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The Mirror Blinding Us to Systemic Change:

Examining the Transformative Potential of Sustainability Practices in Dutch Education

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November 2023

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Abstract

Hi, and welcome to this research journey where I reflect on the potential of Dutch sustainability education to drive systemic change. Through previous involvement in research on education-care arrangements, I have experienced how difficult it is to recognize and discuss assumptions that uphold an undesired system. These insights, coupled with my expertise in Political Ecology, Ubuntu Philosophy, and Sustainability, have led me to question the extend to which assumptions and frameworks [unconsciously] hinder sustainability education from achieving systemic change.

Through interviews with individuals actively engaged in the sustainability education sector and my personal experiences with 'good practices' in sustainability education, I demonstrate how the universalizing ontology of One World World (OWW) leaves us wondering around in the hall of mirrors. The sustainability education sector appears to resemble a 'salad bar' where people cherry-pick problem statements, topics, and strategies based on their preferences rather than following a systematic, interconnected approach. While my interviewees offer promising insights, there is a deficiency in understanding the interplay between problem definition, interventions, and future visions of sustainability education. Due to destructive beliefs and dualities, as outlined by Escobar & Blaser (2018; 2009), we withhold ourselves from discussing topics that extend beyond the environmental realm, scientific reasoning, and predefined frameworks. This limitation is significant because practices and structures contributing to systemic change often lie beyond those frameworks. It is my hope that this elaborated research journey contributes to fostering intercultural dialogue that embraces plural forms of sustainability education to accomplish systemic change. I belief that children, society, the world—each one of us—deserves an opportunity to unfold, come together, and flourish in symbiosis.

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Introduction

I started studying at the Wageningen University to learn how I could make a change in society. 'Making life more sustainable', is how I would have described it. Up until now, I believe that education is the place where to unfold such change. It is for a reason they say: as the twig is bent the tree is inclined. This is how I ended up writing this report you are about to read. A research journey that explores the intersection of education, systemic change, and political ontology in the Dutch education system.

Last year, I had the opportunity to participate in a research project about education-care arrangements in the Netherlands. Research indicated that the number of dropouts from primary and secondary education has increased with 50% between 2014 and 2019 (Hassink et al., 2020). This concerning trend asks for attention and suitable interventions that help reduce these numbers. Besides, the Dutch 'inclusive education' law (Wet Passend Onderwijs) places a responsibility on schools to provide a suitable educational environment for all children. Therefore, research about developments in the care farm sector have shed their light on education-care farms. Hassink (2021) shows how 49 farms in the Netherlands offer children long-term education with the aim of reintegrating into the regular school system. As contributor to this research in the form of an internship, my focus was on understanding the factors that have played a role in the success of these education-care farms.

When I started my internship, I found the concept of providing children with education, care, and practical activities in a natural environment to be an ideal approach. The arrangements appeared more comprehensive and inclusive than traditional forms of education as it has the potential to bypass the nature-culture and body-mind dichotomy. In practice, I learned that children are asked to help farmers work on their land, interact with animals and the natural environment, and devote time to their social-emotional development. In theory, they made me reflect about the growing emphasis on interconnectedness, reciprocity, embeddedness within nature, and mental health. Such practices challenge dominant structures in education, potentially paving the way for socially and environmentally sustainable alternatives (Brand et al., 2021).

As I acquired more knowledge and experience about education-care arrangements, my perspective gradually shifted. I observed children holding a cat while performing cognitive tasks to enhance their concentration, I learned how horse riding is facilitated to develop time-telling skills, and I engaged in conversations with teachers who search for creative methods to make school subjects more accessible. Parents/guardians, children, and employees experience that interventions bring about changes in children's daily lives. I understand that these initial results create a sense of hope for children who aspire to reintegrate into society. However, I am also worried by the objectifying approach that these interventions seem to uphold. The natural environment is viewed as a means to effectively integrate children back into school. To me, this is contradicting, knowing that this education system has been proven inadequate for meeting these children their specific needs. The instrumental view of nature in education reinforces the idea that knowledge and skills are solely acquired through human-centric activities, neglecting the importance of embodied and experiential learning. As Escobar (2020) argues, such dichotomies have contributed to the alienation and disconnection of humans from nature and themselves. In my experience, a disconnection from the self is

often seen by children visiting education-care farms. I have experienced how children their feelings and behaviors do not align. An accumulation and lack of understanding of emotions disables them to grasp their actual needs.

As I progressed in my internship, I became increasingly curious why so many people remain positive and believe in the value of education-care arrangements. Asking related questions to education-care providers, I noticed a lack of critical reflection towards their practices. Also, when I questioned the research team's work from a political ontological perspective, they struggled to respond effectively. Instead, they emphasized the importance of highlighting positive aspects of research, such as small-scale initiatives that could contribute to sustainable change.

As the end of my internship approached, my supervisor expressed his appreciation for my critical perspective on their research. Although I was surprised by this, as I had not previously encountered such openness to critical inquiry before, it also highlighted the complex challenges of implementing critical theory in practice. Despite growing awareness of the need for systemic change, researchers seem to lack a clear understanding about how to achieve it. This, along with discomfort in reviewing assumptions that come along with our worldview and scientific practices, can impede progress. At least for me, that was the case, as I had much difficulty meeting the expectations of the research group while also feeling free enough to critically reflect on the research that I did.

To me, it is highly frustrating and discouraging seeing and participating in research which, in fact, upholds an unsustainable system. I believe that many researchers in the field of critical theory encounter similar challenges. Researchers who take a positive approach should recognize the importance of understanding the impact of their practices. Without this comprehension, they may unintentionally achieve the opposite of their intended goals. Therefore, I feel the need to delve deeper into underlying assumptions and power structures that shape initiatives aiming to bring about systemic change. To do so, my prior research on education-care arrangements, coupled with my belief that education is the place for catalyzing change, has motivated me to start of this research journey on sustainability education and its potential for systemic change. Do they show similar patterns as I experienced in research about education-care farms, reinforcing an unsustainable system, or do they potentially contribute to systemic change?

Starting of this research journey, the following pages introduce theories that have continued to inspire and motivate me to work towards systemic change. Arturo Escobar, and especially his conception of 'The Pluriverse' has played an important role in this regard. Guided by the *Context, Evolution, and Theory that Shape this Journey*, I will explore and reflect upon a variety of sustainability initiatives within Dutch education, as well as draw upon my personal experiences with what I consider to be sustainability education. Those will be outlined in *the results*. The *Leren Voor Morgen* platform is used to seek inspiration from a diverse range of projects, which showcases a wide variety of sustainability-related initiatives. To reflect on sustainability education practices, I pose questions about the motivation behind an initiative, what they entail, and what they possibly will bring about with regards to systemic change. These findings will be elaborated upon in the sub-sections labeled *Past*, *Present*, and *Future*. To complement those, an outline of my personal experiences will provide additional insights

into how to analyze, interpret, and contextualize the externally obtained data. It is my hope that this research journey will contribute to facilitate a dialogue on the boundaries of the Western ontology and the possibilities they offer for a revised perspective on the sustainability of our education.

Context, Evolution, and Theory that Shape this Journey.

The invisibility of Western practices

Questioning our day-to-day practices is not easy. We grow up with them, live with them and reenforce them through living. Dutch citizens, for example, are all obligated to go to school when we reach the age of 5. It seems a matter of course rather than a topic of debate, and ideally, every child should have these same rights. And besides, let's take a moment to consider what is associated with a school. It probably involves a teacher who teaches children cognitive skills, a classroom where children follow classes, books that support children their learning process, and a blackboard to educate children about a particular subject.

The documentary *Schooling the world: the white man's last burden* takes its viewers on a journey to the Buddhist culture of Ladakh in the northern Indian Himalayas (Black, 2010). It delves into the hidden assumptions of Western culture by contrasting opposing worldviews of the Ladakh and Western volunteers (Marlens, Hurst & Grossan, 2010).

> Before I move on, I want to state that it should be recognized that there is much diversity to be found among each Western citizen and their approach to life. It is because I talk about and discuss widespread and regulated practices in this research that I chose to refer to *Western* society.

Through their educational aid work, the 'poor' Ladakh were helped to 'develop' and 'escape' their situations. But instead of improving their livelihoods, children spent less time on the lands or even left the rural countryside permanently. This has threatened the sustainable Ladakh livelihood to a large extent. Essential traditional knowledge about their local environment, cultural norms and sustainable living declined because the Ladakh methods of learning from elders to a younger generation eroded after the establishment of formal schools. Efforts merely contributed to environmental degradation, the breakdown of communities, and a loss of traditional knowledge.

To me, this documentary has been, and still is of great value. I got challenged to critically reflect on the many generalizing ideas I convey(ed) about education and life in general. I may have thought about alternative education forms, but never questioned the concept of a formal educational institution where students, under the guidance of teachers, acquire knowledge and skills. The documentary explains me that knowledge and practices are always bound to the time and context in which it is generated and are thus not universally applicable. The problems we face and the solutions we come with are all a result of the way we experience and interpret the world around us. This is seen in the way volunteers interpreted the problems the Ladakhi face and the solutions they have offered them. The same is true for the research team I have been working with during my internship. Although education-care farms and the research team recognize the problems of children participating in education-care arrangements, they still solve them following the same logic that caused these problems in the first place.

How a Western ontology shapes our everyday life.

Dutch education is a great example showing how time and place resonates in their contemporary practices. From the enlightenment, the industrial revolution and liberalization, neoliberalization, up to the present day, there has been an increased focus on individual success and measurable outcomes. Both are deeply rooted in private sector logics (Holloway, 2019). Up until now, we see how education resonates this logic in its focus on standardization, competition, and quantifiable achievements (Peck & Tickell, 2002; Hendrikse & Sidaway, 2008). In practical sense, the economic perspective takes on a more prominent role in education. Subject goals and content got adjusted to the needs of the economy, and new subjects are introduced such as "technology" and "computer science" (Lowyck et al., 1995). Also, the education sector itself is adopting a more entrepreneurial attitude by asking schools to increase their autonomy and financial independence (Lowyck et al., 1995). This evolution is shaped by a complex convergence of circumstances such as the foundational concept of ontology.

The concept *ontology* can be defined as a hidden framework through which a society understands the world, themselves and how they come into being, doing, and knowing (Escobar, 2018). A more refined definition is given by Blaser (2010), stating a three-layered definition of what is called an *ontology.*

> 1. The assumptions about what beings exist and their conditions of existence.
>
> 2. The way these assumptions shape socionatural configurations through daily practices. In simpler terms, ontologies don't come before or exist separately from our daily actions.
>
> 3. Assumptions are manifested through narratives, evident in ethnographic accounts, myths, and modern narratives like political speeches and news reports.

Through this framework, people enable themselves to go about knowing the world, make rules and define what counts as knowledge (Blaser, 2009). Escobar (2018) describes in his book *Designs for the pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds* that within the Western ontology we understand ourselves as *self-sufficient subjects confronting an "external world" made up of preexisting, self-standing objects that we can manipulate at will* (p. 93). Literature enacted this universalizing ontology as the so called "*one-world-world*" (OWW) The objectifying and rational stance of the OWW means that truth is only obtained and carried out through science. This assumption comes with a downside, as it has given rise to an artificial hierarchy within human societies, where only the Western truth is permitted to be integrated into everyday life (Neusiedl, 2021).

For the educations sector, the OWW ontology is conveyed through scientific and evidence-based teaching methods that conform to their ideas of modernity and progression. We generally find a top-down education structure in which children are taught 'objective' knowledge. These teaching methods are embedded in a curriculum that follows the developments of society at its own slow pace (Lowyck et al., 1995). Due to neoliberal capitalist movements, schools' autonomy increase causing them to expand or engage in collaborations and further specialize their expertise on cognitive knowledge transfer (Herman & Hofmann,

2019). Classes get bigger, there is less time and space for individual differences and the development social-emotional skills.

To make the concept more tangible, I did a quick search myself, looking for ways in which the OWW ontolgy gets conveyed.

It is easy to find ways in how you, too, are visually reaffirmed of the top-down teacher-student association we have with education. Simply do a search for a "teacher" icon in Microsoft Word. The results that appear all depict a teacher at least in front of a blackboard, sometimes accompanied by a pointer and/or an observing row of [passive] recipients. Although I have not asked a Ladakhi to share their association with education, I assume that it would be displayed differently.

Preparing children to participate in Dutch society reinforces the OWW ontology and has become a self-referential entity (Neusiedl, 2021). Minority truths, or ontologies, are [unconsciously] made invisible or seen as inferior. It is therefore made increasingly challenging for Dutch children to question everyday practices and engage in meaningful discussions about the political and ideological aspects inherent in education (Wals et al., 2022). Rose (1999) beautifully compares this situation to *a hall of mirrors* in which Dutch society engages in the vicious cycle of reinforcing the refinement of a neoliberal ideology. With this knowledge in mind, it is better explained why Western volunteers failed to help the Ladakhi develop. While the ontologies of the volunteers and the Ladakhi are structured around a different framework, these volunteers are not able to recognize another way of knowing the world. Ironically, this is again reflected in the documentary structure itself, as it uses social scientists to comment on Western practice to validate a non-Western ontology and lifestyle. It shows how difficult it is to recognize the hall of mirrors we move through.

Searching for a way out of the hall of mirrors.

To me, research about the OWW and ontological inequality has played a major role during my studies on systemic change. The dominant position of the OWW in Western society misses out on opportunities to challenge undesirable practices and instead consider practices that have arisen from other ontologies like buen vivir, ubuntu, sentipensar, kyosei, and hurai (Escobar, 2018). Input from these ontologies can be rather valuable as they demonstrate how life can also be centered around solidarity, interconnectedness, reciprocity, embeddedness in nature and health. The conceptions can challenge structures of inequality, oppression, and unsustainability, and promote justice, equality, and sustainability (Blaser, 2010; Escobar, 2018). In practical terms, I state that Western society should be encouraged to shift their focus from assisting a world 'out there', like how the volunteers tried to help the Ladakhi, to learning and discussing together if, how, and where to move from one direction to another.

Political ontology (PO) research does challenge the categories and hierarchical classifications historically deployed by governments, corporations, and the academy to impose a dominant reality structure (Escobar, 2004; Tornel, 2022). I therefore consider PO as appropriate theoretical framework to analyze how sustainability practices are put forward in Dutch

education. Contemporary sustainability research is mostly centered around the planetary boundaries of the world we live in. People share their worries about climate change, the exploitation of resources, or the loss of biodiversity. Brand et al. (2021) explain, however, that these concerns do not allow for a full consideration of the societal drivers of this ecological crisis. So instead of overcoming the mentioned planetary boundaries, thereby reenforcing unsustainable societal boundaries, Brand et al. (2021) too propose a shift of focus towards societal boundaries. It is likely to assume that also Dutch sustainability education is centered primarily around planetary boundaries. Therefore, theories on PO and the OWW provide important insights to this research journey where I discover the potential of Dutch sustainability education.

Enhancing our understanding of the OWW ontology

To enhance the understanding of the OWW ontology, Escobar (2018) has described a set of dualities and beliefs that cause negative social, ecological, and political consequences. Let me start by stating that I believe these create a fragmenting illusion for the readers of his work. The beliefs and dualities are all interconnected, serving as either consequences or causes of one another, and often complement each other. Nevertheless, they also serve as practical examples in gaining a deeper understanding of the OWW framework and help unveil the assumptions and the hegemonic stance underlying sustainability education in the Netherlands.

Four beliefs – the individual, science, the economy, and the real – are described as a crucial structure of the modern ontological default setting (Escobar, 2018, pp. 83–91).

The Individual	The belief that we exist as separate individuals with rights and a free will.
The Real	The belief that there is an objective reality 'out there' prior to, and independent of, the multiplicity of interactions that produce it.
Science	The belief in the concept of science as the foundation of valid knowledge claims in modern societies.
The Economy	The belief in the economy - individuals transact in markets, production of commodities, unlimited growth, accumulation of capital, progress, scarcity, and consumption - as a separate domain of thought and action.

The four beliefs are often neglected when analyzing neoliberal practices but play a central role in the imposition of its propagated truth and the way they interact with the 'objective' world (Escobar, 2018). To this research, these beliefs help me to understand and reflect on how sustainability initiatives in Dutch education are potentially framed, shaped, and hindered by the rationalist tradition.

Besides, Escobar (2018) mentions three fundamental dualisms that characterize Western modernity. They are important to this research journey as each binary establishes a hierarchy

within social, ecological and political contexts. They cause suppression, devaluation, subordination, and destruction of nonconforming knowledge sources. Sustainable or systemic change, however, is asking society for improved holistic practices. This can only be accomplished if we recognize and understand these, mostly hidden, dualities. The dualisms Escobar (2018) talks about are: the subject-object duality, the us-them duality, and the nature-culture duality. Again, it is important to recognize that all three dualities as seen as interconnected and complementary for the fragmentation of Western society. It could be argued that those three dualities have a long standing history. Blaser and Escobar (2016), drawing on Latour (1991) and Escobar (2004), contend that the Enlightenment era initially contributed to the division between the body and mind, resulting in what they term 'modernity-coloniality'. This began with 'the first great divide', distinguishing between nature and culture, where nature was harnessed for industrialization and economic progress. Subsequently, the 'second great divide' emerged, separating 'us' from 'them,' establishing a hierarchical distinction between Western ontology and those with different relationships to their environment. Although all three dualities follow-up and/or complement each other, they help us understand how modern education and sustainability is constructed, organized and propagated in the Netherlands.

In terms of educational practices, dualities unconsciously influence Dutch education to a large extent. In Dutch education, children receive instructions on how to perform specific tasks or movements from their teacher, prioritizing external guidance over the exploration of their own sensory experiences and individual approaches to the tasks at hand. Approaching the body as something material, it also makes sense that schools designed gym classes around the performance of physical movements (e.g. mastering a softball shot, completing a running circuit, giving grades) rather than on activities that highlight the experience itself (e.g., body practices like Taiji or Qigong, where participants concentrate on the intricate sensations of the movement, aiming for gentle and smooth execution, refining their technique, etc., with minimal guidance from the instructor) (Martínková, 2017). Within the realm of nature-culture duality it makes sense that Dutch children are increasingly taught about environmental issues through theoretical practices rather than direct engagement with nature. Moreover, the us-them duality can be observed in educational practices where diverse cultural perspectives are often marginalized or overlooked in favor of dominant cultural narratives, again, limiting the understanding of global interconnectedness.

Research aim

The OWW ontology and thereby the Dutch society I grew up in seem to have forgotten that reality comes about through our past, present, and future vision. Life is both you and me, the world we live in, our relations, interactions, and how we will endlessly unfold and transform. You can compare it to a forest, where plants, trees, and fungi share knowledge, spaces and nutrients and together form a resilient ecosystem. To me, especially fungi inspire me and challenge all that is considered alive or dead, plant or animal species, the individual or the plural through their appearance and behavior. As Sheldrake (2021) explains it: *fungi make our worlds, change our minds, and shape our futures*. There are numerous cultures and ontologies who have embraced such an interconnected lifestyle and have a strong awareness of the alive earth and their place within this life. Besides, we even know cultures that recognize the plurality of lives, or ontologies, that are liven. The Bajau people for example, who live in

Indonesia, constantly move in, and between, changeable land and water interfaces and fluid ontological constellations (Pauwelussen & Verschoor, 2017). Education for sustainability has been used as contemporary tool in an international political effort to ensure a sustainable future (Ärlemalm-Hagsér, 2014). Therefore, research on PO and the OWW suggest a change in the nature of reflection to an embodied, open-ended reflection, also enacting with other worlds (Escobar, 2018). Within education, a relational, critical, actional, ethical, and political pedagogy is therefore suggested. Considering the political ontological ground of the OWW ontology, it is, however, questionable whether contemporary sustainability practices in Dutch education fulfill those needs for systemic change. This is exactly what this research journey has explored.

Method

In this research, I aim to enhance understanding of sustainability education in the Netherlands. To do so, I have started a research journey that incorporates previous insights, predominantly from Arturo Escobar, Ubuntu philosophy, and my experiences gained during my internship on education-care arrangements. To evaluate the potential of education for driving systemic change, I have delved into the historical contexts, contemporary practices, and future perspectives of the sustainability education sector. To learn more about these topics, I engaged with a diverse range of stakeholders from the sustainability education sector, along with personal observations and experiences for what I consider sustainable education.

Data collection

As a starting point of my research journey, I have approached a diverse range of people working at Leren voor Morgen (LvM) through email. LvM operates as a collaborative platform dedicated to promoting sustainability education throughout the Netherlands. Their belief is that fostering unity across the entire sector will amplify its impact. As a result, it has become a central repository for various initiatives, enabling pioneers to connect and avoid reinventing the wheel. Therefore, I have considered it as representative cooperative for the overall sustainability education movement in the Netherlands. During the research, I gained more knowledge about the network of the sustainability education sector. This knowledge development, together with new suggestions from the people I had approached, I expanded my network and met new people to talk with and learn from. In this way, I have encountered a diverse range of individuals, with a total of 10 participants out of the 31 individuals I reached out to. These participants included advisors, sustainable education developers, coordinators within the sector, municipal employees, and people involved in policy making. In Appendix 1, a list of all interviewees is provided, along with descriptions of their occupations, relevance to the research topic, and pertinent prior experience. The data collection process consisted of nine online interviews conducted through MS Teams and Zoom, complemented by three meetings in-person. All were either audio or visual recorded and had a duration between 30 and 60 minutes.

The primary method I employed to enhance my understanding was conducting interviews, which I carried out in Dutch or English. It is important to note that the quotes included in my data analysis are therefore often translations of the original citation. Prior to our actual meetings, I did background research on their (professional) experiences. I researched their current and past work, any potential stances they held on sustainability (education) issues, and looked for information regarding the interventions they have been involved with. This information was used to develop my detailed interview questions which were structured using the 'what, how, why' method. All exact questions were adapted to the information I obtained through background research and prior interviews. In Appendix 2, you'll find a more detailed insight into the interview structure that I followed. To introduce the interview to my interviewees, I explained the context of my research, emphasizing that I was currently investigating sustainability in education. I shared my concerns regarding the actual systemic changes achieved by the various initiatives I had encountered during my studies. Drawing on my background in sociology and political ecology, I sought to use this as a starting point for our discussions, aiming to explore their experiences and perspectives on sustainability in

education. Together, the interviews aimed to uncover the rationale behind interviewees' involvement in sustainable education, the nature of their work, and their expectations for the future. Together, they identified potential opportunities and challenges related to sustainability education, whether these pertain to problem definition, execution, or goal formulation.

In addition to conducting interviews, I also made a visit to an organization that works on the development of sustainable education interventions. During this visit, I observed a wide variety of interventions and gained insights into their development. Furthermore, I spent a week actively participating in a sustainable education initiative called "Wild Perspectives." These specific insights are succinctly presented in an additional chapter where I describe various interventions I attended and considered valuable. I made detailed notes of both activities and added them to my dataset. These visits provided me with a deeper understanding of the organization and the visions they uphold.

The methods I use find their origin in Hermeneutic research. This research originally focusses on the interpretation of literature and texts. I have learned about this approach in African philosophy, where emphasis was placed on the diversity of truth development. I believe that the foundations of Hermeneutic Research can further evolve through the course of my research journey. Analyzing sustainability education through in-depth interviews and firsthand experiences, I find that this approach is the most suitable for conducting ontological research and expanding our understanding of how educational practices are constructed. This enables us to interpret and reflect on the work conducted in the sustainability education sector, shedding light on how reality got developed and whether this is [not] sustainable. Interviews are a valuable method because they allow for direct engagement with stakeholders in the sustainability education field. This direct interaction provides insights into their perspectives, motivations, and challenges, which are essential for grasping the complex dynamics of the sector. Additionally, the inclusion of personal experiences complements the interview data. It enables me to better understand the practical application of sustainability education and its impact. Together, unveiling the reality of Dutch sustainability education deepens our understanding of their contexts, the interventions, and the visions. This understanding allows us to reflect and engage in dialogue about the potential boundaries and opportunities for change and explore possibilities for a revised perspective on sustainability education, aiming to contribute to systemic change.

Challenges and opportunities

As my research continued, I noticed that it was often challenging to establish a shared understanding between me and my interviewees. Both me as a researcher and the interviewees I spoke to appeared entrenched in their own viewpoints. This sometimes made it difficult for me to gain a comprehensive understanding of the motives behind their actions within the sustainable education sector. To address this issue and overcome these challenges, I sought guidance form Birgit Boogaard, research expert in the field of intercultural dialogue and African philosophy and Ubuntu. She had previously inspired me to broaden my perspective and engage with alternative paradigms. Together we discussed various aspects including:

- How we view sustainability education interventions.
- Approaches to dealing with epistemological and ontological diversity in conversations.
- Strategies for raising sensitive topics related to the foundations of science and sustainability narratives.
- Methods to enhance dialogue and improve communication.

I also made use of noteworthy insights from my interviews to discuss in subsequent interviews. This iterative process allowed me to develop a deeper understanding about the perspectives and motivations of interviewees regarding the relation between their historical contexts, practices, and visions.

Data analysis

After collecting all the data, I had transcribed and coded all interviews using Microsoft Word. These transcripts were subsequently coded based on the predefined themes "past," "present", and "future". The decision to use this structure was driven by the recognition that the OWW ontology often obscures the temporal and contextual nature of reality/truth (Law, 2011). The 'past-present-future' approach facilitates a thorough examination of the interplay between problem definition, execution, and goal formulation, shedding light on potential issues and opportunities within Dutch sustainability education for systemic change. Having the themes predefined allowed for a more systematic approach to identifying subthemes, which were based on recurring similarities and differences within the themes. To provide additional structure and clarity, I created a coding tree (figure 1). These themes and subthemes have been central to my data analysis and will be further explored during the discussion of this research.
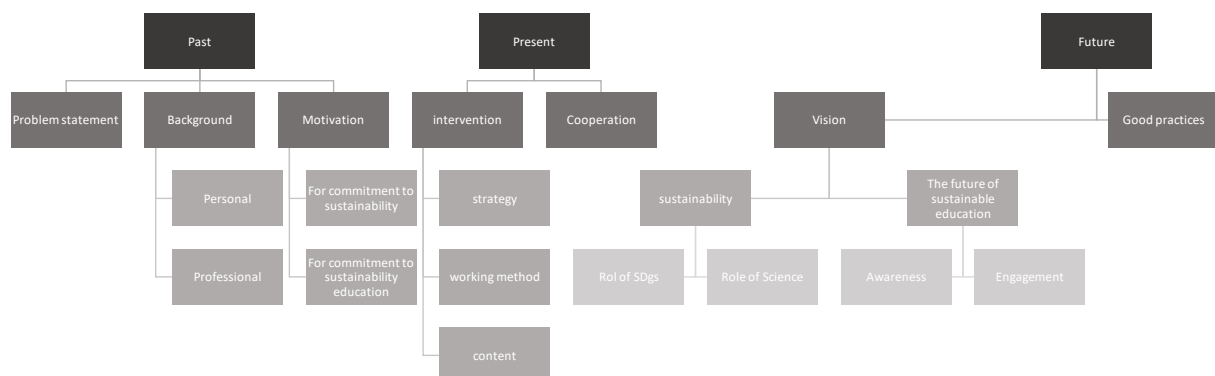

Figure 1

Results

You have arrived at the part of my research journey where I am about to present the outcomes of my data analysis. As we delve into the findings, I will explore sustainability initiatives in Dutch education, paying particular attention to the influence of Western ontology and their potential for systemic change.

In this phase, I aim to shed light on why these initiatives were conceived, how they are implemented, and their envisioned goal. These aspects are framed as the past, the present, and the future, respectively. The 'past' focuses on understanding the background, problem definition, and motivation of interviewees to become involved in sustainability education. The 'present' delves into the interventions themselves, exploring their strategies and practices. Finally, the 'future' unveils the goals and ideal scenarios envisioned by the interviewees, providing insights into the direction sustainability education is heading.

Through these three sections, I aim to construct a chronological overview that traces the development and progression of sustainability initiatives in Dutch education. This overview will serve as a foundation for analyzing the effectiveness, challenges, and shortcomings of current practices in sustainability education.

Before delving into the discussion of this research journey, I have also included an additional section about my personal experiences with what I consider to be inspiring forms of sustainability education. These experiences serve as tangible examples that resonate with the themes and concepts explored in the data analysis, adding depth and perspective to our understanding of sustainability in education.

The Past

In my journey to explore sustainability education in the Netherlands, this chapter serves as foundational layer. I will delve into the histories and motivations that caused interviewees to participate in sustainability education. Here, we aim to focus on both personal and professional histories. The chapter will help us outline formative experiences and aspirations that have influenced interviewees perspectives. As we delve into their stories, we gain a deeper understanding of the roots of their commitment to sustainability education.

Leren Voor Morgen (LvM) was founded in 2016 by a group of people working in the field of education and sustainability. To accelerate developments, LvM would help them work together, learn from each other, and build upon each other's work. They now function as an umbrella cooperative for sustainability networks in education, with the aim of bringing more synergy into their operations, attracting new partners, and taking more control over the implementation of sustainability education.

The Sustainable Development Goals (SDGs), as developed by the United Nations, help LvM to maintain a substantive overview. This overview is supplemented by the Whole School Approach (WSA) which serves as both a framework and a guiding principle for the cooperative. As illustrated in figure 2 the WSA consist of five overlapping leaves called: the curriculum, pedagogy and didactics, building management and operations, professional development, and school environment. Collectively, these elements shape the trajectory of a school, visually unified as 'vision'. LvM is committed to pursuing an integrated approach where all domains contribute to the overarching goal of

Figure 2

transitioning toward a more socially and environmentally responsible world. It is noteworthy that LvM has unequivocally committed to working with the SDGs and the WSA as foundational elements of their sustainability efforts. Within the cooperative, these frameworks are embraced without further question or debate. The commitment to these frameworks stems from the recognition that sustainability issues are multifaceted and ever-evolving in our rapidly changing world. By adopting the SDGs and the WSA as their guiding principles, LvM beliefs that all members of the cooperative are enabled to speak the same language and share a common understanding of their mission. According to LvM, this unified approach not only helps to maintain a shared starting point but also provides the flexibility to adapt to emerging knowledge and insights as they continue their journey toward sustainable education. For this reason, they also call themselves a "learning environment" where they facilitate discussion about sustainability and education.

Below, you can find two quotes explaining why interviewees belief societal collaborations help transition education, as in line with the SDGs and the WSA.

"The business world has a lot of knowledge about what is sustainable, and that knowledge is evolving rapidly. However, it doesn't always reach schools as quickly. So, a school has to meet certain requirements while the business world adapts to developments because it needs to make a profit. Therefore, what we are trying to do, we call it Sustainability skills. This means that schools should be in closer contact with their environment and learn together with businesses, for example." – [Interviewee 2]

"You have a huge pioneer palette, those who are the most sustainable teachers … fully embracing the whole school approach, where everything fits. And then you have teachers who don't know the SDGs and actually have no idea that they can do anything with them. And those groups are not really familiar with each other because those who run very fast don't see that others are not moving." – [Interviewee 3]

Cooperatives in the Netherlands are a collective of members. During the time I was in contact with LvM, they had over 150 members who together form a movement of sustainable change in education. They are as much responsible for their future focus as the cooperative itself. These members consist of a wide variety of people, and all contribute to sustainability education in their own way. The interviewees I met mostly share the same enthusiasm for nature, animals and/or sustainable change. A noteworthy commonality among most

interviewees is their emotional connection to the natural environment or the subject of sustainability.

Below, you can find two quotes where two interviewees explain their emotional relation to the natural world and the topic of sustainability.

"I am interested. And I, I'm also very honest, I had my father who was already into organic gardening in the 70s, and he was ridiculed for not spraying his cauliflower with pesticides. Because the caterpillars could just calmly eat on my father's cauliflower, and a brother-in-law who said, 'Oh Herman, you should spray, you'll get such big cauliflowers,' and then we'd cut them, and my father said, 'Ours are nice and organic, not sprayed,' and I was proud of him. He also instilled a love for swallow nests in us. We were allowed to look at the eggs." – [Interviewee 10]

"I remember when I was 8 years old. My father took me to one of those mega barns or barns with chicks. He thought, 'It's nice to see on the farm.' It was really such a metal barn. And well, it was quite confronting, you know? All those chicks, you just feel like, 'This is not right.' And I remember my uncle and aunt on the farm. They had calves all the time, and they were named after us. And they were slaughtered because it was time for that. And my uncle also showed how they were slaughtering the animals. And I saw them hanging and all that... At this age I said, well, it doesn't feel right to eat meat. I'm not going to eat meat anymore. But, yeah, my mother, at the time, it was a bit more unusual than it is now, and my mother was concerned about this and that. But that feeling has actually always stayed with me." – [Interviewee 1]

Some backgrounds also overlap with topics on sustainability or even sustainable education pursuing a degree in gardening, environmental social science, or education. However, the majority of their backgrounds seem very different. Those interviewees are trained in the field of business administration, communication, and/or art. Only in a later stage of their career they came into contact with sustainability education. Thereby, most interviewees are now engaged in areas that involve partnerships with government agencies. They work as advisors, provide sustainability-focused educational programs, or develop interventions to address these topics.

In their respective roles, the interviewees integrate the SDGs and/or the WSA to differing degrees, demonstrating their individual approaches and strategies to promote sustainable change. Their motivation for acting primarily stems from concerns related to climate change, the ecological limitations of our planet, and increased (mental) health problems among people. Some interviewees leverage the SDGs as a foundational framework to address the issues they've identified. Such strategies had made me wonder how complexity and open-ended questions about sustainable change are ensured. Discussing these questions, they explain that those complexities are taken into account within their set boundaries. Others have interpreted it more as a (inner) journey to reconnect with the (non-)human world to get closer to the core of what sustainability should be about.

Below, you find two quotes from two different interviews. Together they represent this diversity in visions well.

> "children indeed have very good solutions. Yes, it is especially important to listen to what they find important. Basically, with every decision, you just look if it stays within the planetary boundaries." – [Interviewee 3]

> "If you want to work on sustainability, it's actually essential to seek a connection with natural elements. I see Forest Bathing, Shinrin Yoku, as a form of connecting with nature. But gardening can also be a form of connecting with nature... something I want to focus more on in the future. I call it 'Inner Sustainability,' sustainability from within, and it might, well, I don't make it up on the spot... Imagine, I guide forest bathing sessions, right? You immerse yourself in nature for 3 hours, and suppose, before a meeting where certain decisions are made, you do something like that first. Do you perhaps notice a difference? I personally find that during a forest bath, I'm very talkative, in 'talk mode' in my head, and I can talk the whole time, and afterward, I just get to the core more." – [Interviewee 1]

Present

In this chapter, we delve into the present landscape of sustainability education in the Netherlands, examining a diverse range of interventions actively shaping the educational sector's approach to sustainability. These interventions fall into three distinct categories, collectively contributing to the ongoing transformation of the education sector: sustainability interventions already in place, larger-scale sustainability events, and singular activities initiated by organizations dedicated to advancing sustainability in education. We will explore these categories in detail, shedding light on the diverse approaches and initiatives adopted to foster sustainability education.

While researching the present landscape of sustainability education in the Netherlands, my initial suspicions about sustainability education were confirmed. Through all conversations, I discovered a varied collection of interventions. I have categorized those into three distinct groups. Firstly, I draw attention to the sustainability interventions already there. These interventions celebrate the pioneers, the schools, and the teachers who engage in the realm of sustainable education, promoting and encouraging others to join. Furthermore, the second identified category of interventions encompasses larger-scale events designed to promote specific topics within the field of sustainability in the education sector. They offer a diverse range of activities and teaching kits over a day, a week, or the course of the program. Finally, the last category of interventions got shaped by organizations with a prominent dedication to advancing sustainability within the educational sphere through the development of singular interventions. All initiatives are designed to equip schools and educators with the tools, resources, and strategies necessary to incorporate sustainability into their educational activities. In this complex landscape, I have observed a dynamic interplay of initiatives, all with the aim of contributing to the evolving story of sustainability education.

The first category I highlighted is one where people and organizations get a stage to share and discus the way(s) in which they contribute to make the education sector more sustainable.

These pioneers seem to share the same emotional relation to sustainability as the interviewees with their enthusiastic and passionate about sustainability. Although it is widely recognized among my interviewees that contemporary education doesn't always allow teachers and children to get (more) involved in sustainability, some schools and teachers have taken this extra step forward to do it anyhow.

To nurture and harness the enthusiasm of individual pioneers, interviewees highlight the importance of having dedicated meeting spaces. These spaces play a crucial role in allowing valuable ideas to flourish, as interviewees emphasize the significance of sharing these ideas. Beyond merely providing a platform for enthusiasts to brainstorm collectively, these meeting spaces offer opportunities to engage and inspire others, invite experts to supplement further knowledge, or already share the newest knowledge developments with children.

> "They need to connect with each other peer to peer. You can invest a lot of time and energy in a group, but if they're not able to share their learning experiences with others in the sector, it's entirely futile. SDG 17, collaboration, is far too rare in the Netherlands and is essential." – [Interviewee 3]

Another set of interventions often discussed within this category involves competitions that highlight and celebrate pioneering efforts while building a network for sustainability education. These competitions provide a platform to acknowledge and commend the pioneering work carried out in the field of sustainability education. One such initiative is the *"Duurzame Docent Verkiezing"* (Sustainable Teacher Election). This is an annual event where a national sustainable teacher is recognized across primary, secondary, and higher education institutions, with sustainability broadly approached through the SDGs.

> Below, you can read three examples of primary and secondary school teachers who, and why they have won the sustainable teacher award between 2020 and 2022.

(2022) "Robert received recognition for his dedication to environmental consciousness, creating a greener school environment. Together with the student council, he has realized a beautiful green-blue schoolyard for the school and the neighborhood. It's called a green-blue yard because of its focus on nature and significantly improved water management. Besides, Robert is an inspiration due to his consistently positive role modeling and his exceptional care and support for underprivileged students."	(2021) "Louise's classroom bloomed with autumn leaves as she brought nature inside. She encouraged students to mend sweaters, promoting repair skills and warmth. Her class explored biodiversity in the schoolyard, educating others with chalk-written plant names. Louise introduced a composting system and led her class to victory in the Microbattle challenge, taking sustainable action every day. They also planted wild vines around the school, emphasizing the benefits of green facades, biodiversity, and rainproof solutions."	(2020) "Joanne Malotaux has managed to create a school garden half the size of a football field, just a 5-minute walk from Pantarijn (Wageningen). In this school garden, naturally, a lot of Biology lessons are conducted. How do plants grow, how does a flower work, what do bees actually do? But Joanne has also assembled a team of various teachers from diverse fields: Care, Classical language and culture, technology, economics, chemistry, computer science, and of course, biology. They collaborate on lesson plans to integrate their subjects with the garden. Think of a fertilization plan for chemistry or automated irrigation for computer science."

(Duurzame docent, 2022)

Similarly, there is the *"Sustainabul",* a national competition held annually to identify the most sustainable school. It involves students ranking participating schools based on three overarching themes: education, practice, and business. When analyzing the best practices in schools, as per Sustainabul's findings in 2022, the predominant themes and interventions

center around climate action, circularity, technical sustainability, as well as sustainable food production and consumption (Sustainabul, 2022).

Both contests also pay attention to those who are not jet actively engaged in sustainability efforts. The competitive element is believed to encourage schools and teachers to start of taking sustainable steps forward. According to LvM, illuminating their (un)sustainable practices should encourage them to take [additional] action. To further promote sustainability and increase awareness, a multitude of events are organized for schools. This brings me to the second category of sustainable education interventions. This category consists of national or regional events, showcasing the scale of the sustainability movement and providing schools with opportunities to gain inspiration. Throughout various durations, whether for a day, a week, or an extended period, diverse workshops and teaching packages are provided to children, teachers, and schools. These offerings focus on specific subjects, giving participants the opportunity to (further) engage with and enhance their involvement in sustainability.

Below, I have compiled a brief list of events that were discussed during my interviews.

Dag van de Duurzaamheid (Sustainability day)	On this national day, extra emphasis is placed on sustainability in education by organizing a variety of activities in schools such as a variety of SDG-lectures. This inspires schools and facilitates the exchange of ideas.
De week van het economie onderwijs (the Week of Economics Education)	This is a national week about future-proof economics education in the Netherlands. The program is developed by and for education professionals and provides space for various economic thinking frameworks within the field of economics.
Nationale Week Zonder Vlees (National Meat Free Week)	The educational materials challenge primary and secondary school students to form their own opinion about the impact of meat consumption on our climate. Students learn and explore how to create a healthy and balanced diet without eating meat. The organization aims to activate social awareness through this initiative.
World Clean Up Day	Schools are invited to participate in this day and can register for various free World Cleanup Day lessons, games, and competitions.

Despite the encouraging efforts to engage the education sector in fostering sustainability, my interviews have revealed a common frustration regarding the limited time and resources available for the integration of sustainability into the school curriculum. Sustainability-related activities are often perceived as extracurricular, necessitating teachers to invest extra time in their implementation, or they may be viewed as not aligning with the core educational curriculum. At the same time, it is equally disheartening for sustainable education developers who invest significant time and energy into creating sustainable educational projects. Despite the existence of innovative ideas, their implementation appears to face persistent challenges. When their projects fail to gain the support of schools, these organizations struggle to secure funding, hindering their ability to continue developing sustainable educational initiatives. Consequently, such organizations often focus on creating sustainable educational projects driven by inquiries from local municipalities, provinces, or government entities. These projects are developed through allocated subsidies to secure their income and existence.

> "We have all these packages in the basement, but we can't sell them to the schools. The schools don't come to pick them up, they aren't selling." – [Interviewee 10]

Despite all obstacles, there is still an enormous collection of singular sustainability education interventions to be found or in development. This brings me to the last category I distinguished, namely those interventions shaped by individuals and organizations with a

singular dedication to advancing sustainability within the educational sphere. Here, people develop programs, often together with volunteers and/or professionals, centered around sustainability and/or nature experiences. Through various approaches these programs allow classes to explore topics beyond their school premises. In some cases, external professionals are invited to facilitate an excursion such as a visit to a beekeeper or farmer. In these cases, organizations often ask these professionals to be responsible for the content of the intervention. Other organizations I have seen invite schools to order sustainability kits that allow teachers to implement the program with their students as they see fit. Lastly, I have encountered organizations that establish dedicated spaces to welcome classes and offer tailored programs. It's important to note that these are most likely not the only ways children in the Netherlands are introduced to sustainability topics. I present you these examples to illustrate the extensive range of developed interventions designed to creatively introduce children and schools to the topics they promote.

Below, you find a comprehensive list of all mentioned interventions by interviewees who collaborate or are affiliated with organizations dedicated to developing sustainability. All these interventions are offered individually. Based on my findings, I have categorized them as either sustainability interventions, nature experiences, or a mix of both.

Sustainability intervention	
Huis van de Toekomst (House of the Future)	In this program children learn the significance of the energy transition and the changes we need to make concerning energy consumption and new energy sources to enable sustainable living.
Veganisme Heel Natuurlijk (Veganism very Natural)	In this program children investigate what a plant-based lifestyle entails.
Water in zicht (Water in Sight)	Through this curriculum, children learn to use drinking water in a conscious manner.
Duurzame kantine (Sustainable Canteen)	A variety of schools and caterers are working diligently to provide healthy and sustainable food to the children and staff in their school canteens.
Fijnstofvanger voor scholen (Fine dust collector for schools)	This activity promotes inquiry-based learning and helps students discover more about air pollution and fine dust, the primary sources of air pollution, how to measure fine dust, what can be done about it, and how to conduct an experiment as a researcher.
Urban Heat Island Effect	Children learn about the relationship between radiation and atmospheric temperature by comparing various types of land surfaces. By participating in this research, children gain a better understanding of the connection between climate change and land surface temperature.
Startpunt duurzaam Hardenberg / Ommen. (Starting point sustainable Hardenberg/Ommen.)	In this exhibition, children and schools are invited to receive information and tips about energy conservation and the energy transition, as well as information about waste, biodiversity, and water.
Global Classroom	Global Classroom is a workshop in which children go on a journey around the world by watching various videos created by their international peers. In these videos, young people from all over the world share insights about the Sustainable Development Goals and their lives.
17 werelddoelen les (17 Global Goals Lesson)	This introductory lesson about the Sustainable Development Goals consists of a PowerPoint with fun assignments, videos, a quiz, and an SDG impact meter.
Energie(k) (Sustainable energy use)	"Saving energy? Why? How? With the materials and experiments in this lesson kit, children will explore why we should use energy efficiently and learn about alternative energy sources."

Nature experience	
Beestenboel op de boerderij (Animal Adventures on the Farm)	In this program, children visit a farm to learn about animals through a route with riddles, guided by the farmer.
Outdoor education	Children receiving regular education in a natural environment.
Barefoot Path	Children are free to follow a barefoot trail that leads them over various surfaces. This allows them to experience a diversity of sensations such as sand, water, and stones beneath their feet.
Het Kabouterpad (The gnome path)	Children discover the animals on the farm based on the story of the gnome Hummeltje.
Pieren en Pissebedden (Earthworms and Woodlice)	With this kit, you will receive 'waste cleaners' such as earthworms and woodlice. They clean up dead leaves and other natural debris, something we usually don't think about. The manual provides teaching suggestions and experiments: how do these creatures help in cleaning up waste, what do they eat, and how do they develop from larvae to adult animals?
Expositie natuurfoto's (Exposition Nature Photos)	Children and schools are invited to come and watch a series of photos of the wasp butterfly.

Sustainability intervention & nature experience	

De Bezige Bijen (The Busy Bees)	In this program children are organized into design teams, formulate a vision regarding the threat of wild bees' extinction and the significance of wild bees to the ecosystem. These design teams create an activity that makes a positive contribution to improving the living environment for wild bees. Additionally, the children visit an on-site beekeeper.
Weet wat je Eet (Know what you Eat)	During a visit to the organic vegetable garden children learn more about nutrition and are encouraged to eat healthier. All children receive compost, a small pot, and seeds to fill the mini-garden bottle at school or in their garden and watch the seed grow.
Een insectenhotel maken (Build your own insect hotel)	Children build an insect hotel and learn about Endangered insect species.
Liefdesbrief aan de aarde (love letter to the earth)	This is an exercise in intergenerational thinking about the earth we are all living on. It challenges children to envision the future of their grandchildren and reflect emotionally on what they truly value in life.
Het groene schoolplein (A Green Schoolyard)	Schools are making their playgrounds greener to increase biodiversity, capture more water, reduce heat stress, and encourage children to spend more time outdoors.
Onderzoek: Waterdiertjes (Research: Water critters)	In this project, children catch water critters and report their observations on a website managed by researchers and water managers. Children then calculate the water quality. this helps children gain a better understanding of the state of biodiversity in their surroundings.

In the pursuit of their sustainability goals, schools may select preferred packages or programs based on their unique interests and capabilities. Alternatively, some schools opt to engage advisors to help tailor sustainability solutions to their specific context. In both instances, program content is typically developed through collaborative efforts involving experts and individuals from the business sector. This close cooperation between schools and sustainability advisors is partly due to the lacking ability and knowledge of schools to fully integrate sustainability into their curriculum. Schools tend to position themselves as non-expert stakeholders, readily embracing the advice of external parties. Not all interviewees I spoke have described this as a positive observation as some prefer to use this time and space to have in-depth dialogues about sustainable change.

> "I've spoken to a lot of schools, and conversations often do not go very deep. It's more like an hour-long conversation where you basically listen to what challenges they face and what they need. What I frequently notice is that schools are actually ashamed of how little they do in terms of sustainability and that they are not proud at all." – [Interviewee 1]

Instead, the collection of interventions shows a strong emphasis on predetermined themes, each dedicated to addressing specific aspects of sustainability. Participants can delve deeply into these sustainability areas, fostering a comprehensive understanding of the chosen topics. The various activities play a significant role in promoting knowledge and understanding, ultimately encouraging participants to reflect upon specific sustainability issues together. I noticed that this is often done through the development of competition formats.

Below, I've outlined a series of quiz questions originating from the 17 werelddoelen les (17 global goals lesson) developed by "*SDG Nederland*". Underneath, you will find an English translation, sometimes accompanied by supplementary explanations provided by the organization. Together, they provide a good example of how children are introduced to the topic of sustainability covering specific subjects through a competition format.

Question 1/10	Question 2/10	Question 3/10	Question 4/10

What is the most common cause of food shortages?	Since when have there been more people with obesity than with underweight in the world?	According to the World Wide Fund for Nature, we ingest up to 5 grams of microplastics per week (through toothpaste, fish, and plastic packaging), which is equivalent in weight to?	Where does 90% of the wastewater from consumers go?
- Intensive agricultural practices - **Drought** - Population growth 815 million people suffer from hunger, which is 11% of the world's population. The vast majority of these hungry individuals live in developing countries.	- 1972 - 1990 - **2014** A major study has suggested that there are now more adults in the world classified as obese than underweight. The research, led by scientists from Imperial College London and published in The Lancet, compared the body mass index (BMI) of nearly 20 million adult men and women from 1975 to 2014. It was found that obesity has tripled in men and more than doubled in women.	- **A credit card** - Ten A4 sheets - A 10-euro bill	- It is treated and recycled - It is safely stored in waterproof tanks - **It is discharged back into rivers and seas without treatment** 2 billion liters of wastewater used by humanity are discharged into rivers and seas every day, which is more than 23,000 liters per second. Annually, 730 billion liters of wastewater end up in the environment due to leaks, lack of purification facilities, and so on.

(Leren voor Morgen, n.d.)

The above classification of interventions seems somewhat striking, taking into account that the majority of interviewees emphasize the importance of involving children in issues regarding the overall sustainability transition. Only within the given frameworks of the interventions, children, teachers, schools, and other stakeholders seem to be invited to talk along about the topic. In this regard, a variety of the "nature experience" interventions stand out for their hands-on approach and direct engagement with the environment. Here, they do get to explore their relationship with each other and the natural environment which could help them discover what they consider important in the context of sustainable change.

Below, an interviewee shares an insight they gained on this topic.

"In the morning, I often spend time in the garden with some volunteers, especially when it comes to activities for children. We tend to overcomplicate things. I remember one volunteer telling me a story from their childhood; they didn't have fancy footballs made of high-tech materials. They simply used a ball of grass with a plastic bag wrapped around it. Sometimes, we need to get back to these simple pleasures. It's not necessarily about simplicity; it's about reconnecting with the basics.

You can have a lot of fun and learn valuable lessons from these experiences, and I believe that's what makes them special. Not everyone appreciates this approach; some people expect large screens with information in exhibitions on certain themes. However, we prefer working with tangible objects that you can touch, smell, or engage with using your senses. That's what we aim to do." – [Interviewee 8]

Future

In this final chapter, we explore the future visions of sustainability education as envisioned by our interviewees. These visions are grounded in the principles of the Sustainable Development Goals (SDGs) and the role of science in shaping sustainable insights. Throughout this chapter, we examine their comprehensive approaches, encompassing strategies for raising awareness and fostering active engagement. Additionally, we consider the transformative potential of global citizenship courses in driving sustainable change through education.

In contemplating the future visions of my interviewees, a prevalent perspective emerges suggesting that society is moving in a unified direction. They explain that this direction is delineated through the SDGs and reflects the interests of all global citizens. To further improve our care for one another and the planet, interviewees emphasize the ongoing role of science to consistently reveal new insights in the realm of sustainability.

> "We want to head in the same direction, and if you go a few levels deeper, you can talk about differences in how that direction looks. Ultimately, we also have a kind of consensus that we want to go in the same direction." – [Interviewee 2]

> "Yes, I think we don't have to truth, but we have parts of the puzzle, so I never pretend to know how it has to be." – [Interviewee 7]

> "Innovation should make sure that those kinds of (sustainable) choices are easy, that it's fun." – [Interviewee 3]

It is emphasized that the SDGs are not easily attainable, but rather demand a deliberate effort to raise awareness regarding 'the facts' about current climate conditions and the global goals. Some describe this as an end in itself, while others see it as a means to mitigate the consequences of climate change and save the Earth. Those argue that it would play a crucial role in bringing about the behavioural changes necessary to 'save the world.' Society, and thus children, should therefore learn about the inherent value of a well-functioning ecosystem and the effects of their behaviour on the environment. In order to achieve this, there are interviewees emphasizing the additional need for critical thinking skills to distinguish the facts from the fables and increase their understanding about sustainable change.

Within the established frameworks, interviewees refer to the importance of fostering a sense of engagement between children and topic of sustainability. Merely drawing attention to the SDGs is deemed insufficient; it should be an embodied experience. For some, this entails involving people in specific development topics. By actively engaging individuals in these discussions, they increasingly perceive themselves as integral to the transition. For others, the embodied experience provides an opportunity for collaborative learning about common values and needs, emphasizing the importance of fostering a sense of connection and togetherness. A final form of engagement discussed is more individually focused, centering on one's personal connection. By taking the time to connect with their inner selves, interviewees argue that individuals naturally gain insight into what truly matters to them. When mental and physical well-being are in good health, it logically leads to making 'healthier' choices for the human and non-human environment. In summary, fostering a sense of engagement takes various forms. These forms promote the generation of new ideas and bring people closer together, enhancing their understanding of the overall situation to advance sustainable development.

> Underneath, you will find all three statements in respective order. Interviewees explain how they value engagement for sustainable education.

> > "Especially what 'economy' means and what it entails to get there, to reshape it differently. And we're doing that together with various members.
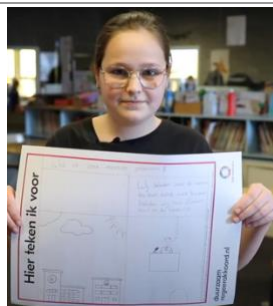
These members have various different visions. So, we continually strive to incorporate all those visions into what we do." – [Interviewee 2]

"Yeah, that's about futuring about what it's like to cooperate in one project. That's about knowing each other's needs. That's about being insecure about the future or about relations and dealing with that. That's about being aware of your own values and knowing how to talk with other people about having conversations about values." – [Interviewee 9]

"I personally see people being very driven and sometimes, perhaps, pushing themselves a bit too hard, which can lead to burnouts. This is interesting because well-being, particularly SDG 3: Good Health and Well-being, happens to be one of my favorite SDGs. I think that when you align this with the goal of good health and well-being, it naturally leads to making entirely different choices." – [Interviewee 1]

A diverse group of interviewees with a background in the education sector highlight the "global citizenship" course as the ideal space for these concepts to converge. This perspective aligns with the government's vision, who even made "citizenship" a compulsory subject in all primary schools. With education in global citizenship, children learn to become critical and independent global citizens who are well-integrated into our diverse and ever-changing society (Nuffic, n.d.). According to interviewees, this approach has the potential to inspire new sustainability insights. As an example, one interviewee emphasized the significance of teaching children about the SDGs. They highlighted how appropriate guidance can empower children to generate creative ideas with the potential to reshape society. Furthermore, as interviewees contemplate an ideal future perspective of sustainability education, they unanimously advocate for the integration of sustainability throughout the entire school system.

During the 17 Sustainable Development Goals lesson in primary education, teachers demonstrate a video in which they explain that in the Netherlands, many excellent ideas have already been conceived to make our world more sustainable. As part of this, children have drawn what they would do to for a sustainable future. Below, you'll find some examples of drawings created by children. It should be noted that these examples are selected by SDG Nederland for their campaign video about the Dutch sustainability coalition agreement. I have added these pictures because they provide us with new insights on the accomplished effects of the sustainability lesson. Are these the effects we want to accomplish?

This child expresses hope for a plastic-free world.	This child expresses hope for equal access to healthcare services like hospitals and dentists.	This child expresses hope for a future where less plastic is discarded and, instead, more of it is reused.
This child expresses hope for the generation of more solar energy, envisioning a future where it's accessible to everyone worldwide, not just the affluent.	This child expresses hope for reduced emissions from factories and the preservation of trees.	This child expresses hope for increased animal healthcare, as they play a crucial role in helping to heal the environment

(SDG Nederland, 2021)

The interviewees themselves also provide a variety of examples they consider pioneering in the field, falling into two distinct categories that reflect their vision of the future. While these examples may not always be directly related to education, they offer insights in the future they envision. It is noticeable that the examples provided often revolve around innovative designs for existing concepts. These diverse examples represent interviewees' collective vision for a more sustainable future.

Sustainability in Business and Innovation	Shifting Values and priorities
- Tony's Chocolonely - Dopper (reusable water bottles) - The Good Roll (sustainable toilet paper) - Shampoo and toothpaste tablets - Electric bikes (as an alternative to scooters)	- Youth finding meaning through sustainable activities like plastic clean-up. - Vegetable gardening as leisure activity. - Forest bathing as part of reconnecting children with the natural environment and themselves. - Cooking with elderly people as leisure activity. - Rethinking work-life balance. - Rethinking car ownership - Shifting travel preferences - Life-long learning possibilities offered by employers. - Tiny houses (minimalistic living)

To deepen our insight into the coherence between the perspectives and actions of the interviewees, I've crafted an overview, presented in Appendix 3. This overview provides a (simplified) representation of the identified problem statement, implemented actions, and the envisioned future according to the interviewees. Together, they enable you as a reader to interpret to what extend the interventions undertaken fit the time and context interviewees describe, and to what extend this aligns with theory on systemic change.

My quest for 'Best Practices' Through Personal Experiences

Introduction

Over the past months, my exploration into the realm of sustainability education has led me to engage with a diversity of individuals. Their stories provided insights into the multifaceted landscape of education and their potential to contribute to systemic change. Yet, amid the narratives of passionate and willing people, I found it challenging to maintain a critical perspective on a subject that is accompanied by hope, passion, and the shared goal of

betterment for future generations and our planet. Also discussing the critical themes of my research with my supervisor involved certain challenges. In these conversations, we jointly questioned the extent to which I can remain critical in the absence of solutions for addressing the challenges of sustainability education. And besides, I also question myself how I can reflect on the One World World (OWW), as defined by Escobar (2018), while writing a critical paper that will passively be sent into the world.

In response to these questions, I have written this final sub-chapter. It has been added to the results to help you, the reader, gain a deeper understanding of the research journey I've undertaken these months. Halfway through my research, I engaged in a valuable conversation with Birgit Boogaard, who specializes on non-Western (African) Philosophies and recently has been awarded the national title '*teacher of the year*'. Our conversation was meant to provide me with new insights on the topic of sustainability education in a way that extended beyond the OWW. Additionally, I immersed myself for a week in what I believed had the potential to represent (elements of) sustainability education – the course *'Wild Perspectives'*. I've considered both experiences necessary to not merely observe sustainability education as an objective outsider but to experience my critical inquiries firsthand and become a part of the questioning process. While this may not yield concrete answers, it ensures that it becomes a lived issue, one that can continue to evolve even after the completion of this paper. This process I refer to as '*unfolding'*.

Struggling through the hall of mirrors.

As previously outlined in this paper, challenging our day – to – day practices is not a straightforward task but is essential for change. We need to recognize our hidden assumptions and power structures to disrupt the hegemonic influence and confront unsustainable systems. During my conversation with Birgit, she strongly encouraged me to address the uncomfortable questions that often accompany such disruption. However, I found it challenging to dismantle the hidden assumptions during the conversations I had with interviewees. We easily got stuck in recurring narratives, such as those concerning the Sustainable Development Goals (SDGs). As explained by Rose (1999), what we encountered can be likened to the hall of mirrors. The conversations showed a reinforcement of the ideology that prioritizes specific goals and approaches, diverting attention from systemic and complex problems. Being 'sustainable' doesn't stop after learning to reproduce the SDGs. Before the start of my data analysis, I had envisioned myself engaging in philosophical debates on related topics. Instead, my conversations primarily centered on informative exchanges, with interviewees explaining the content and methods they used in sustainable education. We did not understand each other, or differences in opinions got ignored. To overcome such situations, Birgit had referred to intercultural philosophers Mogobe Ramose and Heinz Kimmerle. Both emphasize the importance of enhancing mutual understanding. She explained me that you might not always have the answers to each question, but it at least sows a seed for further contemplation. Taking this approach brings sustainable education to life, or as they say in Ubuntu philosophy, '*in motion',* where diverse perspectives are welcomed to be part of the journey to sustainable living.

Not only has it been challenging to invite my interviewees into critical and reflective conversations. Reflecting on my initial experiences with the 'Wild Perspective' course, I also

learned how I [unconsciously] hide behind my rationality when it comes to acting sustainable or participate in the journey of sustainable change. This course, designed to expose students from Wageningen University to experiential 'relational outdoor learning', provided to be an eye-opener.

Especially during the first days of the course's workshops, I was often caught in a struggle to adapt to the sensory approach of the workshops. The task of introducing myself as a 'being' was a real challenge. I couldn't find a connection to any other being apart from myself, and I failed to grasp its relevance. Similarly, during a 'shinrin yoku' workshop, I encountered unexpected restlessness and a struggle to connect with my surroundings. It was surprising, as I had enjoyed this practice in the past. I realized that I needed more time to adapt to the people, the course structure, and the new environments they introduced us to. At this point I wrote as a reflection:

> I realize that I generally feel like an outsider. Although I objectively have much critique on how life should be different (telling people how and why things should not be this way), I feel much more comfort in criticizing over practicing it differently myself.

Besides the challenge of adapting to new educational methods that encourage non-immediate rational thought, I also found it difficult to emotionally connect with the content of the workshops. This struggle became evident during the first days of the course, particularly in specific workshops, such as the visit to an organic horticulture farm and the wild writing workshop.

While walking though the horticultural fields of the *Ommuurde Tuin*, I was impressed by the system and the knowledge that was shared. Taking notes and asking questions felt like the logical response in this situation. However, upon reflection, I realized that I had failed to fully immerse myself in the beauty of the colors, tastes, and scents that made the workshop so valuable. We were even invited to taste a variety of fruits and we got a delicious lunch fresh from the garden. Despite the workshop's attempt to engage all my senses, my emotions didn't connect with the story and the place. Something similar happened with the workshop on wild writing. During this workshop we were asked to use our senses as port to our imagination, bringing together the inner and outer world. We did a meditation and received guidance on writing from the heart while imagining ourselves as another being. But instead, I didn't feel or understood the words that should be chosen. The resulting text was primarily based on rational knowledge. I described my feelings at that moment as 'empty' and 'disconnected'.

These situations have taught me that simply inviting people to be emotionally engaged and make emotions a part of the learning process is not always effective. While theoretical lectures were replaced by sensory experiences, and students were encouraged to explore their relationship with the non-human world, my experiences in those workshops appeared contradictory. The intended messages of these workshops did not seem to resonate as expected.

In both my interactions with interviewees and my personal reflections on experiential learning, I find further support for my earlier claim that 'truth' is intrinsically bound to the context and time in which it is situated. You cannot simply drop new input and assume that it

will be taken up. Challenging the OWW require more than just a change in educational approach. It necessitates a deeper transformation in how individuals perceive and participate in the world. These experiences have led me to appreciate the complexity of this endeavor and the importance of considering the nuances of each learning journey.

Shattering the hall of mirrors

So far, I have gained a deeper understanding of why sustainability education should extend beyond issues like reducing plastics or renewable energy if systemic change is the desirable goal. However, effecting such change is far from straightforward. If we want people to engage in this transition, content should be comprehensive but also methods should be chosen that engage people to challenge contemporary practices and assumptions.

During my conversation with Birgit, I learned that, from an Ubuntu philosophical perspective, sustainability encompasses more than just addressing environmental issues like floating trash. It extends to nurturing connections among generations and fostering a sense of community. For instance, this means not only addressing environmental issues but also fostering intergenerational care, involving children in supporting the elderly, and encouraging them to engage with those beyond their immediate circle. Also, when children themselves pose profound questions about, for example, the origins of the world, we should share multiple stories that allow for a meaningful conversation. Children should be encouraged to explore the variety of perspectives, tailored to the child's developmental stage. This comprehensive approach to sustainability extends beyond the environmental realm and emphasizes the importance of holistic education. We enable our kids to engage in a variety of perspectives which enables them to question hegemonial reasoning and never take specific practices for granted. Through these examples, sustainability slowly becomes a way of life, something we breath, something we are.

For me to engage in new forms of (sustainability) education first asked for recognition and placing myself and my knowledge in the right context. Only after this, I was able to fully engage and connect with the content of the workshops. Halfway the course, we got introduced to ecologist and philosopher Matthijs Schouten. He provided a comprehensive historical overview of how we have arrived at the unsustainable world we currently inhabit. Thereby, he specifically focused on religious effects on the contemporary Anthropocene. After this session, I reflected on his presentation:

> Matthijs is an impressive storyteller, and its content was on point. His narrative made me feel understood, as I could align it with my existing knowledge and experiences. It also made me feel like I belonged in the course. After this, the ball representing my emotional journey started rolling.

This experience marked the beginning of my emotional journey, as it seems that I still require rational validation to express or acknowledge my emotions. To me, it is also interesting to recognize that something as simple as a story opened up so much. It again seems somewhat contradicting to my hypothesis but also confirms the need for nuances and recognition for complexity.

The morning after the positive experience with the lecture of Matthijs, we were invited to take a walk along the "Heelsumse Beek". The stream journeyed from the mouth in Renkum to its source in Heelsum. The place was considered sacred because of its history where humans and the non-human world were brought together. The stream had been created by humans to power various water mills around 1550. During the walk, we saw the gradual transformation of the natural landscape – from a floodplain to a forest, from a forest to organic farmland, from organic farmland to conventional corn fields, and finally, to heathland where the stream's source could be found. This is what I wrote as a reflection:

> The natural landscapes were so beautiful. As we passed by a church, it brought back memories of visiting it with my family during Christmas, as my mom had a choir performance there. And then the story Bas told about the history of human-and-nature unfolding together. Bas's storytelling about the intertwined history of humans and nature resonated with me. Everything touched me, and I felt a deep connection with the environment through which we were hiking. Because of the historical context in which the walk was placed, I suddenly became part of its beauty and origin.

At this point in the course, I felt more confident in engaging with experiential learning activities and was impacted by the diverse perspectives. I distinctly remember workshops such as 'the council of all beings', 'the deep time walk', and an overnight bushcraft workshop.

> *The council of all beings* - this entails a communal workshop in which all participants represent a being allowing them for expression aiming to heighten awareness of our interdependence and strengthen commitment to defend it.

> *Deep time walk* – this is a 4.6km walk that allows participants to explore Earth's geological history. The walk is typically structured so that each step represents a significant period in Earth's history, with geological events and the evolution of life described along the way. It provides a unique perspective on our place in the timeline of life on Earth and fosters a deeper understanding of the interconnections between geological processes, life forms, and environmental changes.

> *Bushcraft sleepover* – Following a session on fire-making and cooking dinner over open flames, the group readied themselves for a night spent sleeping by the fire. Each member of the group took turns as a 'fire watcher' throughout the night, ensuring that the group remained warm and safe.

Throughout the week, we were introduced to a diverse range of perspectives that provided new insights into life. While the course primarily emphasized experiential learning activities, it unexpectedly transformed into a philosophical journey. These experiences not only deepened my comprehension of interconnectedness but also initiated an emotional connection to the topic, challenging the individualistic default structure of modern ontology. As a result, they offered holistic perspectives that transcended the boundaries of conventional science. The subjects we engaged with ceased to remain abstract concepts 'out there'; instead, they became an integral part of our daily experiences. In line with Escobar's (2018) idea of creating space for new conceptions capable of challenging hegemonic structures, I am

convinced that dedicating more time to such activities can significantly contribute to the emergence of transformative perspectives. After one of these workshops I wrote:

> We had just completed the council of all beings. To be honest, I didn't have high expectations for this workshop. Based on my previous experiences this week, I didn't assume that embodying another being would have a significant impact on me. However, as soon as this evening workshop began, taking the time to immerse ourselves in our roles while crafting our masks and later taking our seats around the fire, something within me was stirred. Emotions surfaced, and I was overwhelmed by an intense warmth. I still don't completely understand these emotions or how they came into being within me, but I felt a profound connection. I felt connected both to the sunflower seed I represented and to the people gathered around the fire. I was grateful that I could converse with them and even 'speak to the people' (there were also people representing people). As I cycled home, an unfamiliar sense of empathy accompanied me. This feeling never truly left. Even when I'm outside, whether walking my dog in the forest or shopping alone in the supermarket, I experience intense emotions, primarily sadness. It's as though these emotions had been within me for an extended period, and they had finally found a way to surface. I still don't completely understand them or their significance, but something in this workshop awakened a part of me.

Closing section

Through my conversation with Birgit and my experiences in various workshops, I've come to realize the importance of approaching sustainability education from two distinct angles: the method and the content. The workshops I participated in underscore the critical role of selecting appropriate tools and methods to achieve the desired educational objectives. Whether it's a theoretical or experiential intervention aimed at contributing to systemic change, its effectiveness depends on engaging the audience in the right manner. Failure to do so can result in the inability to accomplish the intended goals. The same principle applies to the content of educational interventions. The content must resonate with the audience and align with their values and concerns. I've personally observed that when the content fails to establish a personal or emotional connection with the learners, it often falls short in evoking the necessary commitment and understanding required for driving systemic change.

As articulated by interviewees, we sometimes find ourselves operating within the limits of the existing educational structure, where methods and content are predefined, even when they may be imperfect. Birgit, too, is familiar with these challenges, which she mentioned when discussing her 'Teacher of the Year' award. Although she acknowledges the constraints tied to competition over collaboration, she has actively worked to navigate her role in a more cooperative manner. This demonstrates that, especially when we are confronted with such constraints, skillful navigation and transparent communication can still enable educational interventions to act as drivers for systemic change.

Before closing this chapter, I want to emphasize that my insights gained from my conversation with Birgit do not possess all the answers, and the Wild Perspectives program is not without

its imperfections. Yet, these experiences and approaches show us that valuable insights often lie beyond the norms of traditional education. This viewpoint reminds us that creative and meaningful teaching can break free from the usual patterns, offering the promise of a sustainable future.

Discussion

As I conclude this paper, I find myself reflecting on a research journey marked by insights into the realm of sustainability education in the Netherlands. I've engaged in personalized discussions with a diverse set of interviewees and gained first-hand experiences in sustainability education. Examining those insights upon the One World World (OWW) through political ontological research (PO), I have been able to question sustainability educational practices upon their ability to contribute to systemic change. Are we on the right track or do we neglect crucial elements through which we (unintentionally) reinforce the hegemonial disorder?

Through a critical examination of the data, I have uncovered insights into the historical context, current interventions, and future visions. Together, these insights provide us with a deeper understanding of the extent to which interventions are attuned to their specific time and contextual dimensions. Initially, I experienced interviewees showing intentions to embrace concepts as 'not knowing,' collaborative learning, and the inclusion of non-scientific perspectives. Those seem to show potential for systemic change. However, a discrepancy between Past, Present, and Future hinders a comprehensive understanding of contemporary functioning of society, how unsustainable practices became entrenched and what is necessary for achieving meaningful change. Beliefs and dualities, as described by Escobar (2018) unconsciously blind us, pushing ourselves into the muffin tin of the hegemonial disorder. Ones more, this discordance evokes the concept of what Rose (1999) referred to as the "hall of mirrors".

Stakeholder Involvement in the Development and Governance of Sustainability Education.

In the realm of sustainability education, diverse stakeholders actively participate, often complementing and learning from one another. In this network, LvM positions itself as an umbrella cooperative, striving to enhance synergy, attract new partners, and exercise greater control over the implementation of sustainability education. The cooperative uses the Sustainable Development Goals (SDGs) as a unifying framework to align its members and foster a shared language. However, it also raises a question: is it desirable for all parties to become identical in their approaches?

Unsustainability is undoubtedly a global issue, yet its origins and requirements vary significantly. Attempting to unify problem statements and solutions can potentially result in the loss of nuances and additional insights. Analyzing this situation within the context of my theoretical framework, a multitude of assumptions emerges. Those are characterized by dualities and beliefs, as articulated by Escobar and Blaser (2016; 2018), that potentially preserve the One World World (OWW). Within this framework, the 'subject-object' duality manifests itself, portraying the SDGs as unifying theories with global applicability. The belief in an objective "real" serves as the foundation, with a singular, scientifically accepted truth (the subject) deemed suitable for learning about and making decisions regarding an unsustainable society (the object). Through this construction, deviating 'truths' and practices that are in essence sustainable within its given time and context will not be considered or even noticed, because the SDGs are the benchmark of doing sustainable. As an illustration, consider

the *'Global Classroom'* workshop, where children from various parts of the world are connected to a video platform to discuss the SDGs. Using the SDGs as lens and guideline [subject] to discuss sustainable change together, potentially involved Ladakhi children will never get to talk about their deviating cultural norms, practices, and learning methods even though their livelihood contains many characteristics of be-ing [motional state of being] sustainable. Besides, such unifying approach also excludes elements such as emotional considerations. This appears contradictory when we consider the societal demand to include these specific elements. During my research, I have come across teachers who have been sustainability teacher of the year because children described their enthusiasm for engaging with leaves in the classroom, the emotional connections shared by interviewees, and my personal experience with sustainable education. These factors are seen as catalysts for a deep commitment to sustainability. So far, the sector seems to value the inclusion of diverse perspectives but does not seem to know what that entails.

Additionally, what is considered sustainable [object] certainly does not seem to be a topic of discussion anymore, given the 'objectively' set boundaries. Assuming there is a unifying reality out there offers the hegemonic [Western] party to outline its framework. It is 'objective', and we can use science to unveil it, right? As a result, I notice that societal drivers that lay at the foundation of environmental degradation are not, or merely mentioned. We learn children about inequality, plastic soup, or climate change but skip the part where we explain how we got into this situation (and also maintain it). Such workshops may encourage children to collect money to 'end poverty' but moves the attention away from the discussion about the societal drivers that conserves inequality throughout the globe. Besides, there is no-one explaining that what is sustainable differs highly among places and time. There has, for example, been much discussion about seal hunting in Greenland due to the European anti-sealing sentiment. For Dutch society, it is more than logic to spread this narrative because our sea biodiversity and quality is declining rapidly. However, for the Kalaallit in Greenland, sensing, knowing, and engaging with seals reflect a complex human-animal relation which goes much further than the need-based use of seals (Graugaard, 2020). These situations show how nuances have disappeared through the language of the SDGs. Only by challenging the assumption of an 'objective' reality, we can open up a meaningful dialogue about sustainable change in its full complexity.

One stakeholder cannot be solely held accountable for establishing these boundaries as it operates within a complex and interconnected network.

Expanding our view to encompass the broader landscape of sustainability in education reveals a diverse range of experts contributing to the field, often invited by sustainable education coordinators and developers. These experts may be invited to lead workshops on their professions, such as beekeeping or farming, or offer insights and advice from the perspectives of innovative businesses or science. While passionate and knowledgeable within their respective domains, these experts may lack a comprehensive contextual understanding of sustainable change and education. While they know much about their profession, it is likely that lack knowledge about suitable pedagogical and didactic approaches and/or show limited expertise on the broader sustainability issue, considering the overall problem statement and the complexity involved in addressing sustainability. So, while a variety of interviewees who invited such experts describe visions that recognize the overall complexity and diversity of sustainability, interventions and advice fall short of truly contributing to systemic change. As

I discussed with Birgit, in a society that is not yet structured to radically implement systemic changes, careful navigation is crucial to appropriately align content and method.

I want to explain an example to further clarifying this statement.

let's examine the involvement of Tony Chocolonely in sustainability education. According to one of my interviewees, this company brings valuable resources and perspectives to the table. Its engagement is driven by a commitment to eradicating slavery in the chocolate industry, rooted in the belief of 'Fairtrade' and social justice. This reflects a broader system of values and priorities that prioritize ethical sourcing, fair labor practices, and community development, while still making profit. So far, this sounds reasonable to me. However, besides that growth and efficiency, as in line with the belief in the 'economy' (Escobar, 2018), is still part of Tony Chocolonely's primary objective, it also makes sustainability seem as something static. Introducing children to fairtrade food production is indeed important, but it should not prevent discussions about our slavery history, the meaning of equality, the requirements for our local environmental sustainability, and the diverse interpretations of sustainability by cocoa producers. All these aspects should be part of the same conversation too. Nevertheless, instead of building upon such insights from Tony Chocolonely, a variety of interviewees encourage children to develop their entrepreneurial mindset to develop like-minded businesses without mentioning any nuances. Do such encouragements contribute to the development of sustainable citizens? Although we cannot assume that a company as Tony Chocolonley is able to share a story in its full complexity, we can also not stop the sustainability conversation after sharing such a story.

Furthermore, I've encountered numerous sustainability education advisors who possess a solid grasp of ongoing initiatives and opportunities for collaboration. However, they are not necessarily experts when it comes to the complexities of (un)sustainability. Interestingly, when I had the opportunity to converse with interviewees educated in the field of social and environmental change, I noticed that their proposed interventions and solutions demonstrated a notably higher level of nuance and sophistication compared to others. More emphasis was placed on each context, dialogue, and space for diversity perspectives.

In an evaluation report on LvM, concerns were raised about whether the office staff possess a deep understanding of the fundamental principles of the education system and the advisory skills needed to act efficiently and effectively (Jansen & Zierleyn, 2020). I would extend this concern to encompass sustainability education. If there is a lack of understanding of the broader context of current practices, it raises questions about how stakeholders can effectively facilitate the transition towards sustainability education. This unintended reinforcement of the hegemonial disorder, caused by framing and the fragmentation among stakeholders, hinders us from tackling the bigger issue, embracing its complexity, and appreciating the diverse range of insights. This impedes substantive discussions on possible approaches to sustainable education that contribute to systemic change.

The fragmentation within this field has seemingly led to a transition without a clear face. The shift toward sustainable education lacks an entity with comprehensive responsibility or a full grasp of the issues and necessary actions. As such, the community often initiates action based on research findings: 'research has shown that...'. Such approaches create a sense of detachment between the community and the issue(s) at hand (Escobar, 2018). Similarly, LvM encourages dialogues among its members, facilitating the exchange of ideas, while simultaneously setting boundaries with far-reaching consequences. Although these boundaries have implications for driving sustainable change within the education sector, they are also seen as mere catalysts for the cooperative's members. Furthermore, advisors possess knowledge of available resources and practices but also view their role as responding to the needs and desires of educational institutions. A similar observation can be made regarding the SDGs. There is widespread global support for the SDGs, accompanied by financial support for sustainability initiatives that align with these goals. We can assume that financial support eases the acceptance of the SDGs without extensive examination. At the same time, their overview leaves much room for individual interpretation, action, and reflection. The predominantly reactive stance keeps sustainability static and confines us to continually wander within the hall of mirrors.

Sustainability Education Taking Shape

Sustainability education encompasses a vast array of projects that continue to increase. Drawing from insights in another field, I've come across the concept of a 'salad bar', which I think is a good comparison to the landscape of sustainability projects in education. My analysis shows how stakeholders can cherry-pick problem statements, topics, and strategies based on their preferences, rather than following a systematic, interconnected approach. Problem statements rise from environmental boundaries to mental and physical health, topics span specific sustainability aspects like water pollution to climate adaptation, and strategies often contain a competitive element to trigger action, all without elaborating on a clear correlation. Both theory and my personal experiences have shown that this is not desirable for systemic change.

A prevalent motivation for taking action is the aspiration to 'care for the Earth'. Planetary boundaries, climate change, and biodiversity loss were often considered drivers for taking action. In practice, events are centered around specific sustainability issues, such as plastic pollution, heat adaptation, or energy sources. This approach inadvertently reflects the nature-culture dualism frequently observed in Western society (Escobar, 2018). It portrays children as independent entities confronting an 'external world.' Consequently, interventions overlook the multiplicity of truths or ontologies, making it increasingly challenging for Dutch children to engage in meaningful discussions regarding the political and ideological dimensions at hand. As Brand et al. (2021) rightly emphasize, most concerns fail to address the societal drivers behind the ecological crisis, which remains the case. This keeps it a 'far-off issue', which does not encourage (emotional) engagement.

We must acknowledge that there are also much promising ideas to be found. Interviewees talk about skills to learn cope with change and diversity, and there is attention for the added value of emotions or other non-scientific input. For example, The "Love Letter to the Earth" intervention stands out for its focus on intergenerational thinking and emotional reflection

This initiative stands out for its emphasis on intergenerational thinking and emotional reflection, encouraging children to envision the future for their grandchildren and reflect on their values. And besides such promising examples, we cannot simply escape from society as it is shaped today.

The problem that this report reveals is a notable discrepancy between the Past, Present, and Future. There are promising visions using methods that do not align and visa-versa. Interventions might recognize the importance of diverse perspectives, a method such as competitive formats fail to foster such diversity. Conversely, a method that fosters both scientific and emotional input but visions a further exploring the 'truth', you still not grasp full complexity. Although the sector strives for non-conventional approaches to education, they fail to question day-to-day practices whereby they inadvertently reinforce conventional behavior and reflection. Although interviewees advocate for a reorganization of education, the OWW ontology proves itself as self-referential entity (Neusiedl, 2021).

The mascots of our (un)sustainable future

Considering the position of children in sustainability education, my research journey revealed limited space for dialogue about its design with them. Instead, they participate in interventions that are designed for them. While there are moments when they are asked for input or judgment, these instances typically occur after the frameworks and/or problem definitions have already been established for them. The children tend to echo concerns raised by these experts, often focusing on issues such as climate change, animal welfare, and industrial farming, mirroring the same topics as my interviewees. This repetition does not challenge fresh or innovative insights and instead confines their contributions to predefined narratives. Pictures of the 17 Sustainable Development Goals lesson confirm this. Reflecting on this echo chamber, we again stumble upon the Hall of Mirrors (Rose, 1999).

Furthermore, engagement between children and sustainability is hindered as the topics often remain distant from their immediate experiences. Science is portrayed as a driving force behind a problem definition concerning a world 'out there'. Dutch children are positioned as facilitators of nature or even people elsewhere because of the climate issues they suffer from. They are not enabled to learn about the complete narrative, including the societal drivers behind these issues, and renders minority truths and alternative perspectives. As a result, it becomes increasingly challenging for Dutch children to question everyday practices and engage in meaningful discussions about the political and ideological aspects inherent in education (Wals et al., 2022). This is precisely what these interventions perpetuate. In contrast, why not provide lessons on the diversity of truths and perspectives and how to navigate such diversities?

Demanding More Attention on Education and Systemic Change

In a sector where there seems to be little space for sustainability education, it may not be strategic to continually offer more sustainable education packages. Yet, more and more are being developed, hoping that they will be adopted and integrated by schools. Perhaps we should shift our focus to the foundation of the education system to be able to fundamentally incorporate sustainability.

Research explains that education follows developments in society, but at a slow pace. This society is increasingly demanding the education sector to professionalize, which puts the brakes on attention for 'the latest trend,' and consequently, sustainability in education. There is simply hardly any time and space for educators to deviate from the existing curriculum. With this knowledge, along with my research journey, I increasingly question whether education is the suitable place at all to bring about fundamental changes in terms of sustainability.

We can extend this discussion even further to question my own position as the author of this 'scientific' report. Although my desire is to facilitate a dialogue on sustainability education that triggers systemic change, it's worth asking if this is the way to initiate such a desire. This work is likely to reach only scientists and no marginalized voices. It does not facilitate responses or in-depth additions, and it will likely be read by people in isolation rather than the content moving through space and time. While I advocate for dynamism, collective eternal unfolding, and embracing complexity and diversity of truths, a journey that is documented like this remains predominantly static, flattened, and fixed. By hiding behind the network of science, I still do not enable you to participate in a dialogue that steps out of that hall of mirrors. Perhaps, we should not only question sustainability education as a topic for scientific debate, but also whether science itself is suitable for reflecting on this topic at all.

Nonetheless, I also believe that my work can unsettle the (sustainability) education sector. If they do not address the core issues and do not invite everyone to make them transparent and think about solutions, practices may need to be reconsidered. Currently, I have only been in conversation with developers and have reflected on this through the literature. To further understand the situation, more emphasis can be placed on children their insights and the actual effects contemporary interventions have on children. They can help us further unveil whether we are achieving what is desired, thereby complementing my theoretical reflection and provide us with further insights.

Conclusion

Sustainability education is a transition that receives broad support. However, the specific requirements for this transformation remain elusive. Despite the collective desire for systemic changes, schools and educators encounter challenges in leading this transition. Even with the involvement of numerous experts, advisors, and well-intentioned schools, there still exists a lack of comprehensive understanding and the identification of suitable measurements to navigate in the right direction. Much like the panopticon concept, individuals unconsciously conform to external expectations preordained for them.

Researching this landscape, I am reminded of the difficulty in questioning our daily practices despite our wish for change. Failing to do so inadvertently reinforces the hegemonic disorder of the OWW which is characterized by its unsustainable structure. Therefore, schools and educators must be given the space and tools to also learn about societal drivers that lay at the core of the problem we keep referring to and learn how to challenge the beliefs and dualities that lay at the core of the OWW. Especially in an environment that still exhibits few characteristics of sustainable change, it is crucial to guide participants through this landscape thoughtfully and effectively.

This research has exemplified the potential of Dutch sustainability education practices to contribute to systemic change. To enhance such change, I advocate for dialogue beyond the limits of nature, scientific reasoning, and predefined frameworks. Instead, we should strive for a profound shift in our thinking and actions, allowing space for alternative reasoning and comprehensive descriptions of the situation and context. Only by doing so we will learn what sustainable change entails, how problem statements, interventions and visions are brought together, and also explore what good practices can already be found among varied worldviews. Doing so, we can genuinely contribute to systemic change and create a more sustainable future. I advocate for this dialogue because I belief children, society, the world— each one of us—deserves an opportunity to unfold, come together, and flourish in symbiosis.

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Appendix 1   -   Overview Interviewees

	Occupation	Relevance to research topic	Relevant (prior) experience
Interviewee 1	This interviewee serves as an external advisor for LvM, focusing on sustainability acceleration.	This interviewee provides LVM with advice on sustainability interventions. Thereby, the Inner Development Goals and the connectedness with nature claim a particular role.	This interviewee has a background in culture, media, and communication. This interviewee is currently working as research assistant, exploring human-nature relations. Besides, the interviewee works as a personal coach in nature. Prior to their current activities, this interviewee has served as an advisor to several other companies in the sustainability domain.
Interviewee 2	This interviewee is an employee of LVM.	This interviewee is involved in a variety of projects propagated by LVM. Within this role, the emphasis is on strategically and operationally engaging with the communicative aspects of all projects and with the cooperative efforts in general.	This interviewee has a background in social sciences. Apart from their existing role at LVM, this interviewee has previous working experiences with sustainable development.
Interviewee 3	This interviewee serves as an external advisor for LvM, focusing on the Sustainable Development Goals.	This interviewee is actively involved in the cross-cutting SDG transition, regional connections, and organizing events related to the Sustainable Development Goals.	This interviewee has a background in business administration and management. Apart from their active involvement in the achievement of the SDGs among children, also other citizen initiatives have been established to bring about (sustainable) change.
Interviewee 4	This interviewee is an employee of LVM.	This interviewee engages in connecting individuals and organizations that align with the goals of LVM and advocates for improved sustainability education throughout the Netherlands.	This interviewee has a background in Chemical Engineering, Business Administration, and Theology. Apart from their role at LVM, this interviewee helps companies, public, and civil society organizations to set long term goals regarding the SDGs. Besides, this interviewee has worked as a teacher.
Interviewee 5	This interviewee is an employee of the Institute for nature education and sustainability (IVN).	This interviewee is actively involved in the development and distribution of sustainability education interventions.	This interviewee has a background in environmental sciences and biology.
Interviewee 6	This interviewee works at an independent Nature and Education (NDE) centre, which is a member of LVM.	This interviewee uses their green heart and business-like approach to run a NDE centre, making sustainability education profitable.	This interviewee has a background in finance, sales, and leadership. Prior to their current job, this interviewee has worked as director of a banking cooperation.
Interviewee 7	This interviewee is a member of the academy for Sustainability education (NADO). NADO is a member of LVM.	This interviewee has much experiences with education and sustainability from various perspectives such as being a teacher, advisor, and director. In the past, this interviewee has been employed by LVM.	This interviewee has a background in pedagogy and landscaping. Their involvement in education and sustainability has been practiced in various ways, taking on education-related roles and advisory roles for both the government, schools, and various cooperatives.
Interviewee 8	This interviewee is an advisor and manager of a Nature activity centre. This centre is a member of LVM.	This interviewee is actively involved in the development and distribution of sustainability education interventions. Besides, they claim an advisory role in various projects related to nature and/or education.	This interviewee has a background in environmental sciences. Prior to their current activities, this interviewee worked as an advisor in nature conservation and tourism.
Interviewee 9	This interviewee is an external employee of SME. SME is a member of LVM.	SME develops articles, classes, events, and advice to achieve sustainability in education. This	This interviewee has a background in social scientific environmental science. Prior to their current activities, this

		interviewee claims a particular role as advisor.	interviewee has worked as a teacher and claimed various positions to manage transitions, preferably related to sustainable change.
Interviewee 10	This interviewee works as a culture coordinator for a Dutch municipality.	From a municipal position, this interviewee develops sustainability education as part of a NDE centre. NDE centres are members of LVM.	This interviewee has a background in music and prior experiences as a coach.

Appendix 2   -   Interview structure

Introduction

1. I start of explaining the cause and content of this interview.

What

2. Could you explain your background?
3. Could you explain the work you do?
   a. How did you get into this position?
4. What motivated you to become involved in sustainability education?
5. What is your relation to LvM? (If the interviewee recognizes a link with LvM)
   a. Could you provide a description of what LvM offers you?
   b. Could you provide a description of what you offer LvM?

How

6. Sustainability plays a significant role in your (professional) life; could you elaborate on this?
   a. How do you relate to … (refer to frameworks found during online research about interviewee)
   b. How do you relate to the SDGs
   c. How do you relate to the WSA
   d. How are these frameworks brought together in your opinion?
7. How does your day look like as …?
8. How do you contribute to (the development of) sustainability education?
9. How do you deal with complexity in this field? (Depending on the role of the interviewee, this question is asked more specifically)
10. How does your work relate to the Sustainability frameworks you hold onto?
11. If you were to critically assess your work, can you identify areas of improvement?

Besides these guiding questions, I discuss relevant cases from my research or prior interviews, tailored to the interviewee's profession, and ask for their reflections on these cases.

Why

12. What does the future look like for you?
13. What is your future vision, with regards to sustainable change and education?
    a. How does your work contribute to such vision?

Closing questions

14. Is there anything you want to elaborate on?
15. Do you have any suggestions for individuals or organizations I could reach out to?

Appendix 3   -   Overview past – present – future

	Past	Present	Future
Interviewee 1	"I started thinking more about what the Earth can actually bear and how we currently live, very individualistically, with less connection to each other and to nature. This leads to various health issues. There are several studies that demonstrate this."	"I strongly believe that it's about raising awareness, and there's a lot to be done in that regard. Awareness, to me, is twofold. It involves knowledge, so having a basic understanding of things like biodiversity, knowing the actual facts instead of fabricated information designed to scare us. On the other hand, it's also about a deeper connection to nature, feeling like you are a part of it."	I personally see people being very driven and sometimes, perhaps, pushing themselves a bit too hard, which can lead to burnouts. This is interesting because well-being, particularly SDG 3: Good Health and Well-being, happens to be one of my favorite SDGs. I think that when you align this with the goal of good health and well-being, it naturally leads to making entirely different choices.
Interviewee 2	"We approach sustainability in line with the Sustainable Development Goals. This means that we view it in a very integrated way, not just as something related to the environment, but also encompassing aspects of inclusion, equality, and various other themes, because ultimately, they all influence each other. It's essential that we've been provided with these frameworks. They've given us a clear direction and, as a result, offer us great opportunities to engage with and work on these issues."	"We believe it's very important that children and teachers participate in the decision making. Because that is what it is all about. We value their input. So, I do not see my role as the one who dictates but more as the facilitator."	"We want to create a world where we treat each other better, where we take better care of the earth. It's really about collectively learning how to do this and shaping it. So it's not just a topic covered in a single school lesson, but it's integrated into every subject, from Dutch to math and anything else. Sustainability becomes so inherent that you almost don't need to explicitly mention it. That's where we want to go."
Interviewee 3	"Our spill-over index is the largest in the world. So, what we purchase here has a tremendous impact on climate change, poverty, and child labor. If we continue with our energy transition, we will deplete all the resources for the entire world, you know? It's essential to realize that everyone has to contribute."	"Your core business in education is truly about imparting global citizenship to children. I'm in discussions with the Ministry of Education, Culture, and Science. Although it's a compulsory subject, how schools implement it can vary. The Sustainable Development Goals (SDGs) are highly relevant for citizenship education and global citizenship. The Citizenship Expertise Center is now going to advise that the SDGs can be used for this purpose. When you teach a class on these topics, you get so much inspiration from the children. Things like plastic pollution, kids find that dreadful, you know. Equality, boys and girls are equally capable and can do anything... So, it's crucial to listen to what they find important."	"So, what I was saying is, if we no longer have the capitalist system, which only revolves around making money, having a big house, a car, and lots of traveling, then we need to undergo a massive transition where it's not all about money. Instead, you spend your time on things that give you purpose... Maybe working in your vegetable garden or cooking for lonely elderly people. Your whole life changes when you start living for the SDGs. Much more meaningful."
Interviewee 4	"That SDG, well, all countries in the world have signed it, and it's not just for governments, but also for businesses, individuals like you, and education. It applies to everything. But who are we to add more things by referring to an existing framework?"	What are we doing to anchor sustainability ourselves? So, we're looking at how we can make changes in a few areas. First, with Wikiwijs, where there's a sustainability page that we manage. We've made agreements with them and we've appointed people from our network to check what can be included there. There are certain criteria we've all established together. This means that sustainability is no longer hit-or-miss. We have quality standards in place.The second thing we do	"Our main goal, of course, is within SDG 4.7, which states that education should prepare learners and students with knowledge and skills related to the other 16. We touch on that systemic change a bit, which is what we're aiming for. But for now, we're doing it within the system, because otherwise, everyone will start to complain."

		is with the Sustainabul. We've picked it up, and we've set new core objectives, including those for citizenship education. I find it quite enjoyable that we're part of the advisory committee for it. So, a number of parties, about 6 or 7, have been appointed to oversee and provide feedback."	
Interviewee 5	"We recognize that nature is under growing strain, which has much to do with to the lost connection between humans and nature."	"We offer programs on nature, sustainability, health, and technology through excursions, guest lessons, lesson kits, material packages, supporting materials, and workshops. In addition, we provide schools with advice and offer support where needed."	"Children learn here to make sustainable and healthy choices for a sustainable future, alongside various target groups."
Interviewee 6	"before this I worked for a bank. I used to be a banking director and when I entered the scenery. They were looking for a director with a green heart and a business-like approach and I think that is just what is needed"	"We offer traditional learning and education on environmental education which comprises lessons at schools. So lessons on plastic soup, on cleaning up, on being out there in nature … We want to do this with the Citizens in the city instead of developing a program for schools"	"I think the core of our mission is to engage people with nature and thereby making them aware that there's a problem in this world."
Interviewee 7	"There is currently a lot of waste, not only in our environment but also mental and physical waste of humans"	"you talk about sustainability and education … we have a module about water or we have a module about circular economy, or we have a module about another topic something with agriculture, but it is not the module on the theme. It are the competences you need to work in a world in transition"	"We don't have the truth, but we have parts of the puzzle"
Interviewee 8	"And um there was the environmental sites like waste pollution these things and I think it what I said about over 10 years ago the climate change came into focus"	"I think what a lot of what we do is still giving information to people" "We prefer working with tangible objects that you can touch, smell, or engage with using your senses."	"we should try to make people see that their way of life should be different to save the world. we are not in technical solutions or anything but we should make people aware that in everyday life your actions have effect on your surroundings and on the environment"
Interviewee 9	"I studied environmental social sciences in which I now focus on sustainable development and behavior because the whole idea of system change is so important for our behavioral change."	"I think one thing that's often overlooked, but that is crucial, is meeting spaces, and so are there places that are self-organized, where people can come together to discuss and meet each other."	"Yeah, that's about futuring about what it's like to cooperate in one project. That's about knowing each other's needs. That's about being insecure about the future or about relations and dealing with that. That's about being aware of your own values and knowing how to talk with other people about having conversations about values."
Interviewee 10	"I am primarily a policy advisor for arts, culture, and education. In 2010, the province of […] approached me with a request to explore the integration of natural and environmental education into the art education. The reason this request materialized is closely tied to my profound personal interest in everything related to nature and our environment. Without that interest, it wouldn't have happen."	"I am now responsible for the nature and environmental education packages, so those are a kind of... I call it a menu. Schools can choose from a range of packages that we offer, which we tailor for primary education. So, I collaborate with local beekeepers, farmers, the IVN's nature association, and so on."	"My ideal would be for people to have more love for nature, the environment, and especially for animals and each other. That's my vision. A world where people are less preoccupied with money."