A spiritual classroom: Rethinking Climate Change Education

Exploring Buddhist virtues and teachings about nature for the development of creative, affective, and participatory Climate Change Education

Figure 1. Child meditating in nature (Eisler, 2020)

Yenthl Koot

Wageningen University and research
Department of Environmental Sciences
MSc Thesis Report
Thesis code: GEO-80436
Tourism, Society and Environment

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Exploring Buddhist virtues and teachings about nature for the development of creative, affective, and participatory Climate Change Education

Yenthl Indri Koot
Registration number: 921211465070
Submitted on: 10 October 2020

Cultural Geography Chair Group
Supervisor: Trista Chih-Chen Lin
Examiner: prof. dr. Edward H. Huijbens

PERSONAL NOTE AND ACKNOWLEDGEMENTS

Yesterday I was clever, so I wanted to change the world. Today I am wise, so I am changing myself. - Rumi

This quote pretty much sums up my thesis journey of how I got to this point. This journey started with my own interest in Buddhism. Ever since I had taken that plain to Sri Lanka – my first ever solo trip when I was 21 years old - where I got to spend a month with young Buddhist monks, teaching them a few words of English and helping renovating Buddhist temples, I was captivated by Buddhism. Only now, almost 7 years later I think I have scratched the surface of what Buddhism truly embodies.

The other major theme in this study comes from my interest in nature and a sense of responsibility for nature. Seeing how children and young people would spend their free time behind electronic devices and how disconnected they seemed to nature was worrying me. I then had the idea to change children's perception towards the environment, so that they would blossom into responsible world citizens that would take care of this planet in the coming decades. It only made sense to me to start fresh, start with the new generation. They would truly realize the mistakes we have made, and rectify our flaws, while we were living our lives at the cost of the environment. So, this was me yesterday, or actually six months ago, when I wanted to change the world. Today, I feel a little wiser, still realizing that the world is facing irreversible climate change issues, and it is true that we have to change something in our capitalistic societies. Today, I came out of a six-month journey, feeling like a changed woman. This journey felt as if I had entered a secret room where only a few people had been and where all the answers to not only world issues, but also personal happiness were displayed. It was only a matter of whether you would want to see it or not. I have seen it, and I can happily say that I see the world through a new clear set of eyes.

I hope I can inspire everyone who may read this, to keep searching for alternative and creative solutions that may not be as obvious. Solutions that are not taught in our academic Western education systems, but are based on ancient values from far corners of our world, which are extremely relevant since they consist of the basic values and virtues of human existence. I have spoken to incredible human beings, who were willing to share their wisdom with me and I would like to truly thank each and every one for that.

Special thanks goes to my supervisor of this thesis, Trista Chih-Chen Lin, who has inspired and stimulated me to think critically and get the best out of my work, while accompanying me on this journey. Furthermore, I would like to thank my parents for showing me the miracles of nature when I was younger, and encouraging me to see the world. Without their encouragement I would have never stepped on that plain to Sri Lanka. I would like to thank my boyfriend Bas Nigten for supporting my ideas, taking me on walks when I was working on my thesis for too long, and making me coffee whenever I did not even know I needed it. Lastly, I would like to thank nature, for joining me on this journey, for never judging me, for just being there and not giving up on us.

ABSTRACT

Climate Change Education (CCE) is recognised as a conservation strategy that is effective in shaping children and young peoples' values towards the environment, and helps reducing vulnerabilities and building resilient communities. However, the current approach of CCE is criticized for being too focused on providing children with scientific knowledge. There is a call for alternative paradigms that guide human understanding and motivation to take care of the environment and help shift the science-based curricula of CCE towards more informal, arts-based, and experience-based learning methods. This study explores the potential contribution of the worldview and insights of Buddhism on nature and environmentalism, in order to expand our understanding of human-nature relations. The richly layered Buddhist wisdom that is presented in this study can help us to question dominant Western perspectives on nature and reshape children and young peoples' perspectives towards the environment. This research presents traditional Buddhist virtues and teaching methods that place a special emphasis on embodiment activities, mindfulness or meditation exercises, and creative nature based activities. With Buddhist notions of suffering, impermanence, interdependence and compassionate listening, this study aims at contributing to literature on creative, affective, and participatory teaching approaches for the development of transformative Climate Change Education.

Keywords: Climate Change Education, arts- and experience-based learning methods, Buddhism, human-nature relations, suffering, impermanence, interdependence, compassionate listening, transformative

TABLE OF CONTENTS

LIST OF FIGURES AND IMAGES

LIST OF ABBREVIATIONS

CCE – Climate Change Education

EE/ESD – Environmental Education/Education for Sustainable Development

1 INTRODUCTION

"To live and believe in the times of the Anthropocene is to be continuously aware of being a receiving as well as an acting part of nature"
- Jenkins et al., 2017

Education is key in shaping children and young peoples values and understandings in regards to climate change issues (Dijkstra & Goedhart, 2012; Brownlee et al., 2013; UNESCO, 2015; Molthan-Hill et al., 2019), especially in the Anthropocene epoch we live, which is defined by large-scale human impacts on the global environment (Steffen et al., 2015). However, research has indicated that children and young peoples' understandings of climate change is generally limited and based on inaccurate and incomplete assumptions (Shepardson et al, 2009; Rousell & Cutter-Mackenzie-Knowles 2020; Trott, 2020). There has been a quest for fresh worldviews and new paradigms to guide young peoples' understanding and motivation regarding climate change action, such as the more spiritual worldviews, as opposed to dominant Western worldviews (Daniels, 2010; Thathong, 2012). One particular conservation strategy that focuses on educating children and young people regarding the environmental crisis is Climate Change Education (CCE). CCE includes approaches, tools and programs to develop and support environmentally related attitudes, values, awareness, knowledge, and skills that prepare people to take informed action on behalf of the environment (UNESCO, 1978; Monroe and Krasny, 2016 as stated in Ardoin, 2020). This strategy is recognised as effective in addressing the current environmental issues, reducing vulnerabilities and building resilient communities (UNESCO, 2015; Molthan-Hill, 2019; Leichenko & O'brien, 2020). As opposed to many other types of climate change strategies, that often place emphasis on policies, new technologies, physical climate change processes, documentation of rising emissions and other empirical evidence, CCE also involves more cultural and social aspects (Leichenko & O'brien, 2020). CCE has gained more attention in the last several years, especially in the months leading up to the Paris Agreement. During a UN Education Day-event called *Learning to live with climate change*, General Director of UNESCO Irina Bokova, stressed that *"we must integrate sustainable development issues deeply into national education systems"* (UNESCO, 2015). The same argument is given in Article 12 in the Paris Agreement, which states that nations should *"enhance climate change education, training, public awareness, public participation and public access to information, recognizing the importance of these steps"* (UNFCCC, 2015, p 10). Despite the international acknowledgement at policy levels and examples across the world where CCE is already deeply rooted in national education systems, the investment in CCE in most countries has not been a priority (Molthan-Hill, 2019). As a matter of fact, in most countries, CCE has not fully developed as an independent field in school curricula yet. Instead, it is usually part of Environmental Education (EE) or Education for Sustainable Development (ESD) (UNESCO, 2012).

Although CCE is capable of guiding children and young peoples' understanding in regards to climate change issues, it is criticized for being too focused on providing children with scientific knowledge (Rousell & Cutter-Mackenzie-Knowles, 2020; Leichenko & O'brien,

2020). Rousell & Cutter-Mackenzie-Knowles (2020) highlight that CCE needs to be more open to alternative approaches, drawing on arts-based practices in order to make climate change meaningful for children. Their critical analysis of 220 English-language publications worldwide about CCE-research between 1993 and 2014 depict these claims, indicating that formal education in most countries is fixated on the development of science-based climate change curricula, instead of informal learning experiences (Rousell & Cutter-Mackenzie-Knowles, 2020). Researchers Hampson & Rich-Tolsma (2015) argue that CCE should also centralize transformative learning as the goal behind CCE, as it is key in changing children's perspectives towards nature (Hampson & Rich-Tolsma, 2015). Transformative learning enables transformations at individual as well as collective levels, but the potency of transformative education in addressing climate change has not appropriately been explored yet (Hampson & Rich-Tolsma, 2015).

Moreover, while indicating that CCE can be useful, multiple scholars have questioned whether focusing on cognitive and scientific knowledge is the right approach to affect attitudes and behaviour of children towards the environment (Dijkstra & Goedhart, 2012; Brownlee et al., 2013). This is why Rousell and Cutter-Mackenzie-Knowles (2020) have recently argued for more creative, affective, and participatory approaches for CCE in order to enable children to be involved in climate change debates that are culturally and regionally relevant for them and their communities (Rousell & Cutter-Mackenzie-Knowles, 2020).

Exploring alternative approaches for CCE is in line with the quest for alternative worldviews and new paradigms to guide young peoples' understanding and motivation regarding climate change action (Daniels, 2010; Thathong, 2012). These alternative worldviews can guide educators in developing alternative approaches for CCE. Furthermore, alternative worldviews can assist people in developing a deeper connection with nature and tackle climate change issues with regards to a spiritual understanding of nature, something that has not yet been brought to light in conventional Western understandings of human-nature relations (Thathong, 2012). Thathong (2012) suggests that a spiritual understanding of human-nature relations should be further explored as a way to change our consciousness and to develop a deeper connection to nature (p.5063). Spiritual understanding and connection to the natural world contains emotions, beliefs and meanings that people give to the environment (Schroeder, 1992). This could be a powerful motivator for people to develop responsible behaviour towards the environment. Spiritual understanding and connectedness to nature are elements that are much more prominently featured within indigenous knowledge or traditional ecological knowledge, which is a mix of knowledge, beliefs and practices in regards to human-nature relations, often passed down from generation to generation (Berkes et al., 2000). This knowledge is transmitted through religious narratives and spiritual practices (Jenkins et al., 2017).

Considering the spiritual understanding of nature in the search for new wisdom from worldviews that could enhance CCE, a general construct of spirituality and religion together is suggested by Good & Willoughby (2014), since a spiritual understanding of nature often includes religious narratives (Jenkins et al., 2017). The concepts, religion and spirituality have their differences, but are strongly associated with one another, to the extent that Good &

Willoughby (2014) suggest that it can be helpful in research to conceptualize a general construct of the two. Smith & Denton (2005) argue that religion is a common means by which spirituality is facilitated. Studies that focus on the relationship between climate change understandings and spirituality or religion is rather scarce. Yet, religions are able to provoke social change, but they have been relatively quiet in their response to climate change issues (Jenkins et al., 2017). Religion is much more than a belief system; it interacts with cultural skills, rituals, topographies, arts, spatial processes and much more (Jenkins et al., 2017). Religiosity is often defined as certain beliefs and behaviour that is associated with organized religion, while spirituality is more or less the search for the divine or the sacred, which usually involves nonmaterial aspects of life (Zinnbauer et al., 1997). Smith's and Leiserowitz's research in 2008 amongst 2164 Americans showed that religious affiliation is indeed a prominent component to take into account when addressing environmental concerns (Smith & Leiserowitz, 2013). A similar research held among 1927 respondents in Australia showed that there seemed to be a relation between religion and climate change attitudes and behaviour, in which Buddhists were most engaged with several climate change issues (Morrison et al., 2015). Several scholars have indicated that Buddhist perspectives and beliefs can contribute to peoples' understanding of climate change and help solving the global environmental crisis (Thathong, 2012). In this study I explore the idea of using Buddhist perspectives on nature and environmentalism for an alternative, and more spiritual approach to CCE in the Netherlands.

1.1 Buddhism in Dutch secular society

In 2019, The Dutch Ministry of Education in cooperation with the 'Boeddhistische Unie Nederland' (Dutch Buddhist Association) started offering humanistic Buddhist education at public primary schools. This was a huge milestone for Buddhism in the Netherlands as the ministry refused to offer humanistic Buddhist education in 2010, since the religion was insufficiently visible in the Dutch society at that time (Zhu, 2018). In 2018 a pilot with Buddhist humanistic courses was held at three different primary schools in Zuid-Holland (South Holland province). These courses were received well, which is why the Ministry decided to continue with the courses. Humanistic education gives children the opportunity to explore other religions, beliefs and cultures, in which children can develop their own view on subjects (Zhu, 2018). The aim of the Buddhist course is to give children the opportunity to explore Buddhists stories and what Buddhism can mean to them, while at the same time discussing relevant themes with a Buddhist perspective. The course focuses on children's development of three pillars; the development of the mind and concentration, the development of stillness and the development of loving kindness (Zhu, 2018).

As explained earlier, CCE is not an independent field yet, but when it is addressed in educational institutes it is usually part of Environmental Education (UNESCO, 2012, p.5). EE in the Netherlands, in particular CCE in primary schools is still not very common, especially compared to other countries around the world where more examples of CCE are implemented in schools (Tol, 2019). A study conducted in the Netherlands reported that children in primary schools mostly have anthropocentric images of nature, which represents

humans as rulers over nature or in a stewardship relation with nature (Tol, 2019). This image that children have of nature in which humans can use natural resources for their own benefits is concerning. It is because of this image that some educational institutes have decided to include some form of EE, such as a few lectures on climate change. We can gradually see more examples of Dutch schools that are adopting climate change themes in their curricula (van der Bor & Burgers, 2019). However, these themes focus mainly on scientific knowledge rather than stimulating experiences in nature and building a relationship with the environment (Tol, 2019). These Dutch *'climate lectures'* are in a way a combination of biology, physics and geography in relation to modernity (Uilenbroek, 2019). A promising example of climate change education in the Netherlands is the primary school 't Carillon from Groenlo, who gives children from the age of 8 to 12 a thematic sustainability course. This course involves three afternoon lectures a week for eight weeks long regarding climate change and sustainability (van der Bor & Burgers, 2019). With this context in mind, and the earlier mentioned arguments made by pedagogy- and CCE-scholars in the introduction, I will continue to focus on what can be gained in formal education in the Netherlands, from primary through to higher education between the ages of five to twenty-one.

1.2 Problem statement

The Anthropocene epoch that we live in, or the current period of large-scale human impacts on the global environment (Steffen et al., 2015), requires humans to act as global citizens, in which education is key in shaping children and young peoples' values towards the environment. It is increasingly recognized that CCE is an effective conservation strategy to guide young peoples' understanding in regards to environmentalism and climate change (UNESCO, 2015; Molthan-Hill, 2019; Leichenko & O'brien, 2020). However, CCE is too focused on providing children with scientific knowledge, leaving little to no room for exploring alternative worldviews and approaches to address climate change issues. Such an alternative view on nature and environmentalism can enable children and young people to develop a deeper connection with nature and tackle climate change issues from a more spiritual point of view (Thathong, 2012). Furthermore, a Buddhist view on nature might facilitate transformative learning, which will benefit CCE (Hampson & Rich-Tolsma, 2015).

Developing CCE that features a more spiritual view on nature, like Buddhism does, deserves more scholarly attention than it has been given. The combination of Buddhist perspectives on nature and CCE is an unexplored phenomenon in environmental and social studies. Buddhist perspectives on nature can show us the sensible and underlying complexities of climate change by illustrating how certain virtues play a large role in how we view nature. Therefore, the questions I take up in this study are: How is nature understood by Buddhists in a Dutch secular society? How can a more spiritual approach enhance CCE and how can Buddhist insights be useful in the development of affective, creative, and participatory CCE?

1.3 Research objective and research questions

The objective of this research is to contribute to literature on affective, participatory and creative approaches for the development of transformative climate change education in the Netherlands, through the exploration of Buddhist perspectives and teachings on nature and environmentalism.

Main research question
How can Buddhist perspectives and teachings on nature and environmentalism contribute to the development of transformative Climate Change Education?

Sub-questions

1 How do Buddhists construct nature?
2 In what ways can a spiritual approach enhance Climate Change Education?
3 What elements of Buddhist teachings would enhance an affective, creative, and participatory approach in Climate Change Education?

This thesis is arranged as follows; Chapter 2 consists of a theoretical framework and literature review, placing this study within the context of existing literature. Chapter 3 describes the methodology used in this particular study, and Chapter 4 and 5 include the findings, a discussion and conclusion section and final recommendations.

2 THEORETICAL FRAMEWORK

This chapter presents the theoretical framework, which serves as a structured guide for the analysis of the main debates within using Buddhist perspectives for CCE. This framework will pose relationships between concepts and explain why these relationships exist. The framework will assist in making sense of why certain theories and concepts are used and combined. First the ontological and epistemological assumptions will be discussed. Secondly, the key concepts for this study will be clarified, starting with the concept of *Buddhist perspectives*, especially in relation with the second concept of *environmentalism* and the ongoing debate to what extent Buddhism is an ecological religion. I will elaborate on the Western dominant view of nature and explore Buddhist concepts, such as *interdependence, suffering, and compassion* as integral parts of human-nature relations. The second central theme within this research is climate change education itself. As mentioned in the previous chapter, the aim is to explore the shift from science-based CCE to a more creative, participatory and affective approach in educating climate change. This research borrows aspects from Mezirow's Transformative learning theory (2003), the Burns model of sustainability pedagogy (Burns, et al., 2019), and Scharmer's Theory U (2009), in order to understand what elements can contribute to creative, affective, and participatory approaches. In conclusion, a summary of these concepts and theories and the relations between them will be graphically illustrated in a conceptual model at the end of this chapter.

2.1 Ontological and epistemological assumptions

Within this study, I will take an interpretive research perspective towards the research topic. By taking this approach, I assume that social reality is the result of peoples' interpretations and experiences within a wider social system, and that it is impossible to describe the world 'as it is'. The ontological assumption within interpretivism is that reality can only be imperfectly grasped, but never perfectly understood, since it is experienced subjectively (Fletcher, 2018). This means that reality in this view can never be fully known, because it is experienced in various ways. Making these assumptions about reality makes it interesting to study human thoughts and their beliefs and understanding of the world. The aim of producing knowledge with an interpretivist view is to enhance our understanding of the world, based on subjective human beliefs, values, reasons and understandings, rather than focusing on empirical observations or trying to explain causal relations of social events (Gorton, 2010). Every participant in this study will likely have a different perception of reality, based on his or her personal background, experiences and values. Thus, their perception on nature, Buddhism and climate change will also differ. Different interpretations about Buddhism perspectives on environmentalism enable the researcher to capture subjective ideas and identify reoccurring themes regarding the implementation of Buddhism environmental perspectives for climate change education in the Dutch context.

In terms of epistemology, interpretivism studies the way which people make meaning in their lives and what meaning they exactly make. This approach focuses on the mental, social, and cultural phenomena that shape people's perceptions of meaning making. However, the approach does not only look at the observable phenomena, but especially to subjective beliefs, reasons, values and understandings. Interpretivists understand knowledge as something dynamic, created through interactions and constructs that individuals build in order to simplify and organise the complex processes they experience (Gorton, 2010).

It is common for interpretivists to use an emic view to look at phenomena, which basically means looking at phenomena from an insider's perspective (Fletcher, 2018). I am aiming to adopt an emic perspective in this research, since I believe that with this type of view – rather than an etic outsiders' view – a researcher is likely to obtain more culturally rich and detailed information from participants. I believe that the participants in this study will not perceive me as a complete outsider, since I have knowledge about Buddhist culture and experience with practices that are often associated with Buddhism, such as yoga and meditation. I believe that I am not an insider, nor an outsider, but somewhere in the middle. This is why the emic perspective suits this particular study. I argue that the emic perspective in this research can serve the purpose of providing descriptive in-depth data about how Buddhists understand environmentalism.

A methodological assumption within interpretivism is that the researcher is a co-creator of meaning and that he or she brings in his or her own subjective experience into the research (Thanh & Thanh, 2015). Since this study makes use of a large amount of theory, it is also important to shortly describe the role of theory within interpretivism. Interpretivists view theories as revisable and shaped by social scientists' own socio-cultural contexts, values and morals (Gorton, 2010). In order to study human understandings, interpretivists usually favour qualitative research methods (Thanh & Thanh, 2015). The research methods will be elaborated on in the next section.

2.2 Buddhists' spiritual perspectives on environmentalism

The Buddhist perspective is *'the worldview from which phenomena are understood from the perspective of Buddhism'* (Wong et al., 2013). I do not wish to suggest that Buddhism has a privileged perspective on the environment over other religions. Rather I want to explore which Buddhist insights would be useful for alternative approaches in transformative CCE, in order to establish a deeper connection between children and the environment. I am aware that I may be simplifying the nuances of how Buddhists perceive nature and how they believe we should deal with environmental issues, because there is simply not one type of Buddhist. Certainly, Buddhists with different backgrounds, from different parts of the world, with different traditions are likely to have different perspectives on environmentalism. Yet, there are numerous principles and theories within the teachings of Buddhism that are considered to be the '*Buddhist perspective'* or *'Buddhist worldview'*, which is shaped by Buddhism.

Buddhism is often seen as spiritual tradition or religion, in which it focuses on personal spiritual development and gaining a profound insight into the true nature of our existence (UNHCR, 2012). Nowadays, Buddhist environmental activists (also called eco-Buddhists) mainly form their argument out of the Mahāyāna perspective and East Asian Buddhism perspectives (Swearer, 2020). Mahāyāna Buddhists view the natural world more positively than early Buddhists did. Mahāyāna Buddhism is a predominant stream within Buddhism and also includes values and beliefs coming from Taoism and Confucianism (Swearer, 2020). Eco-Buddhists remind us that the significant events in Buddha's life took place in natural settings, since Buddha was born, achieved enlightenment and died under trees (Swearer, 2020). Moreover, forests play an important role in the Buddhist worldview, because these places are perceived as the preferred surroundings for spiritual practices such as meditation (Swearer, 2020). Eco-Buddhists emphasize that Buddhist values can be useful to understand human-nature relations based on the Buddhist way of living, which they claim leads to greater fulfillment than a materialist or consumerist lifestyle (Swearer, 2020).

Within environmentalism we often detect two approaches: the *anthropocentric orientation* (also described as "shallow ecology" or "technocentrism"), and the *ecocentric orientation* (described as "deep ecology") (Kopnina, 2012). The anthropocentric view is often considered as the dominant Western view, in which nature is seen as a resource and environmental issues should be solved mainly through technology or science (Holden, 2008). With the anthropocentric perspective non-human-oriented interests are likely to be marginalized, since advocates of anthropocentrism believe that humans and non-humans are two separate entities (Kopnina, 2012). From an ecocentric perspective, humans are positioned within the natural world and all beings are interconnected (Holden, 2008; Kopnina, 2012). This interconnectedness from the ecocentric perspective is very similar as what Buddhists frame as the principle of *interdependence* or *dependent origination* (Sanskrit: pratītya-samutpāda) (Ives, 2016). Buddhists often explain this principle with a simple saying: *"With the arising of this, that arises",* meaning that everything is interconnected (Ives, 2016). The ecocentric orientation also follows this principle, in which ecocentrists believe that nature and human health are interdependent and that alienation from nature is a major source of emotional and physical illness (Coleman, 2006 as stated in Sponsel, 2012). So why can these perspectives not be used for learning experiences for children as a way to prevent alienation from nature instead of healing from the consequences in a later stage of their lives? Perhaps the following two Buddhists' concepts of suffering and compassion can help us understand how Buddhists conceptualize the environmental crisis and how these perspectives can be useful for learning experiences.

2.2.1 The concept of suffering

So what do Buddhist believe are the causes of the environmental crisis? From a Buddhist perspective the destruction of the environment is a result of humanity's greed and the ignorance for all living beings (Sponsel 2012; Ives, 2016). The ignorance towards living beings and the natural world brings about suffering, misery, and threatens the existence of not only the environment or animals, but also human beings (Swearer, 2020). The concept of

suffering (Sanskrit: Dukkha) lies at the core of Buddhist teachings (Swearer, 2020). The Sanskrit translation 'Dukkha', consists of 'Du' meaning 'difficult' or 'bad' and 'kha', meaning something empty, such as a axle hole of a wheel (Peto, 2018). The truth of suffering is not meant as a negative view of the world, instead the concept is used as a realistic perspective to see the world as it is (Sponsel, 2012). Suffering and the cessation of suffering are illustrated in a plan of principles, called the Four Noble Truths, which are four main ethics to overcome suffering that Buddha discovered during his enlightenment experience (Sponsel, 2012):

1. *All existence is suffering*
2. *Suffering is caused by ignorance and desire*
3. *Suffering can end*
4. *The way to end suffering is the Noble Eightfold Path*
   (Sponsel, 2012)

The second truth as we can see here is what Buddhists today describe as a reason for environmental destruction. The last Noble Truth directs us to the Noble Eightfold Path, which are certain measures to end suffering and to reach enlightenment and ultimately *'Nirvana'*; a state of liberation from suffering in this world through an endless death and rebirth cycle, also called *'Samsara*' (Sponsel, 2012). The Noble Eightfold Path are eight steps that one should master in his live, consisting of: Right understanding, right thought, right speech, right action, right livelihood, right effort, right mindfulness, and lastly, right meditation (Sponsel, 2012). In particular 'right action' and 'right livelihood' are interesting for environmentalism, since these two steps describe the acts of holding back from hurtful behaviors towards humans, animals and the environment (UNHCR, 2012). These eight steps of course, can be interpreted in a range of different ways. The question is, what did Buddha perceive as 'right' and could these principles still be applied in the era of the Anthropocene? Nowadays, the 'right' in this eight steps path is often described as 'wholesome' (Sponsel, 2012).

2.2.2 Compassion for all living beings

The relationship between Buddhists and the environment is characterized by compassion (Sponsel, 2012). Showing compassion to all living beings means avoiding causing any harm or injury to animals, but also plants (Sponsel, 2012). Furthermore, Buddhists reject hierarchal dominance of humans over other humans, but also over nature and animals (Swearer, 2020). One of the most known spiritual leaders of Buddhism, the Dalai Lama, frames humans in relation to non-violence and compassion in an interesting way. He believes that changing our attitude towards the environment is for our own good, because it is for our own survival. He also believes that we as humans are non-violent in our nature (Lama, 1992). He explains this with the use of a simple story:

"Now here, you see, some of my friends told me that basic human nature is something violent. Then I told my friends, I don't think so. If we examine different mammals, say those

animals such as tigers or lions that very much depend on other's life for their basic survival, these animals, because of their basic nature have a special structure, their teeth and long nails, like that. So, those peaceful animals, such as deer, which are completely herbivorous, their teeth and nails are something different; gentler. So from that viewpoint, we human beings belong to the gentle category, isn't that so? Our teeth, our nails, these are very gentle. Basically human beings have a non-violent nature, so I think the human attitude towards our environment should be gentle." (Lama, 1992)

This gentleness the Dalai Lama talks about is related to having compassion for all living beings and the Buddhist idea of doing no harm to any other being, also called Ahimsa, or non-violence (BBC, 2020). This non-violence principle also includes not destroying natural habitats of animals (BBC, 2020). Non-violence results in compassion, which is strongly connected to suffering, since Buddhists believe that compassion is a response to suffering (Feldman & Kuyken, 2011). It is oftentimes seen as a feeling that appears when we see someone else's suffering, which motivates us to help them by showing compassion (Feldman & Kuyken, 2011). It is about acknowledging that not all forms of suffering can be solved, but it can be relieved to some extent and support people while healing (Feldman & Kuyken, 2011).

2.2.3 An ecological religion?

However, some critics have claimed that Buddhism as a religion is not as environmentally friendly as many people think. For this research I am not particularly interested to what extent Buddhism is or is not an environmentally friendly religion, because one would need to know the particular context for this assessment. Secondly, when would a religion even count as '*environmentally friendly*'? Still, I would like to go over a few critiques from scientists who are questioning Buddhist views on environmentalism. Gowan (2015) points out that Buddhists' claims about interdependence automatically leading to an increased care for the world should be questioned (p. 287). Critics have also questioned Buddhist activism, as these activities would not suit 'their values' (Swearer, 2020). What is interesting to see here is the response of Buddhist teachers to these critiques. They explain that they advocate for their Buddhist students to hold off activism until they have reached an advanced stage on the Buddhist path through intensive meditative practice, because *"saving the world before extricating oneself from the self-centred ego will only end up making things worse"* (Swearer, 2020). This is where we can really learn something from the Buddhist perspective on environmentalism. Instead of looking at technology or science, one should start with the *'self'*. Other critiques Buddhists have faced are based on critics' selective reading of particular traditions and texts that claim that early Buddhism present negative views of wild nature and animals. Critics are right in the sense that - based on ancient Buddhist texts – animals and wild nature were often perceived in early Buddhism as dangerous and not particularly positive (Swearer, 2020). But like any other religion, Buddhism has also changed throughout the decades and has been reinterpreted by different people, in particular cultural contexts and certain moments in history. This religion, like any other religion should not be seen as a static frame in time with unchangeable views on the world. Claiming that

Buddhism is not an ecological religion because of what ancient texts used to say and pointing out other inconsistencies between ancient and modern views, I argue, is not really valid and only results in a negative representation of Buddhism environmentalism.

2.3 Transformative learning

If we want to explore whether Buddhism can contribute to transformative learning in CCE, we must first examine what transformative learning entails. Simply learning through information by increasing knowledge, I argue, is not enough to change peoples' mind set when it comes to climate change issues. This is why I will elaborate on transformative learning, which is a theory developed by sociologist Jack Mezirow in 1978. The transformative learning theory is a framework being used to explore and understand the meaning making process of people, associated with change in beliefs, attitudes and behaviour of learners (Burns et al., 2019). It explores already established frames of reference and could lead to the assimilation of new frames of reference, or perspectives and beliefs. Mezirow (2003) defines transformative learning as *"learning that transforms problematic frames of reference – sets of fixed assumptions and expectations – to make them more inclusive, open, reflective and emotionally able to change"* (p. 58). The difference between learning and transformative learning is that the latter entails fundamental changes in the learner's perspective, which ultimately results in transformative action (Mezirow, 2003). Two important elements that facilitate transformative learning are interactive and participatory approaches (Mezirow, 2003). I will elaborate on Mezirow's theory by using the *Burns model of Sustainability Pedagogy*, which will be explained and further developed in relation to this study in section 2.3.1.

After delving into the Burns model, I will employ a more recent addition to Mezirow's theory in subchapter 2.3.2, called Theory U, developed by Otto Scharmer (2009). According to Scharmer (2009) there are three main issues or gaps in the Anthropocene epoch: 1) The ecological gap between ourselves and nature, in which we deplete the earth by our endless use of natural resources for our own good, 2) The social gap between ourselves and other humans (e.g. the growing gap between poor and rich), and 3) The spiritual gap between ourselves and our soul, resulting in depression, burn-outs, etc. (Scharmer, 2009). These three gaps have resulted in major problems across the world, which is why we need let go of our existing ways and start a fundamental transformation for ourselves and for our planet (Scharmer, 2009). Interestingly, Scharmer's framework employs Buddhist perspectives and main concepts such as interdependence. Such a holistic approach, which resonates with a *"head, heart, hands"*-framing is identified as useful for transformative learning in relation to sustainability (Sipos, et al. 2008). Hampson & Rich-Tolsma (2015) argue that in relation to addressing climate change, transformative change would significantly be enhanced through employing views and concepts from Scharmer's perspective (p. 178). Mainly, because of the alternative way Scharmer is proposing for humans to look at the world, such as through processes of listening deeply to others and creating and inner sense of *'embodied knowing'* (Hampson & Rich-Tolsma, 2015, p.179). Exploring different perspectives and creating empathy for them is key in this (Hampson & Rich-Tolsma, 2015, p.184)

Lastly, section 2.3.3 will discuss creative, participatory, and affective approaches for transformative learning, before summarizing the conceptual model in section 2.3.4, which will be used in this particular study.

2.3.1 Burns Model of Sustainability Pedagogy for transformative learning

Many theories and frameworks have evolved from Mezirow's theory, so in order to benefit from this theory in the age of the Anthropocene I will make use of the more contemporary *'Burns Model of Sustainability Pedagogy'*, which adopts the transformative learning theory in combination with teaching sustainability. Since CCE involves studying sustainability and sustainable development (UNESCO, 2012), it is necessary to explore the potential of this model for creative, participatory and affective approaches for CCE. Burns at al. (2019) created the Burns Model of Sustainability Pedagogy for teaching sustainability in a variety of contexts, but always aims to create meaningful learning experiences for learners. With this model Burns focused on transformative learning, in order to motivate and inspire people to *"shift their values and make sustainable and authentic changes in their own lives, as well as within their communities and places"* (Burns et al., 2019, p.3).

The Burns Model of Sustainability Pedagogy has five different dimensions, of which each is rooted in learning theory:

1) Content: this dimension emphasizes the importance of focusing on learning that is thematic, focused on interconnected systems and co-creates content. The key aspect of this dimension is to give learners the opportunity to study interconnections between topics (e.g. the interconnections between migration, globalisation, food systems, forestry etc.) from different disciplinary lenses (Burns et al., 2019). Bringing in learners' own experiences and beliefs is central in this dimension, in order to create a holistic understanding on certain topics (Burns et al., 2019).

2) Perspectives: the second dimension focuses on questioning dominant paradigms and tries to include diverse perspectives. Moreover, it focuses on co-creation of knowledge in a group, rather than relying on the professor's perspective on sustainability content (burns et al., 2019), which allows for a shared experience of meaning making. Additionally, non-dominant perspectives that challenge dominant perspectives – such as indigenous perspectives or non-human perspectives - can stimulate the transformative learning process (Burns et al., 2019). Besides looking at different paradigms, learners' must also understand and consider the position of different stakeholders in sustainability issues (Burns et al., 2019). Educational activities that focus on this element can help learners to develop a deeper understanding of the complexity of sustainability issues and helps to create empathy for different perspectives (Burns et al., 2019)

3) Process: the third dimension employs active, participatory, experiential and relational processes, which is grounded in experiential learning theory (Kolb, 1984). It focuses on working together in a shared learning process, in which peer-to-peer learning experiences, creating trust, and community building are key (Burns et al., 2019). This dimension may

cover role-play, artistic representation of course topics, poetry, storytelling, music, breathing exercises, but also creative exercises like brainstorming about commodities and their impacts, which will help deepen the learning experience (Burns et al., 2019). This is in line with Tolliver & Tisdell's (2006) proposal in which they state that transformative learning is said to be most effective when it is facilitated by the following elements: affective, spiritual, imaginative, somatic, sociocultural, or rational (Tolliver & Tisdell, 2006).

4) Context: the fourth dimension focuses on learning in a specific geographical area in which the learners live. This place-based dimension helps learners to understand sustainability topics in the context of their own communities, ecosystems and social and cultural structures, in order to study concrete and tangible issues. This dimension of the Burns model is grounded in place-based- and situated experiential learning and is seen as an essential component for engaged learning (Fenwick, 2001; Orr, 2004; Sobel, 2004, as stated in Burns et al., 2019). Establishing a deep connection to a place is crucial for developing ecological awareness (Thomashow, 1995) and can be stimulated by field trips and outdoor experiences in nature (e.g. by visiting a farm that produces the commodity the students have explored in class) (Burns et al., 2019). Furthermore, Otto and Pensini (2017) emphasize the need for nature-based educational experiences to increase children's connectedness to nature and ecological behaviour, which outperforms environmental knowledge (p. 93).

5) Ecological design: this final dimension lies in the centre of the other four dimensions and is the result of deliberately composing the other dimensions for the purpose of transformative learning (Burns et al., 2019). Astin et al. (2011) add one more important element, which is personal reflection through inner spiritual and personal change, which they consider as the '*inner work'* of sustainability. Schley (2011) explains that this inner spiritual and personal change through self-reflection can stimulate personal development and a deeper awareness of the learners' own connectedness to all living beings and systems.

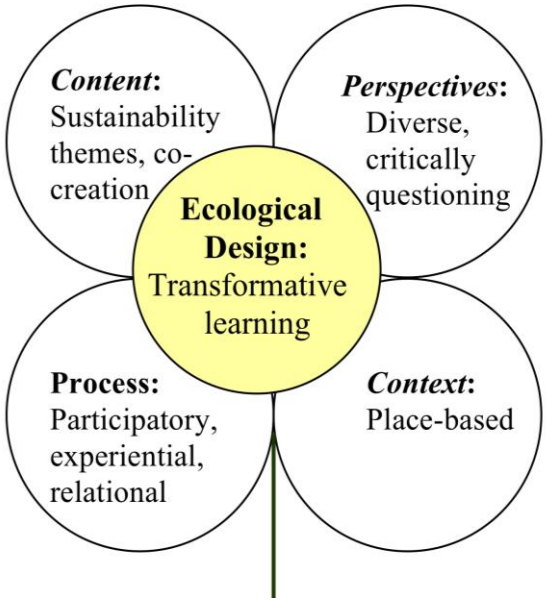

Figure 1: Burns Model of Sustainability Pedagogy for transformative learning

2.3.2 Transformative learning through Theory U

Scharmer believes that we have come to a point where we need to let go of our existing ways and establish a fundamental transformation for the benefit of ourselves, and our planet (Scharmer, 2009). He has set up a framework in the shape of an 'U' that can be used to instigate this transformation. The framework is illustrated in Figure 2 Theory U.

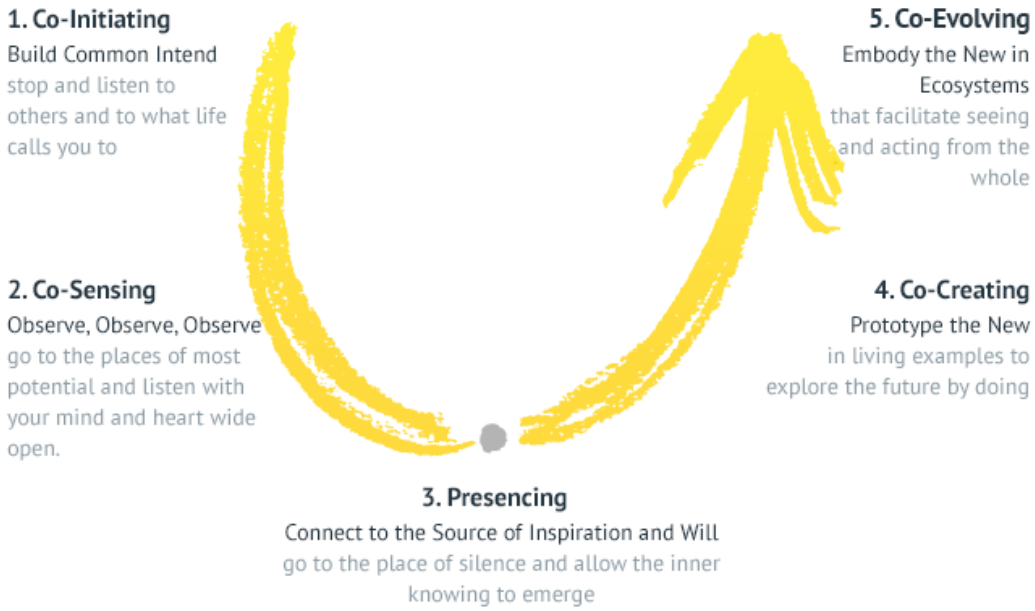

Figure 2. Theory U (Presencing, 2020)

The first part of going downwards in the U-shape, is about letting go of old perspectives and allowing for room to listen to new perspectives (Scharmer, 2009). Listening is key in this first half of the U-shape. Scharmer distinguishes four levels of listening, 1) Downloading, 2) Factual listening, 3) Empathetic listening, and 4) Generative listening. The first level, downloading, involves listening from our own experiences and knowledge, meaning that we listen by reconfirming what we already know. The second level involves factual listening, which is about listening by paying attention to facts, which may differ from the things you thought you already know. These first two levels are not able to initiate transformation according to Scharmer. Instead we should first try to listen empathetically, which involves listening with compassion and feeling a connection to another person, which allows someone to see from a different perspective (Scharmer, 2009). Generative listening takes it a step further by connecting with someone on such a deep level that initiates a transformation within oneself by having an open heart, mind and will (Scharmer, 2009). It is about the realization that you came out of a conversation as a changed person with a new perspective on something (Scharmer, 2009). Scharmer draws inspiration from Buddhist perspectives on listening, in Buddhism often called *deep listening* or *compassionate listening* (this will be elaborated in chapter 3.2.4). Because of the similarities between Theory U for

transformative learning and Buddhist perspectives, I argue that listening, as part of CCE should be further explored.

After allowing ourselves to listen generatively, we can continue to middle part of the U-shape, called 'Presencing' (Scharmer, 2009). This section is about the development of an *'inner knowing'* which unfolds if we would go to the inner place of stillness within ourselves (Scharmer, 2009). Continuing upwards on the U-shape brings us at co-creating and co-evolving, which is about taking informed action for a new vision (Scharmer, 2009). The main message from Scharmer is that we as humans need to let go of certain dominant worldviews and allow ourselves to be more open to let in new perspectives, which enables transformative learning (Scharmer, 2009).

Scharmer has combined Buddhist elements with learning theory within this framework, making the link between transformative learning and Buddhist perspectives even more relevant. This theory is particularly useful for CCE, because it is about exploring alternative worldviews and solutions for contemporary and complex problems. Climate change is an example of such complex problems, and we are used to conceptualise nature from a particular perspective. Changing children's perspective of nature can bring about the development of inner knowing and allow for transformation. CCE can be the vehicle in addressing alternative views on nature and allowing children to engage with transformative learning experiences.

2.3.3 Creative, affective & participatory approaches for transformative learning

Hampson & Rich-Tolsma (2015) emphasize the importance of transformative learning for CCE and that it may well entail practices from the arts and the physical (p.184). Rousell & Cutter-Mackenzie-Knowles (2020) share Mezirow's and Hampson& Rich-Tolsma's thoughts on transformative learning through the arts and the physical, and propose affective, creative, and participatory approaches for CCE. Rousell & Cutter-Mackenzie-Knowles (2020) argue that with an affective or affect-driven approach, children will be empowered to meaningfully engage with climate change concerns across various temporalities (p.203). They expressed that CCE could use a more affective approach in which emotions and bodily responses to climate change concerns are provoked (Rousell & Cutter-Mackenzie-Knowles, 2020). The affective approach goes hand in hand with a creative approach they are proposing, as emotions could be provoked through the use of art, imagery and narrative. Using narrative can stimulate empathy towards the environment (Rousell & Cutter-Mackenzie-Knowles, 2020). They finally propose a more participatory approach in CCE, which involves innovative, bottom-up approaches in which children and their communities should design their own climate change projects, which stimulates engagement with the topic (Rousell & Cutter-Mackenzie-Knowles, 2020). Participatory approaches can enable children to engage with climate change debates that are culturally and regionally relevant for them.

2.3.4 Conceptual model

As we have seen in the previous subchapters there is an overlap between multiple concepts and theories. For example, according to Buddhists, humanity's greed and the ignorance for all living beings lies at the core of the destruction of the environment (Sponsel, 2012; Ives, 2016). I argue that this greed and ignorance of humans is a result of how we have viewed nature from a particular perspective. This greed and ignorance brings about suffering according to Buddhists teachings. So gaining a deeper insight into suffering may guide us in looking at nature from a different perspective. This is where transformative learning comes in. Stepping into a conversation as one person, and stepping out of it as another person is an example of transformative learning. This study will explore what Buddhist concepts and perspectives on environmentalism can bring about this transformation in regards to CCE.

Although there is a connection between all concepts and theories presented above, it is not completely clear yet how all concepts are brought together. Harmoniously blending all these concepts together in a holistic framework is a daunting task, but at the same time represents the explorative character of this study. I therefore argue that the conceptual model below (Figure 3) will be a guide for bringing all the concepts together in later stages of this study.

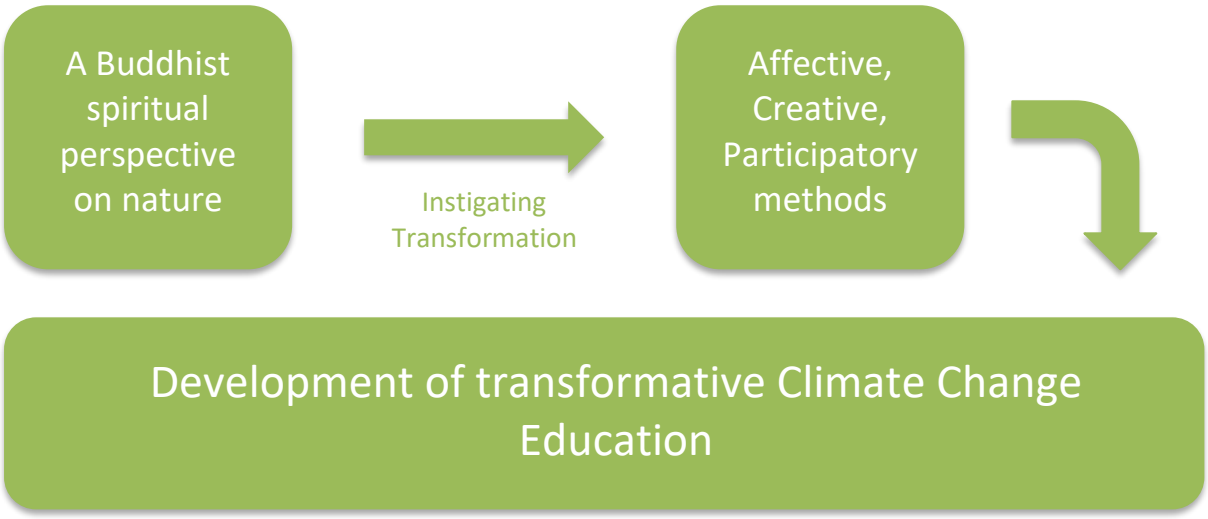

Figure 3: Conceptual model Transformative CCE

3 METHODOLOGY

The following chapter encompasses the methodological underpinning of this research, which consists of the methodology and the specific methods that are used for data collection and data analysis. First, the research design and the corresponding methods will be explained alongside the research questions. Secondly, the researcher's positionality and ethical considerations will be clarified. Finally, the barriers and limitations of conducting the research will be identified.

3.1 Research design

In order to develop an authentic research that makes use of up to date information that is specific to this particular research, the researcher chose to collect primary data. This study contains interviews as the main source of data, alongside autoethnographic observations, which has complemented the interview data. This triangulation of methods was rewarding, since it allowed the researcher to capture the complexity of real-world phenomena through the interviewees, but also through own experiences. Furthermore, triangulation of methods increases the validity and reliability of the research by combining different methods to assess the same phenomena (Boeije et al., 2009).

Since no educational organisation in the Netherlands currently employs specific Buddhist perspectives on environmentalism for climate change education, there was no reason to make use of a singular case study. Instead, the researcher gathered insights of experts and educators in the fields of Buddhism, children and young people, and environmentalism and climate change.

3.2 Data collection methods

The data collection for this research took place over seven weeks from the 5th of July until the 24th of August. Two methods were considered most suitable for this research: in-depth (online) interviews and autoetnography. The combination of these methods provided a detailed understanding of Buddhists perspectives on environmentalism and the possibility of using their insights for the development of an alternative form of climate change education in the Dutch context.

3.2.1 Conducting interviews

One of the main reasons for this study to employ a qualitative research approach is the because of the way social theory was used in the previous chapters. In contrast to a quantitative research, qualitative research uses a more inductive approach and explores social phenomena with the aim of developing a theory, instead of testing one (Boeije et al., 2009). Due to this exploratory nature of the study, in which insights in beliefs and

perspectives are key, semi-structured interviews were chosen as the main source of data gathering.

Previous to the fieldwork a topic list was developed to guide the semi-structured interviews (see Appendix 1 Interview Guide). The topic list was made in a Dutch and English version, but in the end all interviews were held in Dutch language since this was the native language for all participants. Furthermore, a pilot interview was held to improve the overall project conceptualization.

To find the potential participants, I started by looking at which Buddhist organisations were affiliated with the overarching Dutch Buddhist Association (Boeddhistische Unie Nederland). I sought to gain access through this channel, since this organisation started offering humanistic Buddhist education at public primary schools in the Netherlands. Thus, I found information about Buddhist teachers that were involved in humanistic Buddhist education relatively easy. I contacted the coordinator of the humanistic Buddhist education and she directed me to individual teachers and Buddhist organisations that might have teachers working there with affinity with nature and climate change issues. She also sent my research request to her acquaintances in the field that would probably fit the target group and be interested. This snowball sampling method turned out to work quite well, particularly because the participants would need to have knowledge about three topics (Buddhism, teaching to children or young people, and environmentalism), making the target group relatively small.

Along with the snowball sampling method, I also wanted to actively search for participants within the target group, so I started contacting the affiliated organisations of the BUN and individuals by email. Initially, there were 49 organisations and individuals approached through email and approximately half of them had replied. A handful of people that had replied were either unable to help and some had replied that they felt they did not qualify for the interview. Eight people immediately replied that they would be interested in participating in the research and many other Buddhist organisations had sent the email through to the right persons within their Sangha (a community of people that practice Buddhism at a certain location). The remaining participants were found later on in the fieldwork through connections with other interviewees and some others had contacted me themselves, because they had heard about the interview in their Sangha community. The aim was to include twelve interviewees in total, which is in line with Guest et al. (2006) recommendations for non-probabilistic sample sizes, since this number is likely to be enough for data saturation to occur (Guest et al., 2006). Considering the time frame and scope of this research, twelve interviews appeared to be reasonable. In total, 14 in-depth interviews were held with participants who had between 5 and 42 years of experience with practising Buddhism, meaning they all had substantial knowledge of Buddhism perspectives. Due to the current worldwide situation, which involves complying with the societal measures of keeping 1.5 metres distance from people and avoiding social contact because of COVID-19, all interviews were held online. An advantage of using online interviews is the time and money saved by not having to travel to a research location.

3.2.2 Backgrounds of the participants

All interviewees taught or had taught Buddhism to different groups of people during workshops or classes in their Sangha. Many of them had an ecological and/or teaching background from primary school to university. Below is an overview of the interviewees and their backgrounds.

	Interviewee	**Background information**	**Age group**
1	Dick Verstegen	Buddhist Zen teacher, writer and former journalist	70-79
2	Sebo Ebbens	Former Physics teacher, Tibetan Buddhist teacher and writer of the book *'Effective learning'*	70-79
3	Matthijs Schouten	Ecologist, philosopher, WUR professor and Buddhist	60-69
4	Yara Vrolijks	Specialist Philosophy teacher and Buddhist	20-29
5	Tetsue Roshi	Former developmental psychologist, Buddhist Zen teacher, and mediator and child specialist in consultation divorces	60-69
6	Rozanne v/d Veur	Former teacher secondary school, Buddhist and mental caretaker	30-39
7	Jesse van Delft	Buddhist teacher at a primary school and creator of art education	20-29
8	Femke Merkx	Buddhist teacher, researcher and senior climate coach	40-49
9	Erik Hoogcarspel	Eastern philosophy professor, researcher, writer and Buddhist	70-79
10	Anya Wiersma	Buddhist Zen teacher, Nature walking coach	40-49
11	Dirk Polder	Buddhist Zen teacher and nature conservation manager	60-69
12	Loes Thijssen	Vajrayana Buddhist practitioner and meditation mentor	30-39
13	Radia Willems	Vajrayana Buddhist practitioner and entrepreneur	40-50
14	Silvie Walraven	Buddhist teacher at a primary school and coordinator of Design for Change child and youth educational programme	50-59

From the table above it can be seen that many of the interviewees engaged with either education, or environmentalism, or both. Some had studied nature conservation, ecology, or environmental sciences, while others engaged with nature from a more personal interest. These interests played out in different forms; some participants organized nature walks based on the Zen Buddhist concept of 'forest bathing' in which you would use all your senses to be completely 'awake' during a forest walk. Some facilitated climate conservation workshops, while others used nature as a central theme or tool in their classes or meditation

sessions. Some were more familiar with the learning and teaching aspect that is central to this study. Many of the participants had teaching experiences in primary schools, secondary schools or universities. Some were also researchers and had even written books about effective learning methods for children and young people, while others were developers of educational content and youth programs. Overall, there was a variety of interests and backgrounds, but all participants had one thing in common; nature, education and climate change were topics that were close to their hearts and they were all willing to share their insights and perspectives on these themes.

3.2.3 Topic list questions

In order to answer the first sub question 'How do Buddhist construct nature?', it was important to find out what Buddhist perceived as nature and how they would describe nature. This is why the first part of the topic list inquired the interviewees with questions regarding nature and climate change conceptualization from a Buddhist perspective (see Appendix 1 for the complete topic list). When participants talked about nature and climate change, almost all of them would talk about the interconnectedness between us, nature and climate change. The topic list then followed with a question about spirituality, in particular what spirituality meant to the participant and how a more spiritual approach in climate change education could be useful according to them. These questions were necessary in order to gain insight into a more spiritual teaching approach and which methods and tools the participants used when talking about nature in their classes with a spiritual undertone. These insights would help me answering research question two 'In what ways can a spiritual approach enhance climate change education?'.

The second half of the topic list consisted of questions regarding creative, affective and participatory teaching approaches, in order to answer the third research question. Many of the interviewees talked about the creative, affective and participatory approaches from two perspectives; one was their own perspective as a learner during their journey of practicing Buddhism, and the second perspective was as a teacher and what lessons they would teach to their students.

The questions consisted for example of asking about the use of bodily experiences and emotions in Buddhist teachings regarding transferring knowledge about the environment. Others questions that were included in the topic list were: Whether and how creative teaching methods (with the use of art, narrative, imagery or storytelling) were used in Buddhists' ways of teaching, and what Buddhists perspectives were on nature-based learning experiences. Especially the participants who practiced Buddhism the longest (25+ years) easily cited old tales and teachings from the time of the Buddha. They also emphasized certain virtues and values that could still be used for didactic purposes. Participants that belonged to the younger generations talked in general more about the importance of a few major concepts in Buddhism and how they would use that in their classes when teaching children certain virtues. The participants that would still be active as

teachers in primary or secondary school shared many insights into different teaching methods they would use and what they believed worked most effectively with children.

Furthermore, the participants were asked about what they thought was most important for children to learn in climate change education and what would encourage them to fundamentally change their mostly imposed Western perspective on the environment. Related to this questions, almost all participants expressed their concerns about the outdated traditional teaching methods at schools in the Netherlands, in which transferring knowledge is mainly done by stimulating children's' 'head', instead of also their 'heart' and 'hands' in a more experience-based learning environment. Some of the participants also expressed that they felt it was a shame that educational institutions do not give more room to children for developing important virtues and values, such as compassion, kindness, equanimity, attentiveness, non-violence, and being meaningful in the world. Finally, the participants were asked if a concept such as 'compassionate listening' would enhance learning in climate change education. This concept and the underlying aim of using this concept, as a theme, as well as a qualitative research method within this study will be further discussed in the next subchapter.

3.2.4 Compassionate listening

One of the most pivotal elements of conducting interviews successfully, is the researcher's ability to listen (Louw et al., 2018). Active listening is often suggested as a technique for researchers to deepen the understanding of the interviewee's answers and to seize opportunities to build on these answers (Louw et al., 2018). But since I am studying Buddhist worldviews in this research – traditionally an Eastern culture - it is only fair to doubt whether Western research methodologies, techniques and approaches to the research, such as active listening are sufficient. Ong (2016) argues that researchers should not blindly accept dominant Western methodologies and techniques that are in compliance with Western standards of doing research, since they may not fully answer the research questions (p. 397). This is in line with the interpretivist approach, which is concerned with understanding the world through the researcher's subjective experiences, in which knowledge is a result of interpretation (Ong, 2016). Since this study is concerned with both Western and Eastern cultures (Buddhist believes and practices in a Dutch, Western society) I decided to blend in an Eastern practice into the Western standard of doing interviews. I have therefore chosen to take 'active listening' a step further by incorporating something called 'Compassionate listening', which is a way of listening 'that emphasizes our interconnectedness and shared humanity' (Rehling, 2008, p. 83). Compassion consists of the Latin words 'comm', which means 'together' and 'pati', meaning 'to suffer' (Rehling, 2008). Combining the two makes it 'a kind of shared suffering', which involves being non-judgemental, being open to the suffering of self and others, and the desire to relieve suffering (Rehling, 2008, p. 87). Compassionate listening is not only about listening, but also about asking the right questions that increase understanding and empathy (Nelson, 2010). I believe that my personal introduction in each interview already build upon understanding and increasing empathy. I started the introduction by sharing my personal interest in Buddhism that I had gained

during a month of voluntary work in a Buddhist temple in Sri Lanka. I shared some of my feelings and emotions of that experience, and I noticed that each participant smiled somewhere in this story and it helped making the online interview a bit less formal. Sharing a personal example felt as a very authentic way to start the each interview. I believed that this kind of introduction created a sense of trust among the participants. The aim was to create a sense of trust and allow for an open conservation where people could talk freely about their experiences. After my introduction I asked them if they would tell something about their background and about their journey of becoming a Buddhist, because I felt like this question would further increase understanding and empathy.

Listening with compassion is also about recognizing our connectedness and acknowledging the struggles and conflicts we face as human beings (Rehling, 2008). The struggles and conflicts within this study are the shared human struggles over climate change issues and how climate change will impact – and in many countries already is impacting – human lives. In the interviews the participants and I often discussed personal experiences that acknowledge our connectedness. Examples of our shared humanity that were often discussed were: the fact that we all knew what it was like to learn as a child, or our shared experiences of traveling to places where climate change issues are much more visible, but also our shared struggles in the personal decisions that we make that impact the environment.

Within the Buddhist perspective, listening is a key element, because Buddhists believe that our happiness depends for a large part on our ability to listen (Lama & Cutler, 1998). Multiple interviewees talked about the importance of listening and thoughtfully expressing ourselves when we listen with compassion. Drawing on the Dalai Lama's notions of listening, as a researcher I should not be listening to the interviewee's answers about phenomena and experiences as if it were solid, independent entities (Lama & Cutler, 1998). Instead, researchers should listen, while keeping in mind the principle of the earlier mentioned 'dependent origination' and the wider complexities of the interviewee's answers (Lama, 1999). I kept this in mind while doing the interviews, and it helped me being much less judgemental about certain answers. It stimulated me to critically question certain answers while at the same time thinking from a more holistic perspective in which everything is interconnected. Since Buddhism is very much concerned with compassion and listening, I believe that having adopted compassionate listening as a tool within the interviews was an added value in doing research, particularly within this study, because it allowed me to grasp their school of thought more profoundly.

3.2.5 Autoethnography

Since this research started with a personal need to understand Buddhist perspectives on environmentalism more deeply and meaningfully, it was appropriate to use a method that would capture these personal experiences, such as autoethnography. Adams et al. (2017) argue that interviews can be well combined with other ethnographic methods like auto ethnographic observations. Within autoethnography a researcher foregrounds his or her

own experiences in research to describe and interpret cultural experiences, beliefs and practices, as they believe that a researcher's perspective informs and facilitates the research process (Adams et al., 2017). The aim of this kind of method is to offer outsiders a representation of the cultural practices in order to make them more familiar (Adams et al., 2017). The field notes and vivid descriptions should give readers the idea of being there in the cultural experience. Thus, additionally to the in-depth interviews, I decided that I would be participating in a variety of different workshops guided by Buddhist teachers. These workshops were organised by the Buddhist Institute 'Maitreya', based in both Loenen, Gelderland and in Amsterdam. I had chosen workshops that included Buddhist teachings, spirituality and notions of nature in particular. The workshops took place on the 5th, 6th and the 15th of July, of which the first one was at Maitreya Institute in Loenen and the latter two were online Zoom workshops organized by Maitreya Amsterdam. I have also participated in multiple guided meditation workshops on Tuesday evenings that I attended through a live Zoom meeting. The auto ethnographic observations were very useful for two main reasons. Firstly, it helped me to relate to the interviewees, especially since I had never been in a Buddhist Institute with the intention to participate in a workshop or guided meditation. Secondly, doing auto ethnographic fieldwork helped me to see through the eyes of a learner. It provided a reflection of a learner and I could experience first hand which Buddhists' insights and approaches related to nature I experienced as useful for climate change education. This research method was therefore particularly useful for answering sub questions 3 and 4, because my experiences and field notes complimented the insights of the Buddhists teachers about whether Buddhist teachings would enhance an affective, creative and participatory way of learning. Participating in the workshops also allowed me to understand how a spiritual approach of teaching enhances transformative learning. During the first live workshop in particular, I was able to write down everything that I felt was different or similar to a traditional Western educational setting. I was a full member of the research setting, without anyone knowing that I was a researcher. I wrote down my own experiences, feelings and reflections on the workshop in order to uncover how I experienced the various creative, participatory and affective approaches in transformative learning.

3.3 Data analysis

All interviews were audio-recorded, and except for one interview, all were transcribed as well by using a transcription tool called Amberscript. Due to a limited amount of time and personal struggle with typing out long texts behind a laptop all day, the decision was made to invest in a paid transcription tool. In order to analyse the verbal data - which required a certain level of interpretation – a qualitative content analysis was used to give meaning to the earlier collected interview data as well as the field notes from the autoethnographic observations (Schreier, 2012).

The intensity of working behind the laptop a few hours in a row and the need for alternation stimulated me to choose to manually code the transcribed interviews. I have not used a pre-set coding scheme, due to the exploratory nature of this research, which allowed for a more inductive approach (Boeije et al., 2009). However, the theoretical framework provided many

concepts and key terms, which were used in the topic list. Therefore, it must be recognized that these concepts most likely have enabled the way I interpreted the data. Themes emerged from this coding strategy, and I soon began to notice reoccurring themes, which were: Suffering, the human body in relation to nature, natural cyclical processes in relation to impermanence, interdependence related to spirituality, self-reflection, narratives in Buddhism, intuitive wisdom, creative writing, embodiment exercises by using all the senses, meditation/mindfulness exercises, and listening. After manually coding the themes, I started using axial coding, in which I grouped together smaller themes into four larger themes, namely: Nature conceptualisation, Spirituality, Creative, affective and participatory teaching methods, and Compassionate listening. In the final phase of selective coding I started writing down concepts and exploring cohesion between the different topics.

The difficulty in analysing the data was not in the actual analysis, but mainly during the incorporation of quotes that I wanted to present in the findings. The Dutch language was the native language of all interviewees. Some words or sayings that carry a certain meaning do not always have an exact equivalent in another language, in this case in English. Careful translation was therefore an important factor in presenting the findings. In order for important data to not get lost in translation, I carefully tried to listen to the recordings and write down the tone of voice that was used to describe a certain emotion, setting or experience. When I did translate a certain expression or phrase that did not have an equal equivalent, I always wrote down in a few sentences what was meant with a certain phrase.

3.4 Reflections on positionality

In the ontological and epistemological assumptions section I already touched upon aspects of positionality. In this section I will continue with explaining my positionality within this research. Ablett & Dyer (2010) argue that researchers can never be fully objective and will also bring in their personal subjective experiences to the research. In this sense, researchers are always 'with their personal context' when doing research. So with what kind of 'personal context' have I approached this research? First of all, I am a female Dutch student with mixed European and Asian roots. I am a practitioner of yoga and meditation and I have a strong interest in Buddhist philosophies and culture. I have lived in Malaysia amongst Buddhists and have experienced their way of living in that particular context.

Initially, I thought that religion could be a sensitive topic for people to talk about, so I was aware that some interviewees might feel reluctant to share sensitive information. However, this was not the case at all, since all interviewees were very open to answering all questions. Most interviewees expressed that they saw Buddhism more as a philosophy or 'way of life', instead of a religion. Nonetheless, I still wanted to take certain research ethics into account, by creating a mutually respectful, win-win situation with the research participants. In terms of my own religion, philosophy, or 'way of life', I have always considered myself as spiritual, but at the same time I have always struggled with the question: 'Are you religious?'. My answer is 'I do not know. Yes, I do pray to God before I eat and go to sleep, but I have never associated myself with any particular God or religion. In a way, I pray as part of my daily

routine or ritual, while at the same time practising having a clear mind and being conscious and grateful. Whether I believe that is religion, I do not know.

It is only fair to inform readers about the researcher's possible influence on research and identify biases, especially in qualitative social research. Within this project I have tried to take on an objective position in order to be able to claim that this research is written value free and neutral. However, it has never been my goal to completely remove myself from the process of writing this thesis and I am therefore aware of a certain amount of subjectivity in the way I have approached this research.

3.5 Limitations and ethical considerations

Due to the current situation we are still in regarding COVID-19, doing research in the last few months were a bit of a logistical challenge. Like many other academic institutions, Wageningen University & Research responded to the COVID-19 pandemic with international travel bans, domestic travel restrictions and halts to research if this would involve humans. Research remained uncertain during the fieldwork period, because it was difficult to say whether participants were willing to adopt alternative methods such as Skype meetings for interviews. However, the participants in this research were all very willing to do an interview either via Skype, Zoom, or some even suggested alternative video meeting apps such as 'Whereby' and Google Hangout. Establishing a personal connection through an online interview felt a bit more challenging, because I did not wanted the interviews to possibly lack depth. This is why I decided to start each interview with a short introduction about my own experience with Buddhism and about the research project. Then I asked the interviewees to tell something about their first encounter with Buddhism and how they got where they were now. This visibly helped the interviewees to become more at ease and to trust me with their insights and opinions. Additionally, since this study is about peoples' personal beliefs and understandings of nature and Buddhism, special attention was paid to ethical considerations. Participants that were involved in this research were informed about the aim and usage of this research. I asked every interviewee if I could audio-record the interviews and I guaranteed informed consent. Additionally, the participants were always able to draw out from the research if they would want this. Finally, if requested, the participants' names are being replaced by pseudonyms in the research documents, in order to ensure anonymity of the participants.

4 FINDINGS

4.1 Nature conceptualisation

All fourteen interviewees had between 5 and 42 years experience with practicing Buddhism and they all considered themselves as Buddhists. Since Buddhism plays a large role in each of the interviewees' lives, certain teachings of the Buddha have shaped the interviewees worldview and perspectives towards the environment. During the interviews it soon became clear that in order to answer the first sub question, which aims at understanding how Buddhist construct nature, certain fundamental Buddhists concepts need more thorough explanation. A pivotal concept that was mentioned by every single interviewee was the concept of suffering, which largely shapes the way Buddhists conceptualise the world. The concept of suffering has been introduced in chapter 2, where it was framed as a result of humanity's greed and ignorance for all living beings. However during the interviews it became clear, that suffering as a concept is misunderstood and if the true meaning behind the concept is not acknowledged, than the concept will just stay a static concept that is irrelevant for CCE. The following subchapter therefore helps to understand the complexity of the concept and its role in conceptualising nature. The last two subchapters explain how Buddhist conceptualise nature through the body and through a more cyclical perspective.

4.1.1 Understanding nature and climate change through Dukkha

The concept of suffering might be an unfamiliar way of looking at the environment in Western science. But such an alternative view is what makes it interesting and particularly useful according to Buddhist, Wageningen University Professor and ecologist Matthijs Schouten. However, three of the interviews who all had over 25 years of experience with practicing Buddhism, explained that Dukkha is misinterpreted in the Western world, because of its translation into suffering.

> *"Dukkha is more like unpleasant, unease, discomfort, hassle. These are much better words than suffering. Suffering has the connotation of Calvanistic suffering, like Jesus that died on the cross for us. However, Buddhists talk about a whole different kind of suffering. A wagon wheel that has a loose axle, of which the axle is worn out and the spokes are loose, then the wagon wheel looks more like an oval shape, which makes the wagon wobbly. So if you go through life with a wagon wheel that is broken, then you have to pull the cart really hard and with every hole in the ground the cart will go everywhere. This is Dukkha."* (Sebo Ebbens, Tibetan Buddhist teacher and writer, 74)

Thus, with '*Dukkha*' Buddhists do not only mean the hard ways of suffering, such as suffering from disease or death, but instead they mainly focus on smaller discomforts or troubles, such as suffering from stress, dissatisfaction, or disappointment. In other words, the kind of suffering that we experience when things do not go as we wish they would go. It is much

easier for people to associate with Dukkha when it is described as suffering from stress, dissatisfaction, or disappointment, because it is much more related to everyday situations. Bringing this to climate change discussions, the suffering from the stress that stems from the fear of environmental damage or ecological disaster, called eco-anxiety (Huizen, 2019) can than be seen as a perfect example of the impact of Dukkha. Hence, Dukkha in regards to environmentalism can be linked to humans' psychological wellbeing. This is in line with the ecocentric perspective in regards to the connection between environmentalism and emotional and physical illness (Coleman, 2006 as stated in Sponsel, 2012).

Another interviewee also illustrates how Dukkha and in particular the second Noble truth *('suffering is caused by ignorance and desire')* is linked to our psychological wellbeing. *"We are constantly busy with 'grabbing', with quick wins and such, with short-term successes, with self-centredness, grabbing what you think you want at first sight, 'I should have this, I should have that', the greediness"*(Dick Verstegen, Buddhist Zen teacher and writer, 79). This greediness and constant cravings for new things is tied to our consumerist lifestyle, which is at the basis of environmental problems. Philosophy teacher and Buddhist Erik Hoogcarspel illustrates suffering caused by the idea that we teach children about supply and demand in the next rather lengthy quote:

"Capitalism is at the base of climate change issues, and children are unconsciously being influenced by these existing ideas. […] At school they are being told that there is some sort of law of supply and demand. Sooner or later you start thinking that these market forces are the solutions to all of our problems. […] This law of supply and demand is natural due to scarcity. That is why you see that in politics they are constantly creating deficits, meaning that they are constantly trying to make people unhappy, because if you are happy, you don't need anything!"

(Erik Hoogcarspel, (Eastern) Philosophy teacher & Buddhist, 74)

There are multiple implications being made in this quote. First, it is implied that capitalism is one of the main causes of climate change problems. Second, children unconsciously act and make decisions upon the ideas behind capitalism that we impose on them. And thirdly, happiness comes from possessing less, something that multiple interviewees expressed. Many of the interviewees gave various examples of this suffering through cravings that they believe need to be taught to children in CCE: *"First use the clothes you have until they are not wearable anymore, before you buy new clothes"* (Radia Willems, Buddhist). Or: *"There was a story of a yogi, who saw a child drinking with their hands, so then the yogi threw away his cup and said: Well, now I do not need this anymore!"* (Erik Hoogcarspel, philosophy teacher and Buddhist). These were the type of examples that would come up in every interview. These examples indicate what Buddhists perceive as important for nature, and what needs to be taught to children in CCE. The conclusion that can be drawn from the previous quotes, is that Buddhists find it very important for children to learn from a young age that happiness does not depend on someone's possessions. Secondly, our cravings and desires for attachments only cause more suffering. When Buddhist and ecologist Matthijs Schouten was asked to summarize the most important lessons that can be learned from Buddhism for CCE, he explained:

"Climate change will mean a lot for many living beings. The idea that we do not exist independently from the world is crucial."
(Matthijs Schouten, Buddhist, ecologist and WUR professor, 68)

Van Schouten expresses that climate change is a form of suffering that is still to come. He and other interviewees explained that humans in a way already suffer from climate change. We suffer from the illusion that we are separate from our environment, something that Buddhist practitioner Loes Thijssen illustrates by saying: "*When the natural environment degenerates, we degenerate"* (Loes Thijssen, Buddhist).

So what we are seeing is that so far the interview responses with key actors in Buddhism in the Netherlands provide a profound insight into the pivotal Buddhist concept of suffering, making the link between this concept and environmentalism much clearer. Furthermore, based on the findings in this chapter it becomes clear why Buddhists find it important to teach others about the significance of a concept such as Dukkha. They want provide insights into an alternative paradigm, and by doing so, they have clarified the linkages between a Buddhist concept of suffering and environmentalism. This subchapter has also given a more thorough insight into why we should not live independently from our environment. This reflection between nature and ourselves will be elaborated in subchapter 5.1.3 The human body, before moving to another form of Dukkha that revolves around the suffering of impermanence, which will be discussed in subchapter 5.1.4 'A cyclical perspective'.

4.1.2 Understanding nature through the human body

Findings from interviews showed a significant contrast between Buddhist worldviews and Western worldviews in regards to understanding nature. One interviewee conveys this by saying something from a Western perspective: "*Minerals are there to feed plants, plants exist to feed animals, animals exist to feed and help mankind, so mankind was on the top of this hierarchy and the rest was subservient to mankind, because humans had a 'rational mind'"* (Matthijs van Schouten, Buddhist, WUR Professor and Ecologist). This hierarchy view on nature is typically seen in the Western world in order to distinguish different entities and phenomena. We can see a clear division in this quote between mankind and all other living beings, which is in line with the anthropocentric perspective on nature (Kopnina, 2012). Not only does this view contradict what Buddhists believe, it also does not correspond at all with Buddhists' way of expressing how they conceptualise nature, since they oftentimes do this while referring to the human body. Five interviewees talked about nature while mentioning something similar as the following quote from one of the interviewees: *"As it is in the inside [of our body], it is on the outside, it is a reflection of each other. Nature outside and nature within us is closely linked together"* (Loes Thijssen, Vajrayana Buddhist practitioner). Another interviewee confirmed this view towards nature by stating: *"There is no distinction between me and nature"* (Rozanne van der Veur, Coordinator Stichting Duizend Handen, Buddhist). Furthermore, many Buddhists believe that the body and the mind are like a small universe, a microcosm, in which the body and the mind are a reflection of the outer universe, the macrocosm (Lama Gangchen, 2009). The energy flows and elements in our body are seen to

be similar to the outer universe, thus including the environment. The following quote from one of the interviewees illustrates this:

"To take care of your body, is to take care of the environment. You cannot draw a line and say this is my body and that over there is where nature starts. […] The body and nature belong to the same dimension. It is the same kind of existence."
(Erik Hoogcarspel, (Eastern) philosophy teacher & Buddhist, 74)

This means that when you understand the environment in a way that it is a reflection of your body, it is much easier to understand that we must take care of the environment the same way as we do for our bodies. Another Buddhist teacher who is also a climate coach at Foundation Carbon Conversations, illustrates how the elements in nature are similar to our body through explaining about a meditation exercise that she often introduces to her students:

"What we have done previously is the four elements meditation. In the time of the Buddha there was a way to look at the world through the four elements, water, fire, air and earth. In the four elements meditation you are reflecting on the fact that you yourself are a composition of these four elements, just like the outer world and that there is a constant interaction between them. So this is a way, a meditation exercise that makes you aware of the fact that you are not separate from your environment. That you are part of it, and that it is all a large process of flows going back and forth. This can help people to connect or reconnect with the natural environment."
(Femke Merkx, Buddhist teacher, researcher and climate coach)

She emphasizes the importance of recognizing that our inner composition in our body is the same as the composition of the environment that we live in. With the 'earth' element Buddhists mean anything that we can touch (Khema, 2018). For our body this means our flesh and bones, our hair etc. The 'fire' elements include our body temperature and our capacity to eat and to digest. The 'air' element includes our breath and movement within our body and the movements we make with our bodies. Finally, we have the 'water' element, which is the binding elements and refers to the water, blood, sweat and tears that we consist of (Khema, 2018). Buddhists believe that these elements can be found within the environment and are constantly flowing (Femke Merkx, Buddhist teacher, researcher and climate coach).

This view of nature is completely opposite from the dominant Western anthropocentric view in which humans are separate entities from nature. Again, the Buddhist worldview described in the previous quotes emphasizes this Western suffering from the illusion of being separate from our environment. Another interviewee shares this view and mentioned that, according to the Buddhist worldview, we are living in 'degenerating times', in which she meant that the earth is becoming less pure. She also draws a comparison between the purity between the environment and the purity between our bodies in the following segment:

"The elements where the environment is made of, so earth, wind, water, fire and space, go hand in hand with the inner elements in our body so to speak, of which we are made of. These elements are also collectively degenerating. And this is why more people are becoming ill for example. Nowadays almost no one dies of old age, and almost everyone dies from diseases."

(Loes Thijssen, Vajrayana Buddhist practitioner)

This quote links environmentalism to two Buddhist concepts, 1) it show the interconnectedness or the principle of interdependence that Buddhists often refer to in relation to all existence, since she draws a parallel between nature and human health, and 2) the suffering that comes from the denial that we are part of nature, including the impact of this suffering related to human health and physiological wellbeing. Thus, polluting the environment, equals self-destruction, as we are polluting our own bodies, physically with pollution and mentally and emotionally with the stress (aka the Dukkha of eco-anxiety) that comes with it. Another interviewee who had been working as a coordinator and manager in many nature and landscape projects before becoming a Buddhist Zen teacher, also illustrated the interconnectedness between the outer environment and the inner environment within our body, through a simple but relevant example:

"Nature is not something outside of you, but it is about yourself. […] I am currently looking out over DSM, a large chemical company. I look, and I can see a few of those pipes, and there are all kinds of stuff coming out. And you can look at it in a way such as 'Oh hey luckily these pipes are high, so I will not be that effected, and it won't be too bad because of the direction of the wind etcetera. But what it is actually about is: [breathes in deeply, breaths out and stays silence for a few seconds]. That is the difference! It is about the air of yours and I!"

(Dirk Polder, Buddhist Zen Teacher)

As we have seen in this subchapter, the human body plays a significant role in how Buddhists define and conceptualise nature. It is believed that the human body consists of the same elements as nature. When we allow humans and their companies to pollute the air that we breathe in, the soil of the earth, our rivers and our oceans, we allow them to pollute us. When we link this to Dukkha, we can also conclude that we are not only polluting ourselves physically, but also mentally and emotionally by allowing ourselves to experience stress of environmental destruction. This is in line with what Scharmer (2009) explains as the third gap in the Anthropocene epoch, or the spiritual gap between ourselves and our soul, resulting in depression, burn-outs, etc. (Scharmer, 2009). From this view, we are not only destroying nature and causing climate change issues, but we are actually threatening our own existence. This self-destructive pattern of us threatens our bodies and minds to become more and more polluted. Along with this Buddhist perspective of nature through the reflection of the human body, there is another relevant Buddhist perspective that was often mentioned in relation to nature conceptualisation, which will be discussed in the next subchapter. This subchapter adds to the discussion of *why* we treat the environment the way that we do, and how a Buddhist perspective towards life in general can be useful for approaching nature in a different way.

4.1.3 A cyclical perspective – the importance of seasons

Contrasts between Western and Buddhist perspectives became even more evident during discussions about human existence and nature, which was insightful for understanding how nature is being conceptualised at Dutch schools in comparison to what Buddhists teach children about nature. Comments that Buddhist teachers made about natural processes and our existence demonstrated a view that is in line with cyclical thinking. An example of their cyclical way of thinking is their belief that our existence is cyclical. Buddhists have a different view on life and death, in which death is not the end station, but more like an intermediate station (Maarten de Vries, Buddhist teacher). This means that they believe that when someone dies, they will be reborn and this process of death and rebirth will continue until 'Nirvana' or Enlightenment is reached through the cessation of suffering (Maarten de Vries, Buddhist teacher). This way of viewing our existence is completely opposite to traditional linear thinking in the West, in which we are being taught in school about a past, a present and a future. Seeing and experiencing the world from a cyclical perspective is beneficial for the impact of CCE, because teaching children that existence is not linear can provoke a change in their perspective towards nature and therefore their environmental behaviour. One of the interviewees shared her view on the effectiveness of teaching children things from a cyclical perspective:

"Cyclical thinking makes you deal with natural resources very differently than you would with linear thinking. If you think 'Well, I will be 80 years old and until that time I should enjoy my life!' But if you think from the Buddhist view of rebirth, then you might think 'Okay, so I will be 80, and then I will be coming back to this earth and have to continue in this environment again, and again, and again. Then you will be looking with a completely different set of eyes. […] The same goes for planting a seed, which comes from a tree, which becomes compost, which will eventually produce seeds again. I think learning to think cyclically is therefore very valuable in climate change education."
(Loes Thijssen, Vajrayana Buddhist Practitioner)

What this quote shows is that the interviewee wants to illustrate cyclical thinking through the example of how Buddhist view life and natural resources. Interestingly, she immediately continues to draw a comparison between cyclical thinking about life and the cyclical life of the seed of a tree. This is something that I had noticed before during other interviews, where interviewees did not only describe life cycles of resources, but they often described nature through impermanence and cyclical processes, particularly through the use of examples that were season related. I often heard examples such as:

"Every year the seasons come and go, flowers blossom, leaves are falling. […] Buddhism is very much concerned with the seasons, also the spiritual significance of the seasons. For example the summer is all about harvesting and celebrating. Then we are slowly moving towards autumn, where it is all about letting go, leaves are falling off the trees." (Anya Wiersma, Buddhist Zen teacher)

"When I talk to children about impermanence, I always use the example of the seasons" (Jesse van Delft, Buddhist teacher at primary schools).

Loes Thijssen and Radia Willems express that they worry that humans have lost their sense of seasonality. Thijssen agrees with what her teacher has taught her about humans' decreasing sense for seasonality. She cites him: *"Because we live in dense cities, there are so little trees that provide us with information about the season."* She continues: *"We use heating in the winter, AC in the summer, and we can eat fruits all year long, because they are imported. So this all goes against the seasonality of things, we disturb the seasons and therefore also the natural energy flows in our body"* (Loes Thijssen, Buddhist).
Buddhist Zen teacher and walking coach Anya Wiersma gives another example of how the seasons outside of us are related to our inner seasons. She believes that humans have their own seasons, in which spring equals waking up in the morning, noon represents energy and power, which symbolizes summer. Autumn represents the afternoon in which we slowly let go of everything that has happened during the day. The night symbolizes winter, in which we return to ourselves and take the rest we much need. She believes that we take our own seasons for granted sometimes, by disrupting them when we for example use electronic devices in the evenings. In order to bridge this gap, she organizes nature walks based on the Japanese Zen Buddhist ritual of 'Shinrin Yoku', or 'forest bathing' (Anya Wiersma, Buddhist Zen teacher). It basically is a walk in the woods, but it focuses on using the senses, being 'awake', and becoming more aware of peoples' inner seasons. Buddhist teacher confirms the importance of consciously walking through forests: *"If you are thoughtlessly walking through a forest, then trees may feel more as a collection of things, you don't relate to that"* (Dirk Polder, Buddhist Zen teacher).

4.1.4 A cyclical perspective - Acknowledging impermanence through gardening

During the interviewees there were three participants who emphasized the importance of having school gardens for the purpose of connecting children with nature through participatory methods. Gardening has been a traditional Buddhist practice, in particular in Zen Buddhism. The spiritual meaning behind gardening, one interviewee states, is that it gives room for practicing contemplation, meditation and reflection. The participants believed that gardening and growing your own food can make children appreciate nature more, because they are able to actually see life cycles of plant and flowers that they can eat after they have taken care of them. *"Schoolyards can be redesigned with the aim of bringing nature closer to schools"* (Dirk Polder, Buddhist Zen teacher). School gardens are also a great example of impermanence, and gardening creates an intimate relationship between nature and children (Dirk Polder, Buddhist Zen teacher). These findings show that Buddhist practices again emphasize the concept of impermanence in relation to nature.

4.1.5 A cyclical perspective - Accepting impermanence for our own happiness

As we have seen, seasonality related examples are used by Buddhists to illustrate their view on the concept of impermanence. Impermanence is part of the cyclical perspective that

comes natural to Buddhists' views on nature. However, impermanence is also part of a particular type of suffering, as mentioned earlier. This type of suffering is called Viparinama-dukkha, in other words the suffering that comes from not being able to accept change or the truth of impermanence (Bernhard, 2011). Buddhists often relate this to the craving of pleasant experiences and the craving for it to continue (Bernhard, 2011). Think for example of a holiday. During that holiday how often do we say, 'I do not want this to end'. In this way, a pleasant experience always has an underlying dissatisfaction. This form of suffering goes beyond the realization that we do not need possessions for our happiness, it actually affirms that we also should not let our happiness be dependent on pleasant experiences. Bringing this to climate change discussions, we might ask ourselves: Do we really need to fly thousands of miles for these few impermanent moments of happiness when at the same time we know about the harm it does to our environment. When we accept this view of never getting truly happy or satisfied by pleasant experiences, perhaps we might be able to shift towards a more sober live in which we focus on intrinsic happiness instead. This was also discussed in some of the interviews, where participants expressed: "We have an intrinsic wish to be happy" (Radia WIllems, Buddhist). Many of the participants expressed that nature has the ability to intrinsically make us happy, and that connecting with nature allows us to turn to our true nature, our natural state of mind (Anya Wiersma, Zen Buddhist teacher). Lama Gangchen (2009) points out that our natural state of mind is being drawn to natural environments, which is why people usually feel healthier and happier in in mountains, forests, alongside clean rivers etcetera (p.37). Although it is not always possible for some people to escape urban places that do not have many trees, parks or clean rivers, it is important to recognise our mental and physical needs to be surrounded in natural and pure environments. It is for the benefit of our own health and our happiness (Lama Gangchen, 2009). Buddhist teacher Dirk Polder also expresses that nature's strength is that it is non-judgemental, that it has the ability of allowing people to be who ever they are. This might add to the reason why people feel happier in nature, because they do not have to justify or proof themselves in any way.

These examples show that a Buddhist view on nature can stimulate a more intrinsic form of happiness, which does not come from the earlier mentioned possession of things. This chapter has also shown the importance of understanding other cultures' perspectives on nature, the interconnectedness between multiple pivotal Buddhist concepts such as impermanence, the importance of the seasons, nature's ability to stimulate happiness, and how a simple activity such as gardening can help children to connect to nature. The next chapter will continue on Buddhist teachings, but more on how certain teaching approaches might be useful for climate change education.

4.2 A spiritual approach in Climate Change Education

For transformative education to be effective, it must be facilitated by spiritual learning experiences (Tolliver & Tisdell, 2006). Spiritual learning experiences and spiritual development are key teachings in Buddhism (UNHCR, 2012), which was clarified early on in the interviews. While analysing the data regarding spirituality, three concepts and discussion

points were often mentioned by the participants: 1) The principle of Interdependence, 2) Self-reflection, and 3) The discussion about whether spirituality should be used as a term in Dutch education. The following subchapters will uncover the discussions about these three concepts.

4.2.1 The principle of interdependence

During the interviews, the answers to what spirituality meant varied, but always touched upon similar concepts, such as *connecting with something larger then one self*, *gaining a deep insight into the purpose of life, self-development*, and one that was mostly mentioned; *the Buddhist concept of interdependence.* One interviewee who had been a Buddhist Zen teacher since 1995 explains what spirituality means to her:

"Spirituality to me is connecting, connecting with your surroundings, with your environment, and to gain understanding that everything is connected"
(Tetsue Roshi, Buddhist Zen teacher & mediator, 63).

In this quote the Buddhist principle of Interdependence, a profound connectedness, can be seen. In the next quote we can see a similar view on the concept of spirituality. Matthijs Schouten, Buddhist, ecologist at Staatsbosbeheer and professor at Wageningen University Department of Nature Conservation and Plant Ecology explains what spirituality means to him:

"*Spirituality is about connecting to something that is larger than one self, the connection with the miracle of existence. It is about realizing that you are part of something larger than yourself"*
(Matthijs Schouten, Buddhist, ecologist and WUR Professor, 68).

Buddhist lecturer Jesse van Delft who teaches humanistic Buddhist education at primary schools shares a similar view:

"If you look carefully at yourself, to your emotional world with a certain consciousness, and make a connection between your inner world and the outer world, then you are also engaging with spirituality"
(Jesse van Delft, Buddhist teacher at primary school).

Within these three interview quotes, the principle of interdependence is very clearly visible. Their holistic view on spirituality is very much in line with how they conceptualise nature and that we are all part of nature. Interestingly, the underlying theme of Interdependence was often visualized by the interviewees through examples of practical assignments that the interviewees used in their workshops or classes. Zen teacher Tetsue Roshi explained that she uses a simple assignment to make children and adults understand the importance of looking at the world with the principle of interdependence. She asks children and their parents to take a ball of wool to the mediation session. The participants then have to stand on different

sides of the room and while throwing the ball of wool they have to tell the other person a wish they have for them. After a while there is a whole web of woollen strings, which represent a network of connectivity, or interconnectedness. This holistic approach to nature is in line the ecocentric orientation of nature, or 'deep ecology' (Kopnina, 2012), in which all beings are interconnected.

To truly understand how interconnected we all are, multiple interviewees pointed me to the example Vietnamese Buddhist teacher Thich Nhat Hanh used to tell his students. Buddhist Dick Verstegen cites Thich Nhat Hanh:

"*I have an empty piece of paper here in front of me. What is in this piece of paper? There is wood in it. And the logger that took the tree down. And this tree could only live because of rain, sun and wind. So there is rain, sun and wind within this empty piece of paper. And so he continues."*

(Dick Verstegen, Zen Buddhist teacher and writer, 79)

This continues on for a while, but essentially he gives a perfect and understandable example of how interconnect we all are. Thich Nhat Hanh calls this 'interbeing', instead of just being, we are all 'interbeing' (Hanh, 2000). He explains that we are not separate entities and that our choices and decisions that we make everyday affect others. Some of the interviewees gave similar examples like the one from Thich Nhat Hanh, which can be seen in the following segment from Zen teacher Tetsue Roshi who describes a conservation she had with children in one of her sessions:

"This is a string of spaghetti. Where does it come from? From a package. Ok, but where does the package come from? From a store. Yes, and how did the package end up in a store? Through a truck. And before that, where is spaghetti made of? Of wheat! And where does wheat grow? In the earth. Ok, and what else do we need in order for the wheat to grow? Rain! Ok, just rain? No, also sunshine! So also the wind, otherwise the rain will not be there. Ok yes yes, So in this string of spaghetti there is rain, sunshine, wind, earth, a truck, the man who invented the truck, the truck driver, the employee of the store, you know, like that. That is a way to show them; wow everything is so interconnected."

(Tetsue Roshi, Buddhist Zen teacher & mediator, 63)

These quotes emphasize how important it is for Buddhists to teach children about interconnectivity. Another interviewee, SIlvie Walraven, who teaches Buddhist education at primary schools, agrees with this view on interdependence and that it is very useful for children to come into contact with a more spiritual approach of looking at nature. She illustrates this in the following segment:

"Changing one little thing in a chain, has tremendous consequences in the whole system, in the web of life as we call that. […] It is extremely important to realise the interconnectedness between us humans and the environment. We evolve together."

(Silvie Walraven, Buddhist teacher)

4.2.2 Self-reflection

Besides the importance of understanding the principle of interdependence for the conceptualisation of spiritualty, there was a second element that was mentioned by ten interviewees, namely the importance of self-reflection. Many interviewees said something similar to:

"Spirituality is getting to know myself more and more. It is easy to point fingers at others, but for children it is important to learn from a young age what you can do yourself" (Silvie Walraven, Buddhist teacher).

And: *"Spirituality starts with someone who is willing to look at themselves, so a bit of self-reflection, and questions such as: What am I doing on this earth? What is the true purpose of life?"* […] *"I feel that in my classes [philosophy classes in secondary school] there was little room for spiritual experiences, that is just the way it goes in education. Most of the time you are just occupied with managing the group of children and making sure they receive the knowledge they need"* (Rozanne van der Veur, Buddhist teacher).

The first quote suggests that self-reflection is not happening enough in the Dutch education system and that it needs more attention. The second quote confirms the lack of time educators and children get for self-reflection, and therefore the lack of room for incorporating a spiritual approach. When van der Veur expresses "*that is just the way it goes in education*", and the look on her face when saying this, basically says that she has accepted the way Dutch education deals with the division of time and introducing alternative experiences, let alone spiritual experiences.

Another interviewee who currently works in an educational organisation explained her concern that there is not many room during school hours for these kinds of meaningful questions or a more spiritual approach, while self-reflection is important according to the school that she works.

"There must be less pressure on education, in order for such an approach [spiritual approach] to be part of education. And if they actually implemented it, they always express how great it is."
(Jesse van Delft, Buddhist primary school teacher)

This quote affirms the earlier mentioned quote, and again illustrates underlying tensions in Dutch education in regards to pressure and the amount of time teachers get to incorporate alternative learning experiences. These underlying tensions are also in line with the fact that the Netherlands has not placed emphasis on the development of CCE, and therefor is falling behind on countries such as Costa Rica, Kenya, Chile, The Dominican Republic or Brazil (UNESCO, 2015). This demonstrates that Dutch Education remains quite static and unchanged in terms of adopting new and alternative courses and approaches for teaching.

4.2.3 Using the concept, but not the word

A third finding that reoccurred multiple times in the data about spirituality, was the fact that interviewees said that it might be a bit difficult for children to fully grasp what spirituality means. This is why four of the interviewees suggested when introducing children with a more spiritual approach it is not necessary to use the word *'spirituality'*. Instead, we could be talking about the '*miracle of existence'* or the '*miracle of this earth'* (Dick Verstegen; Matthijs Schouten; Rozanne van der Veur). Then the concept may seem more natural to children. It is interesting that four interviewees state that we should not be using 'spirituality' in formal Dutch education, although the term is often used in Buddhism practices in the Netherlands. This says something about Buddhism's position in the Netherlands, and that corresponding ideas such as spirituality, do not fit the in the traditional Dutch secular education systems (yet).

According to Dirk Polder it should be easy to explore a more spiritual approach to nature, because this is natural for particularly children in primary school. He explains this in the following segment: *"The fun thing about working with children is that they, generally speaking, are in a magical life phase, at least young children. For them it is much easier than for us, for them is it completely a matter of course"* (Dirk Polder, Buddhist Zen teacher). What this quote reveals is that the participant unintentionally claims that the earlier you start teaching children about spirituality, the more positive influence that has on how they later shape their perspective. In other words, he suggests educators to anticipate on young children's imaginative capabilities at that time in their lives. Similar to the previous comments made by participants regarding 'the miracle of existence', it seemed as if participants unconsciously exemplified that 'spirituality' does not fit in this secular society and that we therefore need to rename it in order to make it more accessible for children and their parents alike.

4.3 Creative teaching methods

Having first established the main views and perspectives on nature and spirituality, I now take the analysis to the next level by looking into which Buddhist teaching methods to transfer knowledge to children and young people can contribute to developing a creative, affective and participatory approach in climate change education. This subchapter focuses on creative teaching approaches.

4.3.1 Using narrative for creative learning

Those offering Buddhist workshops and classes can be divided into two main groups. First, there are Buddhist teachers who started offering humanistic Buddhist education on public primary schools in cooperation with the Dutch Ministry of Education and the Dutch Buddhist Association. Second, the other Buddhist teachers that were part of this study offered Buddhist workshops in their Sangha, or as workshops in organisations. Many of the latter group had been, or were still working as lecturers at primary- or high school or as professors

at Universities. Some worked in different fields, but still used Buddhist knowledge on a daily basis in their working environment.

Almost all participants made great use of narrative as a creative tool to transfer knowledge about nature to their students, particularly through the use of Jataka tales. A Jataka is a story about one of the former lives of the Buddha, before he reached Enlightenment. It always includes a Buddhist moral or ethic, and the Buddha is usually depicted as an animal. Over 500 of these stories are written in the Pali-canon, a series of writings, in which the original teachings and speeches of the Buddha are documented (Baets, 2017). The interviewees who brought up these Jataka tales were all Buddhists who had more than 25 years of experience in Buddhism, meaning that especially the older generations of Buddhists are familiar with the tales. One of the interviewees, Matthijs Schouten explains the purpose of the Jatakas and how they are still being used for didactic purposes:

"Ultimately, the Jatakas all have the goal of showing how the Buddha was preparing himself for his 'Buddhahood' through self-sacrifice, through compassion, and more. […] These stories sound like fairy tales to us, but certain virtues, and in particular the virtue of compassion is very strongly emphasized. And it is not only about a virtue that can exist between people, but also virtues that are relevant between mankind and animals. And these stories are being told to children all over Asia, it is the first thing a child is being told when they go to school!"
(Matthijs Schouten, Buddhist, ecologist and WUR Professor, 68)

In the last sentence Van Schouten emphasizes what the first things children in Asia are learning in education. By stating this, and without actually saying it, he indirectly says that Dutch children are not learning these virtues at the beginning of their education. Philosophy and Buddhist teacher Erik Hoogcarspel believes that Jataka tales can be a useful tool to teach children certain virtues and values, especially in education related to nature. He mentions that these tales must be slightly adjusted, because they are no longer of this time. Some Jataka tales might become dangerous because they go too far in a sense that some strong devotees searched for similar ways of self-immolation, the same way Buddha does in one of the tales when he offers his own body to a starving tigress with cups (Erik Hoogcarspel, 2020). He also refers to a tale that he often uses in his classes, called the Kisa Gotami tale. This tale is not a Jataka, since it is not about one of Buddha's former lives. However, this story plays out during the time of the Enlightened Buddha, and is a very famous tale amongst Buddhists. In the next rather lengthy quote the tale is being presented:

"Kisa Gotami had a son who had past away. She was grieving and walking with him in her arms for days until she heard that the Buddha came by the village. She went to see the Boeddha with her dead son in her arms and said; Well I have heard that you can, ehm, that you are a special human being and that you can do a lot.. Can you bring my son back to life? Then the Buddha said; Well, that is very difficult, but what I do need is a mustard seed from a house where no one has ever died. So yes, Kisa Gotami was running through the village, asking at each house if someone had ever died there and if she could have one mustard seed. There was not a single house where no one had ever died. So yes, at the end of the day Kisa

Gotami comes back to the Buddha exhausted and said; Okay, I understand now, death is part of life and there is only one thing you can do, which is accepting the way it is."
(Erik Hoogcarspel, (Eastern) philosophy teacher & Buddhist, 74)

This story is structured the same way as many Jataka tales and in this case it teaches us about the important virtue of the earlier mentioned impermanence, one of Buddha's prominent teachings. This tale is a perfect example of a creative way of teaching children about certain virtues in life. Bringing this to climate change education discussions, some interviewees explained that a virtue such as impermanence in nature can be explained through narrative very well, for example through the use of the seasons. Jesse van Delft, Buddhist teacher and creator of art education for children, uses Jataka tales in a very practical and playful way. She does role-play and theatre plays with children around certain Jataka tales, in which she let children play out a narrative. She had previously done a theatre play around the narrative 'what does the world and the environment look like today, and what would we like to change'. She believed that these creative exercises introduced children to contemporary topics such as climate change and made them more aware while doing this in a playful way. Furthermore, she makes mandalas (circular symbolical patterns) from sand with children to teach them about the impermanent nature of things. Making sand mandalas is an ancient Buddhist tradition, in which Buddhist monks spend days and sometimes weeks to make large-scale mandalas with naturally coloured sand made of all kinds of coloured stones (Lamadans, 2020). After they have finished the mandala, a ceremony will be held and the mandala will be wiped out. The sand will be collected and returned to nature in a nearby river (Lamadans, 2020). This is another ritual that teaches us about the impermanence of things, which can be done very easily with children (Jesse van Delft, 2020). However, she experienced that children sometimes found it a bit difficult to wipe out the sand mandala they had just made into perfection. This demonstrates the earlier mentioned Viparinama-Dukkha, which comes from not being able to accept the truth of impermanence. Children may want to hold on to these attachments to show what they made to their parents. This is a very different exercise than what can usually be found in traditional Dutch primary schools. The fact that some children found it difficult to erase what they had just made, is a reflection of what is emphasized in Dutch education and more importantly, what is not addressed adequately (e.g. a concept like impermanence or detachment).

4.3.2 Developing intuitive wisdom

Besides using narrative, another creative tool, which was mentioned by particularly all Buddhist Zen teachers in the interviews, is the usage of Koans. Koans are part of old Buddhist Zen practices and are profound, cryptic and often ambiguous questions that a Zen teacher would ask his students. These questions could sounds like: "*How do you stop the sound of the bell? […] Or how do you stop a tree from moving in the wind?"* (Dick Vestegen, Zen Buddhist teacher and writer, 79). The first example Dick Verstegen presents to me is often part of a workshop that he gives which involves rituals and practices involving singing bowls. He believes that such a practice with using koans for children could be a creative tool

to teach children to really focus on a question without immediately answering with rational and straightforward answers. When he says 'rational and straightforward answers' he refers to the usual Dutch standards of discussing questions in education. Thus, by saying this he draws a comparison between Eastern and Western standards and ideas of what is seen as the 'right' way of learning. Instead, the answers to koans should be much more instinctively, also known as what Buddhist like to train: intuitive wisdom (Dick Verstegen, 2020). Buddhism is often seen as a form of 'inner science' and being aware of inner experiences and being able to reflect on them is a very powerful thing to teach children (Loes Thijssen; Radia Willems). Buddhist Radia Willems explains how her children have developed this self-awareness through listening more closely to these inner experiences and processes. She believes that children who have developed this quality will benefit from this later on in their lives, because their worldview and reasoning for things have become natural. This idea of inner science reflects the 'presencing' Scharmer argues for in Theory U, which unfolds when we would go to the inner place of stillness within ourselves (Scharmer, 2009). Developing intuitive wisdom can therefore be seen as something that enables transformative learning. Buddhist primary teacher Jesse van Delft is also a supporter of teaching children to think about contemporary issues without having to know the answer. When she created a role-play with children about a destroyed earth, neither the audience nor the children had a clue if it ended in a bad or good way, which was odd to them. She expresses that in educational settings it is always expected from children and from teachers to have the right answer to everything, but that is not what Buddhism teachings about intuitive wisdom are about and we can learn from that (Jesse van Delft, Buddhist primary teacher). By stating that children and the audience (mostly consisting of the children's parents) found it *'odd'* that the theatre play did not have a clear ending, illustrates the how Western ideas of wrong or right, and bad and good emerge in everyday situations, which have become normal to us.

Buddhist Zen teacher Tetsue Roshi also believes in the power of Koans for education, particularly because it is a challenging question that sparks discussion where you can reflect on in a group. She is specialised in organising family retreats and always uses creative tools to interact with both children and parents. Koans are also used to develop other qualities, such as flexibility and openness, because it helps people to dare to try out answers, to have an open mind, and acknowledge that we cannot know everything. Buddhists believe that this 'not-knowing' is useful for being able to see from different perspectives (Sudholter, 2019). Again, this displays the difference between what is taught in traditional Dutch education systems and what is taught in Buddhism to children and young people.

4.3.3 Creative writing with children

What became clear from earlier findings about nature conceptualisation was the principle of interdependence and how connected we are to nature. Buddhist teacher at a primary school, Jesse van Delft illustrates how she would teach nature and climate change subjects to children from a holistic point of view, keeping in mind the Buddhist concept of interdependence. A practical tool she would use is the content derived from Middle Way Education, a non-profit organisation that uses traditional Buddhist knowledge to enhance modern education (Middle Way Education, 2020). They are using multiple different

resources to gather content for children, parents and teachers. Many of the resources they use are worksheets from Bala Kids from Shambhala Publications. These worksheets are simple exercises for children to get introduced to topics such as compassion, resilience and connectedness. The example below includes exercises from a worksheet for children between the ages of 5 to 12 regarding the topic of interdependence.

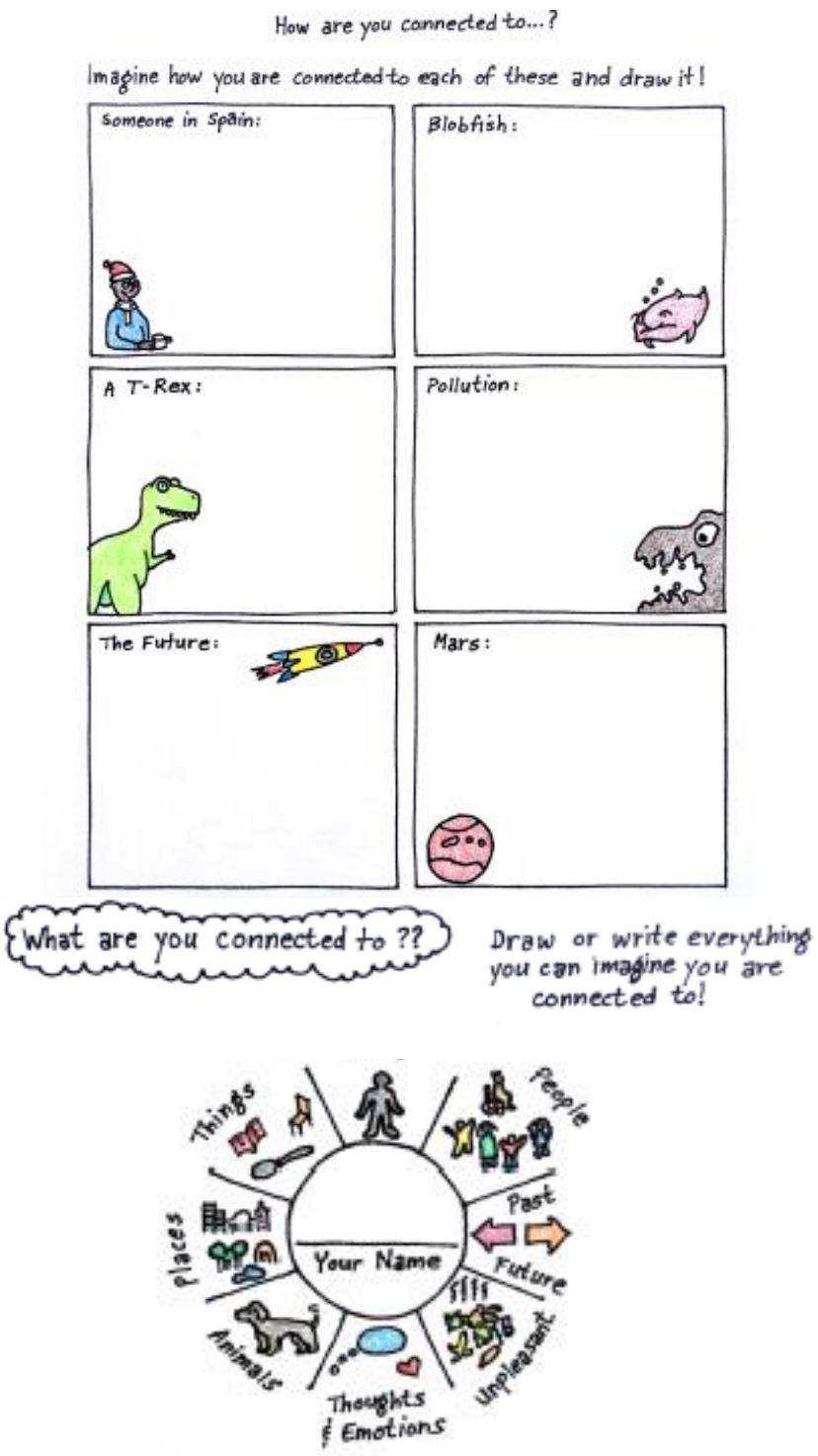

Figure 4: Creative writing tool (Middle Way Education, 2020)

This example is a tool that is being used by Buddhist teachers in primary education. Jesse van Delft explained that this writing and drawing tool helps children to think about the interconnectedness between themselves and other beings or things in a creative and fun way. She believes that a similar exercise can be done which revolves more around the theme of nature and climate change. In this particular example we can already see a few subjects that are related to nature, such as the interconnections between a child and pollution, a child and animals, and a child and places. And again, the body also plays a large role in the exercise, which is very typical for the Buddhist worldview. Buddhist teacher Tetsue Roshi mentioned another example that she uses to stimulate children to think about the true meaning of topics while using creative writing. She would make an 'elfje', which is similar to a type of poem, called Cinquain or Japanese Haiku:

"One of the things I really like to use with children, if you really want them to understand the essence of something. Let's say if you have worked on a certain theme for a while. At the end I would usually encourage them to make an 'elfje'. An 'elfje' is a poem, which starts with, err, the first line is one word, the second one two words, the third one three words, the fourth one four words and the last line is one word. Then you have exactly eleven words, that is why it is called a 'elfje'. And the nice thing about this is that children are being forced to search for the essence. What is it [the theme] really about?"
(Tetsue Roshi, Buddhist Zen teacher & mediator, 63)

What can be seen from this quote is that these kinds of poems are being used for didactic purposes and are useful to teach children the essence behind a word or theme. Below is an example of such a poem related to nature:

Tree
Tall, green,
Growing, reaching, standing
A witness of the past
Future
(Grapevine, 2020)

The idea behind these kinds of poems is to start with the subject in the first sentence, before writing down two words to describe the subject in the second sentence (Grapevine, 2020). The third sentence has three words that describe an action related to the subject (Grapevine, 2020). In the fourth line there should be four words to describe the subject even more. This is usually an emotion or feeling related to the subject. The final line includes one word, which refers back to the subject or sums up the poem (Grapevine, 2020). This exercise draws upon several didactic methods, because it teaches children to think about the essence of a subject. Secondly, it stimulates them to describe their own emotions related to the subject. And lastly, it stimulates children to write in a more creative way.

4.4 Affective and participatory teaching methods

Besides exploring the creative teachings methods Buddhists would use to transfer knowledge about nature and climate change related topics, the second and third element of transformative learning involves an affect-driven and participatory approach. These two elements were often used interchangeably and also touched upon similar elements, including emotions, bodily responses, and involvement in regional projects. This is why the affective and participatory teaching approaches will be discussed in the same subchapter. During the interviews, it soon became clear that Buddhists had multiple ways of using affective and participatory teaching methods, in which the body and inner experiences are central. Besides the more bodily experiences, challenging dominant paradigms, including diverse perspectives, co-creating and bringing in learners' own experiences are also seen as crucial elements of this affective and participatory educational approach, which will also be discussed in the next section.

4.4.1 Learning about different perspectives through embodiment exercises

Buddhist primary teacher Jesse van Delft likes using learning methods and exercises of the earlier mentioned Middle Way Education. Their educational worksheets are publically available for teachers to use in their own classes. In order to understand what elements of Buddhist perspectives would be useful for the content of climate change education, I wanted to review one of the worksheets they would use related to environmentalism while using traditional Buddhist knowledge to enhance modern education. An example that is being used by teachers for children from the ages of five to eight is the 'Scent trail scavenger hunt'. This activity was used to make children understand how ants and other insects experience the world through their smelling sense (Middle Way Education, 2020). It would also encourage them to appreciate non-human beings having intelligent ways of living, which are not less valid than human ways of living (Middle Way Education, 2020). The activity would need two teams, cotton balls that hold scent and two different scents that look alike when it would be applied to the cotton balls. A trail would be set out in the forest and each point (e.g. a tree) on the trail would have two cotton balls that are soaked in the scents. Each cotton ball has a letter attached to it, which in the end would form a word if the children would follow the same scent all along (Middle Way Education, 2020). This activity involves multiple elements of transformative learning while at the same time incorporates traditional Buddhist knowledge, especially in terms of the concept of interdependence, compassion for all living beings, and embodiment (moving like ants). Other interviewees used similar exercises, because they believe that the power of using the senses and actually being in nature is crucial for children to create empathy towards the environment, which is part of what they often called '*the miracle of existence*'.

Embodying another living being is a very common tool that Buddhist teachers use when discussing nature and climate change. Buddhist and climate coach Femke Merkx explains a typical exercise, called *'Council of all beings'*, that can be used to teach children about climate change from different perspectives:

"Around a certain topic, you take the identity of a non-human being. This can be a tree or an animal. Or it could be the ocean, or a none-living being. And then from that particular perspective you have to say something about, err, what you think about climate change, or pollution. And this is something you can do well with children. It is very imaginative."
(Femke Merkx, Buddhist teacher, researcher and climate coach)

The philosophy behind this exercise, she explains, comes from eco-philosopher and Buddhist teacher Joanna Macy. Together with John Seed, Pat Fleming and Arne Naess, she developed the book '*Thinking like a mountain; towards a council of all beings*'. The 'council of all beings'-exercise is seen as a communal ritual in which being aware of the interconnectedness in life is one of the main messages in how we engage with the environment (Seed et al, 2007).

Buddhist teachers Dirk Polder, Silvie Walraven, and Erik Hoogcarspel used similar examples and agreed that children are very good at empathising and identifying with animals.

"Children can do that very well, empathize with animals. What miseries fish can experience or that birds eat the balloons and that sort of things. Children can really understand that."
(Erik Hoogcarspel, (Eastern) philosophy teacher & Buddhist, 74)

"Children intuitively know that all living beings, including animals do not want to suffer."
(Silvie Walraven, Buddhist primary school teacher)

What this quote shows is that Buddhist teachings are very concerned other non-human perspectives on the environment, which is completely opposite to dominant Western perspectives. These kinds of exercises stimulate children to consider the positions of different stakeholders, whether these are human or non-human, which makes them understand the complexity of nature and climate change debates from a holistic perspective. Within this exercise the participants would sometimes also bring in the element of using multiple senses, by moving and acting as a mountain, as the sea or as a fish. They would afterwards reflect on emotions and feelings with children. This affect-driven exercise not only tackles different worldviews on nature, but it also touches upon somatic activities, bodily responses and emotions.

4.4.2 Using the sixth sense – personal notes from a workshop

A more personal example of affective teachings methods in which Buddhists teachers encourage student to utilize the senses was during a workshop I followed. During the first Buddhist workshop I attended on July 5th, 2020 at Maitreya Institute, I was introduced to a few of the main Buddhist teachings, while practicing with multiple different mediations. I was interested in the educational setting of the workshop, alongside the actual content of the three-hour workshop. The workshop took place in a meditation room, a gym-sized room, with a wooden floor, and decorated with red yoga mats and cushions, a shrine with the picture of the Dalai Lama, fruit offerings, white flowers, paper lotuses, and Burgundy red

tablecloths. We each had to take our shoes off before entering the room and we sat down in halve a circle on the yoga mats and cushions. It was a very warm and welcoming atmosphere. I focused on my bodily emotions while being in the room and experienced a sense of feeling grounded, which I believe had to do with my solid crossed leg sitting posture. The Buddhist teacher sat on the same level as we did, which is also quite different than in modern educational classroom settings. Although the teacher was a respected Buddhist teacher, the fact that he sat at the same level as the rest of the group made him more of an equal. This brought a level of openness to the room, making me feel as if I could ask anything without being scared to ask 'foolish questions'. Shortly after the introduction, our group, which consisted of nine people, was introduced to the Buddhist view on the mind. Buddhists see the human mind as the sixth sense. Our teacher Maarten de Vries explains this through a simple example: *"A thought, for example, is a mental object, it is a perception of your mental consciousness, of your mind, not of any of the other five senses"* (Maarten de Vries, Buddhist teacher). In order to create a harmonious mind, one should find a balance in three qualities: clarity of the mind, stability, and relaxation (Maarten de Vries, Buddhist teacher). We then practiced with a few meditation sessions to find a balance in these three qualities.

4.4.3 Meditation and mindfulness practices for climate change education

Since the mind is so connected with the body in Buddhism, one might not be astound by the amount of activities for the mind that were suggested by the interviewees when I talked about affective learning methods. Typical Buddhist practices are mindfulness and meditation, whereby mindfulness focuses on noticing feelings, sensations and thoughts, meditation mainly pays attention to silence and being in the present moment (Maarten de Vries, Buddhist teacher). Below are two perspectives on mindfulness and meditation from Buddhists of different generations:

"You meditate to recognise your thoughts. You also meditate to tame your thoughts, and you do this to be more open to your inside and to your outer world. You need mental space to actually see. You learn to calm down your mind to see what happens around you."
(Sebo Ebbens, Tibetan Buddhist teacher and writer, 74)

"Eventually meditation to me means learning to see what sensation and thoughts pass by inside of you. And to not judge them, but just let it be."
(Jesse van Delft, Buddhist teacher at primary school)

Jesse van Delft and fellow Buddhist primary school teacher Silvie Walraven both use short mindfulness and meditation exercises in their classes:

"I always use short mindfulness exercises. That is a red thread throughout my classes. Mindfulness, just pausing for a moment, feeling you breath, err, feeling how you are seated. Trying to let certain thought's go, and focussing. Yes, many children indicate that they really appreciate this. Also because for once it is quiet in class... Generally speaking there is a lot of

noise throughout the day. But there are also children who find it very hard, who can't stop giggling. But generally speaking, most children enjoy it."
(Silvie Walraven, Buddhist primary school teacher)

So how can mindfulness exercises or meditation enhance climate change education is what I often asked the interviewees. Buddhist Femke Merkx organises climate conservations in small groups and she believes that the way we usually talk about climate change is often too confronting to people causing them to pull out of conservations. She and many other participants believe that children should not be put up with negative climate change narratives, crisis approaches and disaster scenarios. Mindfulness and meditation approaches topics such as climate change engage more with positive emotions by connecting to the environment and using compassion as a starting point.

"When people make decisions that are not so wholesome so to say, then it doesn't help to punish them for it. If we do that and we immediately correct people, which is something we tend to do in our Western culture, then many people will drop out of these conversations."
(Femke Merkx, Buddhist and Senior climate coach)

Instead of correcting people immediately and teaching people the facts about climate change, she focuses on creating a safe space in which people can discuss emotions that are released when discussing climate change issues. By using Buddhist teaching methods and small meditation and mindfulness exercises, participants in the climate conversations workshops are encouraged to focus more on what is happening within themselves and what emotions and feelings evolve when talking about climate change. Merkx believes that this is an effective way of transforming peoples' behaviour, because the changes that these people make to live more wholesome come from their intrinsic motivation, not because someone told them that they should change something for the benefit of the environment.

Buddhist primary school teacher Silvie Walraven says that mindfulness exercises give room for visualisations. She explains that she would make children sit in a circle with closed eyes and visualise that they are walking in a forest. During this visualized walk she would for example say that there is a pool in the middle of the forest that seems polluted with plastic bottles. She would ask children to think and reflect on what emotions or bodily responses they are feeling. These previous two examples show that within affect-driven teaching approaches, self-reflection and a more spiritual way of looking at the environment are major components. Dealing with emotions and bodily responses are important elements that seem to come back in every exercise about nature or climate change.

What we can see in the previous quotes is that mindfulness and mediation exercises are aimed at developing insight and tranquillity. The insights from the interviewees about meditation and mindfulness exercises can be linked to the insights about the earlier mentioned 'Dukkha' of 'eco-anxiety' and the development of intuitive wisdom. The meditation and mindfulness practices can help to alleviate the suffering people experience from worrying about climate change issues, by thinking clearly, grounding in the present reality and thus eliminating pointless worrying (a.k.a. suffering).

4.4.4 Compassionate listening

Compassionate listening was not only used as a research method, but it was also included as an interview question to find out whether participants thought that such a concept could enhance climate change education. “If you look at the social discourse in our society, it is all about conflict, distinction, and difference. The solution to these problems is compassionate listening.” (Matthijs Schouten, Buddhist, Professor and Ecologist). Buddhist teacher Dick Verstegen agreed and said “Compassionate listening is the core of everything!” (Dick Verstegen, Buddhist teacher). Other interviewees explained that compassionate listening is about giving someone your full attention while listening. It involves asking questions about how this person is feeling about a certain issue and asking questions that make the person in question come up with his or her own answers. It also includes listening with an open mind and without any judgement.

So could such a method be useful for climate change education? Buddhist teacher Sebo Ebbens believes it will: “I think that compassionate listening is on of the conditions for climate change education to succeed” (Sebo Ebbens, Buddhist teacher and writer). But in order to teach children this method, it is important that the teacher completely understands and embodies this method. According to Ebbens, the role of the teacher is very important in compassionate listening. He explains: “When I worked high school we had 15 urgent skills for lecturers, listening was one of them, but it was scored the lowest of all.” Child development psychologist Tetsue Roshi confirms that the role of the teacher is crucial in teaching children skills such as compassionate listening. “80 percent of what children learn from us is non-verbally, only 20 percent of what they learn comes from what we tell them.” (Tetsue Roshi, Buddhist teacher and mediator). These examples show that compassionate listening is indeed perceived as a crucial method for climate change education, because it creates room to talk about how different cultures conceptualise nature, without judging them, or placing them into boxes and only emphasizing the differences between Western and other cultures perspectives. From a Buddhist perspective we should be looking at the interconnections between these different perspectives and find common ground.

5 DISCUSSION & CONSLUSIONS

5.1 The objective and research questions

The objective of this research was to contribute to literature on affective, participatory and creative teaching approaches for the development of transformative CCE in the Netherlands, through the exploration of Buddhist perspectives and teachings on nature and environmentalism. Drawing inspiration from Buddhist worldviews, this study has explored key principles and virtues that could enhance CCE in a Western society.

The first sub question in this research was *'How do Buddhists construct nature?'* Findings in this study revealed that Buddhists construct nature through the following four concepts: 1) Suffering or '*Dukkha*', 2) Impermanence, and 3) The human body. First, a thorough understanding of the principle of Dukkha, or suffering as illustrated in subhapter 4.1.1, can help us understand why we constantly have cravings and desires to attachments in this capitalistic society. The Buddhist view of detaching ourselves from this kind of suffering was seen as important to teach children and young people, since it can encourages them to live with fewer things, which will benefit the environment and stimulate intrinsic happiness. Buddhists perceive climate change as a suffering that is still to come, since we are not realizing yet that we are suffering from the illusion that we are separate from the environment. Discussing this given in a child-friendly manner can help reshape children and young peoples perspectives towards the environment, and thus stimulate a transformation in their view. The findings also illustrated that Dukkha can be seen as a form of suffering from the stress that stems from the fear of environmental damage or ecological disaster. Hence, Dukkha in regards to environmentalism is linked to humans' psychological wellbeing, which build upon Coleman's (2006) argument that ecocentrics believe that alienation from nature is a major source of emotional and physical illness. The topic of health and happiness was often brought forward in relation to discussions about nature and what would happen if nature would slowly degenerate. This shows that Buddhists do indeed have a very ecocentric perspective towards the environment.

The second concept that Buddhists use to conceptualise nature is the value of our own body, as explained in subchapter 4.1.2. All interviewees conceptualised nature in a way that there is no distinction between their body and their environment, in which taking care of the environment, means taking care for your body. Participants have emphasized that we are composed from the same elements as the outer environment and when nature degenerates, we degenerate. In their view, polluting the environment equals self-destruction of mankind. The link between Dukkha became clearer at this point, because we are not only polluting ourselves physically, but also mentally and emotionally by allowing ourselves to experience stress of environmental destruction. This is in line with what Scharmer (2009) explains as the third gap in the Anthropocene epoch, or the spiritual gap between ourselves and our soul, resulting in depression, burn-outs, etc. (Scharmer, 2009). From this view, we are not only destroying nature and causing climate change issues, but we

are actually threatening our own existence. This self-destructive pattern of us threatens our bodies and minds to become more and more polluted.

The third Buddhist concept that gave insight into how Buddhists construct nature was their cyclical way of thinking about life processes and natural processes, as discussed in subchapters 4.1.3 to 4.1.5. This Buddhist teaching of impermanence and the use of the seasons can contribute to the content of CCE in a sense that it can teach us about alternative ways of consuming and exploiting natural resources. The Dukkha of impermanence can contribute to the content of CCE through assisting human understanding why pleasant experiences always have an underlying dissatisfaction. Acknowledging this fact can transform our perception of what we think we need in terms of intrinsic happiness, instead of depending on our circumstances and possessions. These three major Buddhist teachings about suffering, the human body, and impermanence can guide human understanding about human-nature relations and reshape the approach we may want to take when developing CCE that instigates transformation within children and young peoples' worldviews.

The second sub question in this study was *'In what ways can a spiritual approach enhance Climate Change Education?*' First, the principle of Interdependence (subchapter 4.2.1), or a profound interconnectedness can help us understand what spiritually meant to the Buddhists in this study, and how it can be applied in CCE. We have seen that Buddhist teachers take each opportunity to express this interconnectedness to children and young people through different exercises. This finding builds on existing literature about Buddhists' holistic view on nature, which is in line with '*deep ecology'* (Kopnina, 2012). Guiding children and young people to look at the world from a spiritual approach based on our interconnectedness can be valuable for CCE. The second concept spiritually consist of according to the interviewees is self-reflection, which is illustrated in subchapter 4.2.2. This is where a lot can be gained in Dutch education, because self-reflection is crucial in children shape their perspectives. However, it was emphasized that underlying tensions, such as the pressure in Dutch education or the lack of time schools get for incorporating alternative approaches may not allow space for a spiritual approach. Furthermore, a spiritual approach can enhance CCE when the term itself is not being used, as I explained in subchapter 4.2.3. Instead, educators and teachers should be using something similar to *'the miracle of existence'*, making spirituality more accessible and natural to particularly young children. It is suggested that educators anticipate on young children's imaginative capabilities in regards to spirituality, which will positively shape their perspective later in their lives. A spiritual approach not only provides new insights for CCE but it also enlightens us in a certain way. For example by making us question whether we should only be teaching children and young people scientific knowledge, instead of encouraging them to develop intuitive wisdom. Or the idea that we should always have an answer ready for everything, instead of accepting this '*not-knowing'*, which will allow us to view environmental issues from different perspectives. Then CCE will become transformative, which builds on existing literature that emphasizes that for transformative education to be effective, it must be facilitated by spiritual learning experiences (Tolliver & Tisdell, 2006).

The third and final sub question in this study was *"What elements of Buddhist teachings would enhance an affective, creative, and participatory approach in Climate Change Education?"* Buddhists in this study shared how they disseminate their environmental knowledge through creative methods such as using narratives to develop intuitive wisdom (subchapters 4.3.1 and 4.3.2) and explore virtues such as impermanence with children. This was often suggested in relation to creative activities such as theatre plays, or making sand mandalas. Not only did participants share their insights and experiences of using creative methods, they also shared their view on making ordinary activities more creative. For example by using writing and drawing templates that would encourage children and young people to think about the concept of interdependence, or writing cinquains to make children think about the essence of a theme, as explained in subchapter 4.3.3. For affective and participatory learning methods, participants would stimulate educators to use embodiment exercises for children and young people, in which they could use all of their senses. These are elaborated in sub chapters 4.4.1 and 4.4.2. A scent trail scavenger hunt or the council of all beings-exercise were excellent examples of encouraging children and young people to engage with the environment more meaningfully. It would also make them challenge dominant perspectives by embodying different stakeholders in these kinds of activities. Thus, Buddhist worldview challenges existing Western perspectives of human-nature relations and provides an alternative view on what CCE could look like. Furthermore, meditation and mindfulness exercises in combination with visualisation techniques were suggested as tools to strengthen children's spiritual connection to the environment, as illustrated in sub chapter 4.4.3. Encouraging children to pronounce their feelings and emotions in these exercises were central. Finally, compassionate listening (sub chapter 4.4.4) was seen as condition for climate change education to succeed, in which teachers play a significant role in embodying this method and allowing room for exploring different perspectives on nature and climate change. The emphasis should not be on distinction and difference, but instead it should focus on emotions, interconnections and similarities.

The results of this research build on the existing evidence of the importance of developing CCE that should draw on more arts-based practices, in order to make climate change more meaningful for children (Rousell & Cutter-Mackenzie-Knowles, 2020). Although the findings were in line with Rousell & Cutter-Mackenzie-Knowles (2020) suggestions for creative, affective and participatory CCE, this study has shown that the affective and participatory dimension are much more intertwined and cannot be seen as two separate dimensions of an approach. The findings were also in line with the Burns Model of Sustainability Pedagogy. All dimensions (content, perspectives, process, context and ecological design) were tackled through different examples of Buddhist didactic methods and were emphasized as important for transformative learning. Furthermore, this research has brought together different teachings of Buddhism in relation to environmentalism, which can be key in instigating a transformation in children and young peoples' perspectives. There has been a call for new paradigms and alternative worldviews to guide children and young peoples' understanding in regards to climate change (Daniels, 2010; Thathong, 2012). This research has illustrated the importance of listening to, and understanding other perspectives in regards to the natural world, that may not necessarily comply with Western academic standards.

5.2 Practical application of the results

In the beginning of this study I was aiming to focus on what can be gained in formal education in the Netherlands in regards to CCE, from primary through to higher education between the ages of five to twenty-one. During the interviews I made the decision to make a construct of this group by naming them 'children and young people', because I realized that it was not my goal to group the findings into primary, secondary and higher education. Instead the findings of this study were meant as an inspiration for children and young peoples' education. Therefore, when educators want to apply the insights of this study they must decide what insights and examples from Buddhist knowledge about nature works best for what age group. Furthermore, the findings in this study should be taken into account when considering how to develop effective and transformative CCE in the Netherlands. CCE that draws on Buddhist knowledge would need to place a special emphasis on experience-based learning methods, including embodiment activities, mindfulness or meditation exercises, and creative nature based activities. It is highly suggested to encourage children and young people to embody various human and non-human stakeholders, which will increase their sense of empathy for different living beings in the natural world. By adopting more of a holistic approach, children can explore interconnections between themes and environmental problems in different fields.

The findings have also shown that Buddhist ideas and terms like spirituality do not (yet) fit the traditional Dutch secular education systems, making it even more important to encourage schools and educators to explore alternative approaches in teaching environmentalism. Otherwise it might be the case that Dutch education remains static and unchanged in their curricula, making them fall behind on other countries' curricula on contemporary issues like climate change. The insights from the interviews with key actors in the Netherlands have brought the different elements of Buddhist teachings together with environmentalism and transformative learning, making it worth for educators to use them for future application.

It is also highly recommended, when developing climate change curricula, to include enough room for children to explore different understandings of nature. This could be realized by first understanding perceptions of nature through the different cultures within each class. The suggested method for such a conversation should involve exercises that stimulate compassionate listening.

From this study it became clear that it is of high importance to make children understand their position within nature. The dominant Western anthropocentric view will not make children and young people more spiritually connected to nature, because of the marginalization of non-human oriented interests and the human-nature separation. However, a Buddhist view of nature, which is in line with a deep ecology perspective, can instigate a transformation in children and young peoples' perspective towards nature and should therefore be adopted in CCE. Finally, it is recommended to incorporate arts-based exercises that leave room for self-reflection and the development of compassionate listening.

5.3 Reflection on research methods & proposal for future research

The process of doing research almost entirely from home due to the regulations in regards to COVID-19 has been fruitful. The workshops that I attended were useful for getting an overall sense of Buddhists teaching methods. However, some workshops were only online, due to COVID-19 measures, so I experienced these workshops as less useful, because there was not much interaction. As for the interviews, besides the advantage of the saved time and research costs of travelling, doing interviews online felt very suitable for this particular study. Mainly, because the topics that were discussed were not necessarily sensitive topics that could be better discussed in person. Thus, doing interviews online was a practical choice under the circumstances of COVID-19. Furthermore, having made a topic list beforehand helped structure the interviews. However, the topic list consisted of many concepts and key terms that derived from the theoretical framework. Therefore, it must be recognized that these concepts most likely have enabled the way I interpreted the data. This means that the findings might have been influenced by the method and corresponding tools I chose to use for this study.

The above-mentioned sensitive aspect in the interviews also leads to the discussion of whether the alternative research method of compassionate listening was considered as perceived as useful. While the application of this method was fruitful in many ways, it did feel as if this method would be particularly useful during real-life interviews that involve sensitive topics where you really need to emphasize with the other person. It requires body language, which is more difficult to show during video interviews. Compassionate listening requires the researcher to listen very carefully and ask the right questions that would show the participant a sense of shared suffering. This often led to the researcher asking questions that would not be relevant for interview questions, just to emphasize a little more with the participant and allow them to express themselves without interrupting their story. The method was however considered fruitful and can be recommended to researchers, since it actually encourages you to really listen to what the other person is saying, while at the same time stimulates you to think holistically and probe questions that are about the interconnectedness between the answers of an interviewee. Participants often shared stories of their own childhood, and by probing questions about the interconnectedness of phenomena, they sometimes only now realized why they behave towards they environment the way they do. In a sense compassionate listening works therapeutic, because it allows people to come up with their own answers, which sometimes lead to revelations for themselves.

To build further on the research findings, a few suggestions will be given for future research. This research has placed emphasis on exploring which Buddhists insights would be useful for developing CCE. It is beyond the scope of this research to have been studying practical implications and whether alternative insights would be accepted and implemented by educators. During a few interviews it became clear that underlying issues, such as the pressure on teachers in education, the fact that teachers are mostly trying to manage a class and try to transfer knowledge, do not yet allow for a lot of room for spiritual-, experience-based-, and creative methods. For future research it may be very useful to look into the

willingness of educational organisations and teachers for reshaping their curricula and use more of the earlier mentioned teaching methods. Along with such a study and to build further on the findings in this study, I would propose to do a comparison case study, by looking at how children on public schools that have not had Buddhist humanistic classes conceptualise nature, and how children that have had at least a year of Buddhist humanistic classes. The Buddhist humanistic education has only just finished their pilots last year, so there would be no reason to have spoken to children already at this stage. Future studies could focus more on how Buddhist humanistic education is perceived by children and to what extent their view on nature is being reshaped by these Buddhist teachings about nature. It is beyond the scope of this study to actually test whether Buddhists insights can change problematic frames of reference of children. A long-term research would be needed to study the changes in children's perspectives, values and behavior towards the environment after being taught Buddhist humanistic education. However, multiple teachers that had started teaching Buddhist humanistic education at primary schools did emphasize that children were more reflective, inclusive and open then before after a few classes of Buddhist teachings. Furthermore, transformative learning is also about letting go of certain dominant worldviews, in which Buddhism can actually play a crucial role.

Finally, in the beginning of this research I showed that research on alternative paradigms and worldviews for the development of CCE was scarce. The interviewees have clearly emphasized the need for children to learn about different perspectives on nature. In particular perspectives that are able to defy human-nature separation. Just like Buddhist wisdom there are many valuable and underrated paradigms and worldviews on nature that extract wisdom from indigenous- or non-human practices, which can be extremely relevant for climate change education.

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APPENDICES

Appendix 1 Interview guide

Instructions		Start by explaining the research, the objectives and why the interviewee is selected; Explain what will happen with the answers and ask for permission to record; Ask the participant if they want to remain anonymous; Explain the lay-out and give an indication of the lenght of the interview;
	Examples of informal opening questions to use	
1	*Could you maybe start by telling me a bit more about your profession as a Buddhist teacher?* *How do you perceive your role as a Buddhist teacher within workshops/classes?*	
2	*What do you know about Climate Change Education (in the Netherlands)?*	
	Interview Topic	**Interview questions**
1	Nature and climate change conceptualization	How do you as a Buddhist view nature? And can you explain the differences between old Buddhism beliefs about nature and the current perspective? How do you as a Buddhist view climate change? What do you believe are the causes for the climate change issues we face? What do you teach about nature/environmentalism in your classes/workshops/sessions? How can the concept of interdependence be applied in CCE for Dutch children? How can the Four Noble Truths be applied in CCE for Dutch children? How can the Noble Eightfold Path be applied in CCE for Dutch children? (For the researcher to check whether the main question of this topic is answered: 'How do Buddhists construct nature?')
2	Children's connectedness to nature	How do you perceive Dutch children's connectedness to nature?

3	Spirituality	How would you describe spirituality and what does the concept mean to you? Do you think Dutch children could benefit from a spiritual approach on climate change issues, if so, how? How would you incorporate spirituality in CCE? (For the researcher to check whether the main question of this topic is answered: 'In what ways can a spiritual approach enhance CCE?')
4	Affective teaching approaches	How do you think children can engage more meaningfully with climate change concerns? Within Buddhist teachings, are emotions and bodily responses provoked, and if so, how could these practices be applied to climate change education? How can bodily experiences, such as breathing exercises and meditation enhance CCE? Do you think that creating empathy for different perspectices of various stakeholders is important for CCE? Why? (For the researcher to check whether the main question of this topic is answered: 'What elements of Buddhist teachings would enhance an affective approach in CCE?')
5	Creative teaching approaches	Do you think using narrative/art/imagery can stimulate empathy towards the environment? If so, how? Within Buddhist teachings, are art, imagery and/or narrative used in learning? How can such an approach be applied to climate change education? Within Buddhist teachings, do you ever use creative approaches or exercises such as: artistic representations of topics, role play, poetry, storytelling, music? Why or why not? And do you think it might be useful for CCE? Would you consider nature-based/outdoor experiences necessary for CCE? Why? Significant events in Buddha's life took place in natural settings (Buddha was born, achieved enlightenment and died under trees). How can such a view be useful for CCE? (For the researcher to check whether the main question of this topic is answered: 'What elements of Buddhist teachings would enhance a creative approach in CCE?')
6	Participatory teaching approaches	What would you suggest as innovative, bottom-up approaches for climate change projects for children? Do you think it is important for children to engage with climate change projects that are culturally and regionallly relevant for them?

		Why? How important do you think it is for CCE to focus on the specific geographical area the learners live? Do you think that children should have more 'voice' in climate change debates? Why? (For the researcher to check whether the main question of this topic is answered: 'What elements of Buddhist teachings would enhance a participatory approach in CCE?')
7	Transformative learning	Do you think incorporating elements of Buddhist teachings and practices in Dutch public schools would benefit children or do you think Buddhism should be practised and taught only on Buddhist oriented schools? Do you think Buddhist teachings and/or practices could change beliefs, attitudes and behaviour of humans towards the environment, if so, how? How can Buddhism encourage fundamental changes in people's perspective towards the environment? What role can Buddhism play in removing ourselves from dominant worldviews? Would you consider personal reflection as important for CCE? Why? (For the researcher to check whether the main question of this topic is answered: 'Do you think Buddhism can enhance transformative learning, and if so, how?')
8	Content for Climate Change Education	What content would you consider as absolutely nessesary for climate change courses? What should be the focus of CCE? Do you think questioning dominant views on nature and challenging dominant perspectives should be a key element in climate change education, and why? Do you think it is important for CCE to focus on interconnections between topics (such as climate change, food systems, migration, globalisation), and why? How can a holistic understanding of different topics enhance CCE? Do you believe that CCE should be taught from different disciplinary lenses, and why? What elements from Buddhism teachings, perspectives and practices would be useful for the content for a climate change curricula?