's signature:  date: 7-1-2019

Supervisor's signature (if satisfied with the proposed procedures): date: 7-1-2019

