

Blue Hearts: 'Connect, respect, protect'

Decolonising Western-centric Ocean Literacy towards an environmentally just ecopedagogy for the Dutch context

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Summary

The Ocean environment is currently experiencing major anthropogenic change, critically affecting global marine biodiversity and all life on planet Earth. Due to a profound lack of Ocean related education, many young Dutch learners are becoming Ocean illiterate, which shapes drastically unsustainable interactions with the Ocean. In attempting to counter Ocean illiteracy to address the challenges faced by the Ocean environment, Western-centric organisations are developing global Ocean educational programmes, such as the European Blue School Project and the UN Ocean Literacy Framework. However, this thesis explores the degree to which the educational models of the European Blue School Project and the UN Ocean Literacy Framework are essentially the product of Western-centric epistemologies. This thesis furthermore explores the degree to which Western-centric epistemological dominance, practices the homogenisation of a diverse global society, which aims to conform diversity to environmental worldview orientations inherent to Western perspectives on the Ocean environment and education.

This thesis argues that Western-centric epistemological dominance in contemporary global Ocean education is a product of the colonial legacy, which has continued the marginalisation of non-Western epistemologies. This colonial legacy of Western epistemological oppression has denied the epistemologies of people, subjected to Dutch colonial rule, the right to existence and being heard for centuries, still greeted with prejudice and subordination in contemporary Dutch society and education. Therefore, this research aims to overcome the perpetuation of the colonial legacy of Western-centric Dutch Ocean education, and instead, advocate for an environmentally just ecopedagogy that challenges the colonial legacy of the European Blue school Project and the UN Ocean Literacy Framework. By challenging the dominance of Western-centric environmental worldview in Dutch Ocean education, this research aims to empower people who remain entangled in the Dutch colonial project and the epistemic oppression they face. Doing so enables the possibility to create a decolonial, environmentally just ecopedagogy for Dutch Ocean education.

To achieve this aim, the thesis adopted a decolonial methodology, which recognises the false presumption that Western science is superior to other ways of knowing. Therefore, this research uses a two-stage decolonial critical discourse analysis. In the first stage, the decolonial critical discourse analysis is performed on the educational documents of the European Blue School Project and the UN Ocean Literacy Framework, which establishes a baseline of coloniality inherent in the Western-centric curricula. For the second stage, to provide a decolonial perspective, the research performs a decolonial critical discourse analysis, based on semi-structured interviews with nine respondents from nine post-Dutch-colonial nations.

The main findings of this thesis show that Western-centric Ocean education prioritises discourses that centre human-wellbeing, essentially disconnecting itself from nature, under the presumption that humans are exceptional in their right to use the environment as a tool for their personal gain, to enhance economic growth and the pursuit of sustainability for continued resource exploitation. Furthermore, this thesis shows that non-Western epistemologies are continuously marginalised and epistemically oppressed in the Western-centric educational agendas. This epistemic oppression has denied non-Western centric epistemologies their just recognition in global Ocean education, which essentially neglects the non-Western-centric

beliefs on the interconnectedness of humans and nature, in their interaction with the Ocean environment. Therefore, the thesis recommends the recognition and empowerment of non-Western epistemologies, to challenge the colonial legacy inherent to Western-centric educational models as the European Blue School Project and the UN Ocean Literacy Framework, for the creation of a just ecopedagogy that prioritises sustaining life, over sustaining the economy, for the Netherlands.

Keywords: *Decolonial perspective – Dutch Ocean education – Ecopedagogy – Environmental justice – Environmental worldviews – Epistemic justice – European Blue School Education – human exceptionalism – Ocean Literacy – UN Ocean Literacy Framework*

Preface

This Master Thesis was written for the completion of the master's program in Environment and Society Studies – Global Environment and Sustainability, at Radboud University, Nijmegen School of Management. My initial motivation to research this topic for my thesis, came from my personal experiences as a Geography teacher. Over the past few years, I have extensively familiarised myself with the Dutch geography curriculum. And, while my passion for geography education has never faded, over time I started to seriously question certain aspects of the Dutch geography curriculum. What I had noticed was the severe disconnection between physical- and human geography within Dutch educational material. For some reason, both fields were always taught separately from each other, which was completely incomprehensible to me. In my eyes, humans and nature have always been interconnected. So why then has contemporary Dutch education detached both fields from each other?

This question was the reason I enrolled myself in the Environment and Society Studies program at Radboud University. Initially, I wanted to learn more about the interconnection between the physical- and human geography aspects I teach, to enable myself to teach my students the interconnection I had always missed in geography education. Later, however, my newly discovered interest in environmental justice became increasingly prominent in this initial question. I became intrigued by the issues of justice and coloniality that are inherent to the society I live in. This confrontation with the generally neglected influence and perpetuation of injustice and the colonial legacy, steered me in the direction of wanting to learn more about the reasons behind this existing disconnect to improve the Dutch educational system.

Of course, one could not decolonialise the entirety of the Dutch curriculum and that's why I had to make a choice to challenge the colonial curriculum one part at a time. Over the course of the Environment and Society Studies program, I also developed a passion for the marine environment. I believe my passion for this can be traced back to the absence of the marine environment in Dutch geography education. The Ocean has been this mysterious topic which has eluded my personal education for many years, and it intrigued me to learn more about it. As it turns out, the Ocean entailed so much more than I could have ever imagined. Therefore, the need to better the Dutch curriculum, combined with my passion for the marine environment is what essentially motivated me to write my Master's Thesis on this topic. I hoped that it would allow me to essentially create an environmentally just ecopedagogy for the Ocean, by providing a decolonial perspective to the UN Ocean Literacy Framework and the European Blue School Project.

Furthermore, this thesis was written under the joint supervision of Radboud University and Wavemakers United. Therefore, I would like to thank dr. Jennifer E. Telesca at Radboud University, for her guidance and extensive feedback during the conduction of my research. Her contributions have helped me configure the scope and final product of this year-long project. My thanks also go out to Wavemakers United, a great organisation with a wonderful team that actively tries to better the world, by providing water, climate, and energy education to children all around the globe. They have provided me with a warm and welcoming workplace and their efforts to support and facilitate my research have been tremendous. Special thanks go out to my Wavemakers United supervisor, mister Muhammet Bilgic, for offering me this wonderful opportunity.

Especially, I would like to thank all the respondents who have contributed to this research, by sharing their inspiring stories, experiences, and perspectives on just, decolonial Ocean education. Their input has been eye-opening, as well as confronting, in unravelling the colonial legacy inherent to Dutch education.

Furthermore, I would like to thank my fellow members of the Master Thesis cohort for their support and extensive feedback during this entire process. Lastly, and especially, I would like to sincerely thank my dear friends, family, and girlfriend for their provision of endless support and not complaining when sometimes having to deal with the included stress and zoned-out absence during this long, yet insightful, endeavour.

This thesis was written for the empowerment of those voices marginalised by the colonial legacy. It serves as a message to Western educational professionals to critically engage with what we aim to teach, so that we no longer perpetuate this historic and epistemic injustice.

Thank you for reading my thesis. I hope it provides you with the same eye-opening insights as it did for me.

Yours sincerely,

Max H.J.F. van Brussel
July 2024, Middelrode

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List of abbreviations

1. **European Blue School Project (EBSP)**
2. **European Union (EU)**
3. **Intergovernmental Oceanographic Commission of UNESCO (IOC/UNESCO)**
4. **United Nations (UN)**
5. **UN Ocean Literacy Framework (UNOLF)**

1.0 Introduction

The Ocean¹ plays a fundamental role in the cycle of life. However, life has not always been a guarantee on this planet, as all species face challenges in survival, with most having gone extinct gradually since the origin of life (Elewa & Joseph, 2009). Despite this gradual trend, there have been sharp peaks in the number of vanishing species. The Earth has known five mass extinction events, of which at least four are known to have originated in the Ocean, devastating global marine biodiversity and signalling critical moments of change (Bond & Grasby, 2017; Elewa & Joseph, 2009; McElwain & Punyasena, 2007; Stanley, 1984). At this moment, the Earth is heading towards a sixth mass extinction event, driven by anthropogenic Earth system change, which would be catastrophic for the Ocean and the survival of all life, including humanity (McElwain & Punyasena, 2007; Payne et al., 2016, Penn & Deutsch, 2022). Unfortunately, few people know about the importance of the Ocean in sustaining all life on Earth, due to the profound absence of Ocean related topics in contemporary education (Freitas et al., 2022). As a result of this absence, young learners are often unaware of the influence the Ocean has on their daily lives. More importantly, this large presence of Ocean illiteracy in people's lives has shaped unsustainable ways of interacting with the Ocean, which has significantly degraded the Ocean environment to dangerous levels for the survival of life on Earth (Freitas et al., 2022; MacNeil et al., 2021; Payne & Marrero, 2022; Penn & Deutsch, 2022).

In reaction to the rapidly changing state of the environment, the global governance body, the United Nations (UN), acknowledges that an inability to change anthropogenic activities in a changing planetary system, will fundamentally impact the Earth's health. Their acknowledgement of this anthropogenic threat has resulted in the creation of an approach for sustainable development to ensure the satisfaction of human-wellbeing in facing environmental change. The UN therefore further defined sustainable development to seek transformative change, to ensure the maintenance of a future that provides the necessities needed to alleviate the concerns for human wellbeing (Brundtland, 1987). Problematically, this development fails to holistically address the problems faced by the Ocean. Contemporary sustainable development as defined by the UN is vague, abstract and fosters delusion in its definition (Robinson, 2004). It is an inherently Western-centric² concept, predominantly focused on sustainable economic growth, limitedly addressing its impact on life and the environment (Escobar, 2015; Hodos, 2007; Hopwood et al., 2005). Yet, economic growth cannot be sustainable. The pursuit for unending economic growth is inherent to a neoliberal, capitalist foundation, rooted in colonial history, which drives contemporary processes of conquest, domination and exploration, to satisfy the economic needs of society (Cronon, 1996; Meeuwsen, 2022; Weiner, 2014; Williams, 1972). Therefore, the belief in economic development for sustainability is essentially a perpetuation of the Western-centric imposed colonial legacy, that drives contemporary global policy, education, and environmental protection (Escobar, 2015; Geisinger, 1999; Langan, 2018; Matthews, 2011; Schneider et al., 2010; Smith, 2008).

¹ According to Smith's (2008) work on decolonial methodologies, expresses the necessity of not viewing participants as subjects to be studied, as this would marginalise their humanity. Therefore, in referring to the Ocean, the 'O' is capitalised as this research does not seek to subjectify this important ecosystem.

² This research makes use of the APA Bias-Free Language style guide created by the American Psychological Association (2023).

Unfortunately, such colonial tendencies, prioritising economic development for sustainability, are evident in efforts to address the threats faced by the Ocean. The UN launched the Decade of Ocean Science for Sustainable Development, aimed at creating ‘the ocean we need for the future we want’ (Santoro et al., 2018, p. 37). At its core is the UN’s notion of sustainable development, rooted in Western cultural-scientific dominance that prioritises economic growth (Cobern, 2005; Liu & Lederman, 2007; Sepie, 2017; Smith, 2008). Contributing, Heymans et al. (2020) show how Ocean science is predominantly produced by former colonial powers, critically underrepresenting knowledge from previously colonised countries (Bender et al., 2022). Therefore, this idea of a collective ‘we’ is rooted in a Western-centric environmental worldview, powerfully characterising the global order of human-Ocean relations, essentially homogenising the people of Earth. Such paradigms have become dominant in science and education, which raises questions of environmental justice in the Ocean sphere and the interaction of the human and nature (Freire, 1978, Liu & Lederman, 2007; Sepie, 2017).

The Ocean Decade is becoming the world’s foremost agenda for sustainable development in the Ocean sphere (Bender et al., 2022). And, while this agenda aims to achieve its goals and cultivate positive educational change, through the development of the UN Ocean Literacy Framework’s (UNOLF) by the Intergovernmental Oceanographic Commission of UNESCO (IOC/UNESCO), the educational agenda remains stuck in its own environmental worldview oriented thinking, perpetuating the colonial legacy of exploitation, epistemic oppression, and the alienated human-centric attitude to the interconnectedness of humanity and nature (Bender et al., 2022; Del Monte et al., 2021; Haugan et al., 2021; Heymans et al., 2020).

In the European Union (EU), the Ocean Decade attempts to bring the Ocean into the classroom through the European Blue School Project (EBSP). The EBSP is an educational model, federated by the EU, that attempts to increase marine citizenship and Ocean literacy within European member states. Within its educational agenda, it derives core aspects of the curriculum from the IOC/UNESCO’s UNOLF, but focusses predominantly on education for the blue economy, which prioritises young people learning about ocean-based, sustainable economic development. Currently, the EBSP is the perceived future for European Ocean education, already accounting for eight schools in the Netherlands, since its start in 2019 (European Commission, n.d.; IOC/UNESCO, 2023; Mokos et al., 2022). An unchallenged advancement of the EBSP and the UNOLF in the Netherlands would potentially increase environmental injustice within a national curriculum that already continuously perpetuates its colonial history. This becomes evident from the Dutch’s positive assessment of the colonial legacy, inherent to its national curricula, by the partial inclusion and exclusion, and unbalanced representation of its colonial history (Boers-Goi, 2014). These practices are used as an ideological tool to shape students’ views on the nation’s history and maintain its power-balance. Essentially, the partial inclusion and exclusion of Dutch historical elements support the Dutch’s belief of innocence and tolerance within the global community (Wekker, 2016). The exclusion of the experiences of those marginalised by Dutch colonial practices, obscures the historical roots of contemporary inequality, that perpetuates a belief in Western superiority and a colonial ideology that continues to oppress large parts of society (Boers-Goi, 2014; Del Monte et al., 2021; Smith, 2008; Weiner, 2014; Wekker, 2016).

It is therefore paramount to challenge colonial legacies, rooted in the dominant Western-centric environmental worldviews on sustainable development, that perpetuates global environmental injustice and exploitation of the Ocean, in Dutch education. The dominant power structures must be challenged to create a decolonial ecopedagogy, that strives towards environmentally just ways of learning and interacting with the Ocean. Giving voice to marginalised environmental worldviews of post-Dutch-colonial people, is thus essential to provide a decolonial perspective to the EBSP and the UNOLF within a Dutch context, to prevent further continuation of their colonial legacy, and seeking justice for the Ocean environment. It is time to move beyond a curriculum in service of sustaining the economy, towards one in service of sustaining life.

1.1 Research aim & question

This research aims to overcome the perpetuation of the colonial legacy of Western-centric, Dutch Ocean education, by advocating for an environmentally just ecopedagogy, that challenges the UNOLF and the EBSP. It seeks to critique contemporary Western-centric environmental worldviews on Ocean education, which fail to address the root causes of Ocean degradation and environmental injustice. Specifically, this research aims to create an environmentally just ecopedagogy for Dutch Ocean education, by providing a decolonial perspective to the educational agendas of the UNOLF and the EBSP, through the empowerment of marginalised environmental worldview-oriented epistemologies from post-Dutch-colonial people. Therefore, this research seeks to address the following questions:

What might a decolonial Ocean Literacy look like for a Dutch environmentally just Ocean ecopedagogy?

- 1) What are the differences in environmental worldviews on Ocean education and privileged knowledge practices between post-Dutch-colonial people and Western-centric Ocean Literacy?
- 2) What are the implications of differences in environmental worldviews and privileged knowledge practices between the post-Dutch-colonial people and Western-centric Ocean Literacy?
- 3) How can decolonial perspectives from post-Dutch-colonial people be integrated into ecopedagogical Ocean Literacy?
- 4) What is necessary to realise an environmentally just ecopedagogy for decolonial Dutch Ocean education?

1.2 Scientific relevance

While there is an abundance of ecopedagogical, and Ocean environmental literature available, almost no studies relate both fields. Therefore, this research addresses the gap in Ocean-ecopedagogical literature, by interlinking both research fields to further science education.

Furthermore, this research focusses specifically on Ocean Literacy, which is largely derived from Western-centric science (MacNeil et al., 2021). The Western-centric scientific method is one which favours the natural sciences, fuelled predominantly by objectivism and the use of realist and positivist approaches, seeking neutrality (Medin & Bang, 2014). This evolution of Western-centric science has resulted in the disconnect of the natural sciences and social science, often

neglecting the existence of different epistemologies by not recognising and integrating both fields into one interconnected science (Cobern & Loving, 2001; Lave et al., 2018).

By bringing in environmental worldviews from previously colonised countries, this research adds to making scientific research and its products more inclusive, by drawing on non-Western, marginalised epistemologies. Therefore, this research addresses the perpetuation of colonial legacies and the marginalisation of previously colonised worldviews for Dutch Ocean education. Research on perspectives from previously colonised worldviews on environmental change have been largely ignored, marginalised or peripheralized in academic literature (Walshe & Stancioff, 2018). By acknowledging the post-Dutch-colony nations' agency, this research breaks with the reoccurring practice of epistemic oppression, by stimulating participation in knowledge production (Baldacchino, 2015). Through this practice the research contributes towards the acknowledgment of a knowledge ecology, constituted of different ways of being in this world, which will aid in breaking with the Western-centric epistemic oppression in science. It therefore contributes to a more equal epistemic global balance in science, suited for, and produced by a larger, inclusive public, fostering the advancement of epistemic justice in science and education and the interconnection of natural- and social-science (Fossey et al., 2002; Gupta et al., 2022; Lave et al., 2018; Smith, 2008).

Continuing, the UNOLF forms the basis of the EBSP, which has received little (descriptive) attention in scientific literature (Mokos et al., 2022). No evidence was found of the existence of scientific literature that critiques the EBSP's vision on Ocean education and its privileged knowledge practices. Merely work briefly describing the contents of the core aspects and how this could contribute to enriching the educational agenda of the EU was found (Koulouri et al, 2022; Mioni, 2022; Mokos et al., 2020; 2021; 2022; Worm et al., 2021). Therefore, this research aims to bridge this gap, by challenging the core principles of the EBSP, and the UNOLF, to assess the quality, inclusivity, core focusses, and privileged knowledge practices of the presumed way forward for Ocean education in the EU and the Netherlands.

Furthermore, the elaboration on Freire's (1978) ecopedagogical theory as a decolonial effort for the improvement of science education, through the alienating human-nature-relationship theories, together with theories on decolonial perspectives, contributes to the scientific relevance of this research. By elaborating on Freire's decolonial work through these theories, a deeper conceptualisation of the interpretation of Freire's work can be realised, contributing to the better analysis of data and the use of an exemplary approach for further ecopedagogical research.

Finally, by aligning Clapp & Dauvergne's (2011) environmental worldview theory with ecopedagogy, this research builds on Freire's (1978) multi-perspectivity recognition within ecopedagogical practice. Furthermore, the integration of Dobson's (1996) conceptions on environmental sustainability in Clapp and Dauvergne's environmental worldview theory, has expanded on the scientific practice of identifying and studying alternate motivations for, and conceptualisation of environmental protection. By doing so, this research provides better structure to understanding and operationalising Freire's (1978) multi-perspectivity approach to decolonial perspectives and the Western-centred educational agendas.

1.3 Societal relevance

Unprecedented anthropogenic change is rapidly affecting the Earth's most vital ecosystem. The consequences of this devastating change to the Ocean, extends beyond ecological impacts, threatening cultural practices, food security and millions of livelihoods (McElwain & Punyasena, 2007; Payne & Marrero, 2022; Payne et al., 2016; Penn & Deutsch, 2022). The Western-centred scientific model has become a universalised method to globally teach about the Ocean, fostering sustainable development as the solution for ongoing anthropogenic environmental change (MacNeil et al., 2021; Medin & Bang, 2014). This homogenisation of the global population has a direct link to the perpetuation of the colonial legacy in the epistemic world order, with the believe of Western ways of knowing and being in the world as the ultimate answer. Its continuation maintains the epistemic oppression of marginalised environmental worldviews; not acknowledging their importance and the existence of a plurality of epistemologies (Cobern & Loving, 2001; de Melo Resende, 2021; Fossey et al., 2002; Guilherme, 2019; Smith, 2008). Therefore, this research is written for the empowerment of non-Western, previously colonised, and marginalised voices, in striving towards epistemic justice for a Dutch Ocean ecopedagogy.

In doing so, this research aligns with Haraway's (2008) believes on situates knowledges, which challenges the myth of objectivity and universal knowledge, and strives towards the inclusive empowerment of subjectivity and context-dependent ways of knowledge production and understanding the world. Therefore, this thesis serves as a message to Western education developers, teachers, schools, and policy makers to challenge their dominant believes on Ocean education, and strive towards decoloniality, inclusivity and justice, by acknowledging the existence of a knowledge ecology.

To achieve this, this research aims to decolonialise the Western-centric global standard in contemporary Ocean education: the UNOLF, used in the EBSP. Specifically, it addresses the Dutch case, to prevent a perpetuation of the existing colonial legacy in the national curriculum (Boers-Goi, 2014; Weiner, 2014). Since the EBSP is considered as the way forward for Ocean education (Mokos et al., 2022), a more inclusive approach, refraining from further marginalisation of previously colonised environmental worldviews, is essential to avoid education sustaining the colonial legacy. Therefore, it must learn from former colonial worldviews, recognising historical disparities affecting Ocean science knowledge production and the need for more just and inclusive approaches to break the Western epistemic oppression, through engaging with a decolonial perspective and the lived experiences of people from post-Dutch-colonial nations (Smith, 2008).

Finally, this research seeks to engage with a decolonial perspective on the EBSP and the UNOLF, to build towards an environmentally just ecopedagogy, as an alternative educational strategy for Dutch Ocean education. It would emphasise the interconnection of socio-environmental issues and promote transformative, environmental justice-oriented education, breaking with the colonial legacy (Freire, 1978; Smith, 2008). Through the recognition and empowerment of decolonial perspectives in the creation of an Ocean ecopedagogy for education, the future Dutch generations will be able to better navigate environmentally just change, fostering the appreciation and restoration of life.

2.0 Literature review and theoretical framework

This chapter is dedicated to presenting and discussing the literature surrounding the core focus of this research. It seeks to position the research within the existing body of scientific knowledge, while simultaneously identifying the gap in the literature. The identification of the literature gap is to be addressed through this research. Furthermore, the theoretical framework, involving the concepts and theories used to structure the research is also presented in this chapter.

2.1 Literature review

In general, Ocean illiteracy has been linked negative anthropogenic change to the Ocean, due to the absence of related topics in education (Freitas et al., 2022). Therefore, the IOC/UNESCO has shown a significant interest in enhancing Ocean knowledge by launching the Ocean Decade, the UNOLF, and federating the EBSP (European Commission, n.d.; IOC/UNESCO, 2023; Mokos et al., 2022).

While the EBSP is thought of as the way forward to enhance Ocean Literacy in the EU, little research on its implication for Ocean education has been done (Mokos et al., 2022). Mentioning of the EBSP could be found in work by Koulouri et al. (2022), Mioni (2022), Mokos et al. (2021; 2020; 2022), and Worm et al. (2021), yet all maintained a descriptive nature of the project, signalling how it is a means for interdisciplinary collaboration amongst schools to address Ocean issues and Ocean Literacy, towards sustainable global citizenship. Nothing could be found that assessed or challenged the implementation, or the content of the EBSP.

Most Ocean education, like the EBSP, is a product of former colonial powers. As a result, Ocean education has become stuck in a colonial legacy of neo-liberalist worldviews, encouraging exploitation to sustain human-wellbeing, neglecting the Earth as an interconnected living being (Freire, 1978; Heymans et al., 2020; Lubchenco & Haugan, 2023; Wheaton et al., 2021). Inherent to contemporary Western society and their educational models is the alienation of nature by the human. The human's drive to distinguish itself as the controlling factor on Earth, detaching itself as part of the natural world, perpetuates the human centric ethos developed under neoliberal colonialism (Cronon, 1996; Tsing, 2012; Williams, 1972). Failing to acknowledge the existence of such imbalance, would sustain the false presumption of hegemonial superiority in knowledge production and educational agendas, further homogenising the global population and perpetuating historical legacies of capitalism, colonialism, and imperialism (Gillespie & Mitlin, 2023; Meeuwssen, 2022; Smith, 2008).

Such educational agendas are rarely challenged, and for the Netherlands, it shaped racialised conceptions of their nation, which reveals a racial neoliberal foundation embedded in the national curriculum. According to Weiner (2014, p. 330), this racialised conception shows its origin within the neoliberal foundation of the national curriculum, as 'contemporary racism is inextricably linked to capitalism and exists largely in the form of neoliberal denial that disregards how the historical and contemporary private control of resources generates and maintains racial inequality'. According to Autar (2017), Delgado and Mulder (2017), and Wekker (2016), this has resulted in the creation of oppressive environments for Dutch students who are not part of the dominant social class, through curriculum development and the alienating, intimidating, and demeaning behaviour of teachers and students. Yet, to approach this through a single-axis

analysis of oppression, one that assumes only race as the deciding factor of dominance, is short sighted, according to Crenshaw (2013) and Wekker (2016).

While there is in fact an existing hierarchy in Dutch society and education that marginalises certain groups, a careful note must be made to critically understand the Dutch society's neglect of systems of oppression and their historical forgetfulness, which feeds the dominant discourse of colour-blindness, antiracism, and tolerance. It is not only race or skin colour that perpetuates this colonial legacy but the intersection of multiple identities and social categories which affects the individual within society (Crenshaw 2013; Wekker, 2016). The neglect of intersectionality in understanding the existent oppression in Dutch society and education would fail to adequately address the specific needs and challenges faced by marginalised members of society. Recognising this intersectionality is therefore important to understand the complexities of oppression and the ways in which different forms of discrimination intersect and compound each other (Crenshaw, 2013). It would help to better understand the Dutch's belief in a nation based on ethical principles, colour blindness and tolerance, while in fact racism prevails amongst the dominant White classes, at the intersection with different aspects of identity, because of the colonial and imperial Dutch history of oppression (Wekker, 2016)

These alienating and exclusive practices of the colonial legacy in Dutch education can be traced back to the organising principle of Dutch society (Balkenhol, 2018). Balkenhol argues that the Dutch historical and contemporary commitment to pillarization of society, the division of society based on race, religion, and the intersection of other identity aspects, continues to be a measure of segregation, favouring the dominant White groups. These pillars limited the possibilities of inter- and intra-pillar justice seeking, as the system justified the perpetuation of religious, cultural, and economic differences within Dutch society, contributing to large polarisation (Balkenhol, 2018).

Further, when addressing the racial neoliberal foundations of Dutch education, Europeanisation is evident through systematic social-forgetting, distortion and marginalisation, drawing away attention from their dark side of history (Boers-Goi, 2014; Weiner, 2014). The Dutch educational material supporting the curriculum, portrays a dominant practice of social forgetting. The material is presented through a Eurocentric perspective which excludes the cultures and histories of marginalised groups and emphasis Western superiority, which feeds the White Dutch's sense of superiority and ignorance to social injustice (Wekker, 2016; Weiner, 2014). Such practice are often a critical element in Dutch education and 'play an important role in shaping how students view their nation's history and conception of racial groups, racial and power hierarchies' (Weiner, 2014, p. 329). The material is framed in a way in which the White Dutch colonial effort is perceived as positive, and not at all guilty of racism or exploitative behaviour, showing a character of mercantilism (Delgado & Mulder, 2017). This has contributed to the denial of race, and racism, in its intersection with gender, sexuality and class, within the Dutch society, which has had a severe impact of the conceptualisation of Dutch children and adults towards the racialized or ethnicised other (Weiner, 2014; Wekker, 2016).

The Dutch colonial legacy of education has contributed to the normalisation and perpetuation of colonial relations between humans and the system of exploitation and oppression (Weiner, 2014;

Wekker, 2016). The system is bound to ‘perpetuate White ... epistemologies and an educational coloniality of power’ (Weiner, 2014, p. 344), functioning as a ‘mechanism to perpetuate the hegemony of modernity and the disavowal of other forms of understanding’, which generalised and homogenises the global population according to Eurocentric standards (Vázquez, 2012, p. 5). The educational practices of the Netherlands is thus a product and example of the colonial legacy in which ‘[W]hite people set standards of humanity by which they are bound to succeed and other bound to fail’ (Dyer, 1997, p. 9). It is maintained by the continuous practice of denial, disavowal, elusiveness, and selective emotional investment of history, within Dutch society and education, essentially sustaining a self-image of moral superiority, tolerance and innocence, which obstructs the empowerment for decoloniality (Wekker, 2016).

A decolonial perspective could aid to ‘expose and disrupt the ongoing processes of colonialism [and] uncritical ... reproduction of Eurocentric curriculum knowledge and discourse’ (Moncrieffe, 2022, p. 1). It would aid in the reversal of colonial injustices in education, by critically assessing and challenging dominant environmental worldviews, and empower marginalised and historically silenced worldviews under colonial rule in the curriculum (Freire, 1978; Moncrieffe, 2022; Sepie, 2017; Weiner, 2014). Furthermore, it would challenge the inherent idea to Western society that one has earned the right to be considered a ruling society, which has earned the right to be considered to expand beyond its (epistemic) domain (Wekker, 2016). Ecopedagogy could foster such inclusion, by engaging with different environmental worldviews and knowledge practices, and sustaining life instead of economical practices (Freire, 1978; Matthews, 2011). It is vital in striving towards an ecology of knowledge, that no longer marginalises non-Western worldviews on knowledge production, breaking with a tradition of violence, oppression, and imposition in fostering oppositional discourse for education (Leibowitz, 2017; Smith, 2008; Vaiditya, 2018; Weiner, 2014).

2.2 Theoretical framework

Based on the literature review, this research makes use of theories of ecopedagogy, the decolonial perspective, alienation of nature, environmental justice, Ocean Literacy, and environmental worldviews, which construct the theoretical framework of this research.

2.2.1 De-alienating Ecopedagogy and incorporating a Decolonial Perspective

Multiple pedagogical strategies are available to address environmental issues in contemporary (natural) science education, yet, most models have been critiqued for overlooking social issues caused by environmental harms (Misiaszek, 2015, 2020). Ecopedagogy offers a critical approach to teaching and learning, that addresses the connection between socio-environmental issues. It fosters social and environmental justice, opposing the colonial legacy of neoliberalism rooted in global society (Kahn, 2008), through its ethos of moving from a discourse of sustaining economic development, to one of sustaining life (Matthews, 2011; Misiaszek, 2020). It finds its roots in Latin American education, originating from the work of Freire (1978), on pedagogies of oppression. His work focussed on a socially just approach for education in post-colonial development contexts, embracing a critical, constructivist pedagogy which enables transformation-based education (Kahn, 2008; Matthews, 2011; Misiaszek, 2015, 2020; Zocher & Hougham, 2020).

Freire's work on critical pedagogy drew attention to the power dynamics in cultural production, acknowledging the influence of coloniality, and addressing questions about knowledge production and epistemic oppression (Freire, 1978, Matthews, 2011). It suggested to shift from an educational model based on banking practices, in which knowledge is imposed through reproduction, to a pedagogy of problem-opposing education (Freire, 1978). According to Walsh (2015), Freire's work on ecopedagogy aligned with a decolonial perspective, setting out to challenge the contemporary hegemonic order of education.

The decolonial perspective forms a framework to articulate and challenge the history and order of the modern world, placing coloniality at the centre. It serves 'the idea that despite the end of formal colonial administrations, colonial arrangements have not been dismantled but continue to govern contemporary societies' (Del Monte et al., 2021, p. 80). It challenges notions of modernity and views Eurocentrism as knowledge from the colonial world (Escobar, 2015; Vázquez, 2012; Weiner, 2014). Drawing on this perspective allows for critiquing the colonial epistemic order of White epistemologies, and the pursuit of marginalised knowledge practices, to counter the historic epistemic injustice (Leibowitz, 2017; Vaditya, 2018; Weiner, 2014). It encourages moving beyond binary systems of understanding, such as the human-nature dichotomy, acknowledging the possibility of different ways of inhabiting the Earth (Del Monte et al., 2021; Ferdinand, 2021; Freire, 1978, 2004; Walsh, 2015).

The human-nature dichotomy as a colonial legacy is present in many layers of the global society, with Western-centric perspectives having expanded globally, affecting the environment in numerous, exploitative ways. The colonial legacy has resulted in the separation of humans from nature in their interaction with the physical world (Williams, 1972). This has resulted in the conception of an alternative nature, on which colonial powers have built societies, constructed through practices of conquest, domination, and exploitation (Williams, 1972). We have come to a society in which the concept of nature, or wilderness, is essentially a human creation, stemming from particular human cultures (Cronon, 1996). The notion of capitalism as the driving motor of contemporary society is strictly reliant on the continuation of processes of conquest, domination, and exploration, and how it has shaped the interaction between humans and nature, is an example of this. Through this, humans have created a segmentation of nature which is pristine, and worthy of protection, while other regions are subjected to the colonial grasp of exploitation (Cronon, 1996; Williams, 1972)

Such practices are dangerous as the pristine valuation of parts of nature becomes elite, with many other corners of the Earth becoming less natural, as they are subjected to more and more environmental degradation (Cronon, 1996). Contemporary society has rooted itself in the idea that some parts of the natural world are nature, whilst others are society – human and nonhuman – leading to the disconnection of humans as an inherent part of natural world (Cronon, 1996; Haraway, 2008; Tsing, 2012). According to Tsing (2012), such human exceptionalism is blinding. It fuels the assumption of human autonomy and directs questions to the human control and impact on nature, rather than to species interdependence. Such reasoning is inherent to the colonial, mastery way of thinking, rooted in monotheistic, Eurocentric religions, ruled by domination, drastically shaping the interaction of humans and nonhuman (Tsing, 2012). And thus, 'if we

[continue to] alienate the living processes of which we are a part, we end, though unequally, by alienating ourselves' (Williams, 1972, p. 84).

Freire's work is rooted in the urgency of understanding the possibilities of inhabiting the Earth in different way and challenges the human-nature binary of colonialism. Freire understood that the respect for all life, is worth fighting for, simultaneously recognising the Earth as a victim of exploitation (Freire, 2004, Misiaszek, 2015). Ecopedagogy, coming forth from this vision, emphasises the inclusion and interconnection of all human and nonhuman individuals, societies, and the natural world. It recognises the interrelationship of the Earth's species in an ecological community intrinsically reliant on each other, unable to be reduced to a scalable sum of parts (Matthews, 2011). It further acknowledges that the colonial world has established a norm for destructive environmental exploitation, which should be overcome (Delgado & Mulder, 2017; Ferdinand, 2021; Freire, 1978; Weiner, 2014). An ecopedagogy should therefore promote transformative decolonial action by helping to reveal socio-environmental connections in education that oppress the inhabitants of Earth (Freire, 1978, 2004; Misiaszek, 2015).

Freire (1978) also recognised the political nature of education, acknowledging how different worldviews influence decolonial transformative action. To achieve environmentally just decolonial change in education, this recognition is needed (Misiaszek, 2020). It urges critical analyses of existing paradigms, to overcome the colonial legacy of Western-centric intellectual dominance (Luke, 2018; Misiaszek, 2015, 2020). Ecopedagogy revolves around envisioning sustainable futures, engaging in critical dialogues, to bridge the gaps between existing realities and desired utopias (Misiaszek, 2020). An ecopedagogical strategy must therefore counter fatalistic teachings promoting neoliberalism as the natural paradigm, and use problem-posing to challenge the perpetuation of colonial legacies (Freire, 1994; Misiaszek, 2015; 2020; Walsh, 2015). This theory is essential to nurture a deep understanding of interconnected socio-environmental challenges; equipping learners with the skills to actively participate in creating positive change, by nurturing the freedom and plurality of thinking about socio-environmental issues (Misiaszek, 2015, 2020).

2.2.2 Ocean Literacy

Ocean Literacy was originally coined and first used in the United States, to create a national curriculum for Ocean education. From here, the framework gained rapid growing global traction, becoming an international movement (Cava et al., 2005; Santoro et al., 2018; Worm et al., 2021). It got adopted by the UN's Call For Action for Sustainable Development Goal 14, and later became an important cornerstone of the UN's Ocean Decade, under the development of the International Oceanographic Commission of UNESCO (IOC/UNESCO) (Worm et al., 2021). Currently, the contemporary educational purpose of Ocean Literacy has been shaped by the IOC/UNESCO, to educate people in becoming an 'ocean literate person [who] understands the fundamental concepts about the functioning of the ocean, [and] can communicate about the ocean in a meaningful way, and is able to make informed and responsible decisions regarding the ocean and it's resources' (Cava et al., 2005, p. 5).

Furthermore, the increase of Ocean Literacy amongst students of the world has become a valued outcome of the UN's Ocean Decade, with a mission that focusses on the development of positive

behaviour in which marine-citizens ‘understand and value the ocean in relation to human wellbeing and sustainable development’ (Worm et al., 2021, p. 2). To achieve this, the IOC/UNESCO created the Ocean Literacy Framework, as an educational tool, to help educate future generations about Oceanic conservation, restoration, and its sustainable use. It has become an educational standard, working from seven principles that entail ‘adequate’ Ocean knowledge. According to Santoro et al. (2018), these principles are:

1. The Earth has one big ocean with many features
2. The ocean, and life in the ocean, shape the features of Earth
3. The ocean is a major influence on climate and weather
4. The ocean made the Earth habitable
5. The ocean supports a great diversity of life and ecosystems
6. The ocean and humans are inextricably interconnected
7. The ocean is largely unexplored

However, the Ocean Literacy movement of the IOC/UNESCO finds its root in Western-centred, predominantly natural, science, which further perpetuates the colonial legacy and the marginalisation of colonised worldviews (MacNeil et al., 2021). As the concept finds its roots in North America, Worm et al. (2021), notes that a translation into other languages and cultures is not easy. He states that the uncritical use of the term Ocean Literacy, would go against one of its core messages aiming to connect society in all its diversity. Therefore, the UN sought to correct this precarious problem by launching a Portuguese and Spanish translation of their educational agenda, titled *cultural oceânica* and *cultura oceánica* (Worm et al., 2021). This translation now acknowledges Ocean Literacy as culture, yet the UNOLF, once more, limited itself to a Eurocentric, Western-centric perspective, which contributes to the perpetuation of epistemic injustice in science (education) by not recognising the epistemic importance of non-Western perspectives and cultures (Catala, 2015; Kotzee, 2013; Worm et al., 2021).

According to Worm et al. (2021, p. 3), Ocean Literacy must acknowledge non-Western perspectives as they hold ‘a great complexity of ocean knowledge and culture that needs to be recognised and integrated within existing Ocean Literacy efforts’. Therefore, truly inclusive Ocean Literacy requires an inclusive movement drawing on the lived experience and environmental worldviews of diverse and marginalised communities (MacNeil et al., 2021).

2.2.3 Environmental Worldview theory

The concept of worldviews has been defined differently by many, however, communalities can be identified (Kearney, 1975; Koltko-Rivera, 2004; Sire, 2014). Worldviews can be defined as a set of assumptions, values and beliefs about the socio-physical reality, forming reference frames through which people make sense of the world; strongly influencing cognitive processes and behaviour (Koltko-Rivera, 2004; Liu & Lederman, 2007; Nash et al., 2022; Sire, 2014).

Koltko-Rivera (2004) recognises a plurality of ways in which humans envision themselves in their role on this planet, acknowledging the individual construction of meaning. However, the conceptualisation of one worldview as the ultimate perspective from which life can be understood is flawed (Cobern, 2005; Sire, 2014). Cobern and Sire critique these simplistic

conceptualisations of worldview theory, for being too universal and abstract to comprehend the individual's agency.

Nash et al. (2022), address how different worldviews are inherent to understanding human-Ocean relationships, and how such differences ultimately influence the interaction and understanding of the human-nature relationship, and its effects on the Ocean. Therefore, this research will use Clapp and Dauvergne's (2011) environmental worldview theory, as it aids in understanding the causes and consequences of global environmental change, rooted in the different conceptions of the human-nature relationship³. Their theory recognises that environmental worldviews are not universal and are in essence multi-faceted, allowing for multi-perspectivity, which aligns with one of Freire's (1978) core values of ecopedagogy.

Clapp and Dauvergne (2011) recognise the existence of four transdisciplinary environmental worldviews: *market liberals, institutionalist, bioenvironmentalists and social greens*. They aim to capture 'the broader societal debates about environmental and political economy, rather than just the academic debates ... often cover[ing] a [narrower] range of viewpoints' (p. 3). These environmental worldviews emphasise different areas of importance in understanding global environmental change, the interaction of the human and nature, and the influence of globalisation; they adhere to different philosophies about the nature of, and solutions for environmental change. An overview can be found in *table 1*.

According to Clapp and Dauvergne, the market liberal worldview is one that emphasise the importance of economic practices, seeking growth, modernity, technocratic solutions, and neoliberalism, as a means of improving the environment. In its reasoning, a market liberal, does not recognise the existence of an environmental crisis, but rather sees environmental degradation as inevitable problems caused by weak economic growth, market failure and poor economic growth. There is also the institutionalist, according to Clapp and Dauvergne, which recognises the possibility of a crisis, without imminent intervention to enhance the effectiveness of the (global) institutional capacity. It believes that at the core of environmental change are weak institutions and inadequate global cooperation to correct environmental failure, underdevelopment, and state sovereignty. And, by enhancing institutional capacity, increased human welfare will follow.

More contrasting to the previous environmental worldviews are Clapp and Dauvergne's bioenvironmentalists and social greens. For bioenvironmentalists, the focus is on the integrity of ecosystems and their functioning. They state that the Earth is near or beyond its carrying capacity, resulting in a threatening ecological crisis to human survival. They argue that this is caused by the excessive use of ecological space, overpopulation, excessive economic growth, and overconsumption. To counter these negative effects, they suggest the need for a new global

³ This research acknowledges the existence of alternative appropriate conceptual models to Clapp and Dauvergne's (2011) Environmental Worldview theory, for the composition of a theoretical framework. The use of Charles Taylor's (2002) Modern Social Imaginaries Theory, d'Andrade and Stauss's (1992) Cultural Models Theory, Weedon and Jordan's (2012) Collective Memory Theory, or others, could have supported the same purpose as the use of Environmental Worldview Theory. However, a deliberate choice was made for Clapp and Dauvergne's Environmental Worldview Theory, given its inherent environmental nature.

economic order with limits to growth, a limited population growth, reduced consumption, the internalisation of nonhuman values into institutions, and the collective exploitation control.

Lastly, the social greens have a focus on the pursuit of justice and local and global injustice feeds the existing environmental crisis, according to Clapp and Dauvergne. These injustices are fed by global capitalism, exploitation, and unequal consumption patterns, with globalisation driving and accelerating exploitation, inequality, ecological injustice, and the erosion of local communities. They propose the rejection of industrialism and the reversal of economic globalisation, the empowerment of marginalised voices and promotion of ecological justice and local knowledge.

It is important to acknowledge that Clapp and Dauvergne’s environmental worldviews are not ideal categories and that within, there are multiple different debates taking place. Furthermore, it must be stressed that there is no one correct view, as each provides insight into the contemporary sources of environmental problems and solutions. It helps us to understand the markedly different interpretation of the condition of the global environment and the human-nature relationship (Clapp & Dauvergne, 2011). While this research recognises the homogenous nature of how one understands their role in environmental change, this theory is essential in helping to understand communalities and differences.

Table 1
Environmental worldview theory

Environmental Worldviews	Market liberals	Institutionalists	Bioenvironmentalist	Social greens
Emphasis	Economies	Institutions	Ecosystems	Justice
Existence of environmental crisis	There is no crisis, only some inevitable problems. Modernity, neoliberalism, and technocratic solutions improve the global environment.	Possibility of crisis, without imminent intervention to enhance the effectiveness of the (global) institutional capacity.	The Earth is near/beyond its carrying capacity. Ecological crisis threatens human survival.	Local and global social injustice feeds the existing environmental crisis.
Nature of environmental change	<ul style="list-style-type: none"> Weak economic growth and poverty Market failure and poor governance practises 	<ul style="list-style-type: none"> Weak institutions and inadequate global cooperation to correct environmental failures Underdevelopment State sovereignty 	<ul style="list-style-type: none"> Excessive use of ecological space Overpopulation Excessive economic growth Overconsumption 	<ul style="list-style-type: none"> Global capitalism Exploitation Unequal consumption patterns
Impact of globalisation	<ul style="list-style-type: none"> Fostering economic growth will improve the environment 	<ul style="list-style-type: none"> Enhancing cooperation to increase human welfare 	<ul style="list-style-type: none"> Driver of unsustainable growth; accelerating natural resource depletion 	<ul style="list-style-type: none"> Accelerating exploitation and inequalities; driving ecological injustice and eroding local communities
The way forward	<ul style="list-style-type: none"> Promoting growth and alleviating poverty, pursued with globalisation Correct market and policy failures to encourage market based clean technologies. Promote voluntary corporate greening 	<ul style="list-style-type: none"> Promote strong global institutions, norms, and regimes to manage the global environment. Promote globalisation and effective development to build state capacity Employ the precautionary principle 	<ul style="list-style-type: none"> New global economic order with limits to growth Limit population growth and reduce consumption Internalise the value of nonhumans into institutions and policy Collective coercion to control exploitation 	<ul style="list-style-type: none"> Reject industrialism and reverse economic globalisation Empower marginalised voices Promote ecological justice and local/indigenous knowledge

While Clapp and Dauvergne’s environmental worldview theory recognises that there is no ideal category, and that each has its own understanding and conceptualisation of environmental issues, the implication for sustainability across the categories vary substantially. To help gain better insight in the alignment of environmental worldview theory with the findings of this research and the implications for sustainability, Dobson’s (1996) conceptions of environmental

sustainability could be used to expand on Clapp and Dauvergne’s (2011) theory. It would help structure the reasoning behind the motivation, and the way the individual acts while facing environmental change. Dobson argues that there are four different modes of environmental sustainability, which have considerable differences regarding what to sustain, why and how. These modes include *sustaining total capital for human material welfare*, *critical natural capital for human material and aesthetic welfare*, *irreversible natural capital for human material and aesthetic welfare and obligation to nature*, and lastly, *units of significance for obligation to nature*⁴. It is important to expand Clapp and Dauvergne’s theory with Dobson’s conceptions of environmental sustainability to help identify the causes of, and solutions to unsustainability.

Furthermore, Dobson also focusses on the degree of sustainability within his conceptions of environmental sustainability, addressing the nature of technocratic and ecocentric views. Dobson states that technocratic views emphasises finding solutions to environmental challenges and the prioritisation of economic growth, while ecocentric views have a strong focus on ecological balance, aligning human actions with nature and valuing nature’s intrinsic worth. He further examines the differences within these views and comes up with four classifications, aligning with his conceptions of environmental sustainability.

Dobson acknowledges the existence of a technocratic cornucopian and -accommodating view, with the first prioritising resource exploitation and growth, through free market functioning and a primary economic policy objective, signalling very weak sustainability. This cornucopian view therefore bares a strong resemblance with the priorities of Clapp and Dauvergne’s market liberal worldview. The accommodating view aligns more with an institutionalist worldview as it takes on a more resource conservationist and managerial position, calling for stronger institutional capacity, signalling weak sustainability. Furthermore, the ecocentric view has been categorised into communalist and deep ecology views. The communalist approach focuses on resource preservation and the stop and deregulation of economic growth, signalling strong sustainability, which would align with a bioenvironmentalist worldviews. Lastly, the deep ecology approach signals the need for extreme resource preservation and a reduced economy in rooted in questions of justice, which aligns with the social greens worldview. Through this reasoning of Dobson’s theory, the alignment with Clapp and Dauvergne’s environmental worldview theory becomes clear and can be integrated as presented in *table 2*.

Table 2
Integrating environmental worldview theory and sustainability conceptions

	Market liberal	Institutionalist	Bioenvironmentalist	Social greens
What to sustain	Total capital (human & natural)	Critical natural capital	Irreversible natural capital	Units of significance
Reason to sustain	Human welfare (material)	Human welfare (material & aesthetic)	Human welfare (material & aesthetic) Obligations to nature	Obligation to nature
Sustainability spectrum	Technocratic cornucopian	Technocratic accommodating	Ecocentric communalist	Ecocentric deep ecology
Level of sustainability	Very weak sustainability	Weak sustainability	Strong sustainability	Very strong sustainability

⁴ This research does not align with Dobson’s use of capital and the human centrality of the theory. However, despite this capitalisation and Dobson’s human centrality, the theory does support the analysis and better understanding of the human-nature interaction inherent to Environmental Worldview theory.

2.2.4 Environmental justice

As has become evident from the literature review, the Western-centric educational agendas, and education in the Netherlands are essentially a product of colonialism. These educational models impose a Western-centric epistemology across the global, further perpetuating the colonial legacy. Drawing from decolonial justice work from Ferdinand (2021) and Krenak (2023), this research recognises the colonial world's establishment of an ultimate way of inhabiting the Earth based on exploitation, which has disconnected the human from the organism of Earth. Therefore, this research seeks to break with the colonial ecology, which aims to preserve colonial perpetuation, by striving towards the realisation of a knowledge ecology that resembles harmonious co-existence and acknowledgement of multiple, different ways of knowing and inhabiting this Earth. Therefore, this research draws upon environmental justice theory to ensure a just acknowledgment and representation of non-Western, decolonial epistemologies for Ocean education that actively challenges the global Western epistemic order.

Before fully acknowledging the use of environmental justice theory, it is paramount to acknowledge the need for decoloniality in this theory, as most environmental justice literature finds its roots in Western origin. However, Western-centric environmental justice literature increasingly acknowledges historical colonial legacies and their implication, yet, further recognition of its perpetuation in current global injustices is necessary (Rodriguez, 2020). Thus, a decolonial environmental justice theory is essential, as it allows for epistemic justice (Fossey et al., 2002; Smith, 2008).

Therefore, this research uses the concept of epistemic justice to operationalise the theory of environmental justice. According to Gupta et al. (2022)⁵, drawing from Fricker (2007), epistemic justice is the recognition of an individual's or community's knowledge as a credible epistemology. It assumes the recognition of knowledge as a credible testimony that is not marginalised or deemed unworthy by outside prejudice. Furthermore, epistemic injustice recognises the ability of the individual and community to make sense of their experiences, allowing them to challenge their subordination or marginalization. This epistemic justice conceptualisation is essential for the operationalisation of environmental justice theory as it strives towards the demarginalization of epistemologies.

The pursuit of epistemic justice in education is essential to empower those marginalised in communicating their knowledge and voice on the nature of the powerful's oppression on society (Catala, 2015; Kotzee, 2013). Therefore, the pursuit of epistemic justice empowers and values different forms of knowledge production equally towards the creation of a knowledge ecology, that can challenge the dominant epistemic oppression of the colonial legacy in Western Ocean education (Ferdinand, 2021; Fossey et al., 2002; Gupta, 2022; Krenak, 2023; Smith, 2008).

⁵ This research uses Fricker's (2007) conceptualisation of epistemic justice, as presented in her book *Epistemic injustice: Power and the ethics of knowing*. This book was not freely available online, nor in the Radboud University Library. Therefore, this research draws on the interpretation of Fricker as presented in Gupta et al.'s (2022) *Conceptualising earth system justice*.

Furthermore, according to Catala (2015) and Kotzee (2013), epistemic justice is strongly interlinked with other conceptualisations of environmental justice theory⁶, which can be used to expand our understanding of process of epistemic (in)justice. According to Catala (2015), epistemic injustice is the product of unequal power relation between social groups, subjected to prior situations of social injustice, signalling the presence of pre-existent different justice issues.

Early work on defining social justice, done by Rawls (1971, p. 4), centred on the provision of a way of 'assigning rights and duties in the basic institutions of society, [which] define the appropriate distribution of the benefits and burdens of social cooperation'. However, this sole focus on fair processes of distribution has been widely critiqued (Schlosberg, 2004). Young's (1990) critique notes that the conception of justice should be grounded in concepts of domination and oppression, bridging issues that impede social justice. She argues that theories of distribution do not examine the social, cultural, symbolic, and institutional conditions underlying poor distribution (Schlosberg, 2004). The existence of social group differences is inherent to notions of privilege and oppression. To counter oppression, ongoing 'struggles for recognition can aid the redistribution of power and wealth and promote interaction and cooperation across gulfs of difference' (Fraser, 2000, p. 109). Young (1990) further argues that social justice should therefore explicitly recognise and attend to such differences to undermine oppression.

According to Schlosberg (2004), justice should thus focus on procedural processes as a means of addressing the inequitable distribution of social goods and the conditions undermining social recognition. To achieve justice, a focus on the interlinking, overlapping concern of recognitional-, distributional- and procedural justice is required (Schlosberg, 2004). Therefore, this research will expand on the conceptualisation of environmental justice through epistemic justice theory, by using Schlosberg's conception on environmental justice, as this movement acknowledges the interlinkage of distribution of environmental risk and socio-economic and cultural inequity, incorporating all three interlinking foci. This would provide a broad basis for understanding the pre-existing situations of injustice underlying epistemic injustice, according to Catala (2015).

Based on the work by Gupta, et al. (2022) these three principles of environmental justice are defined as followed. First, distributional justice recognises the necessity to equitably distribute resources, environmental burdens, and benefits between claimants. Second, recognitional justice, acknowledges the need for recognition and appropriate treatment of cultural diversity of individuals and communities. Lastly, procedural justice promotes justice in decision-making procedures that shape how benefits and burdens are allocated.

2.3 Conceptual framework

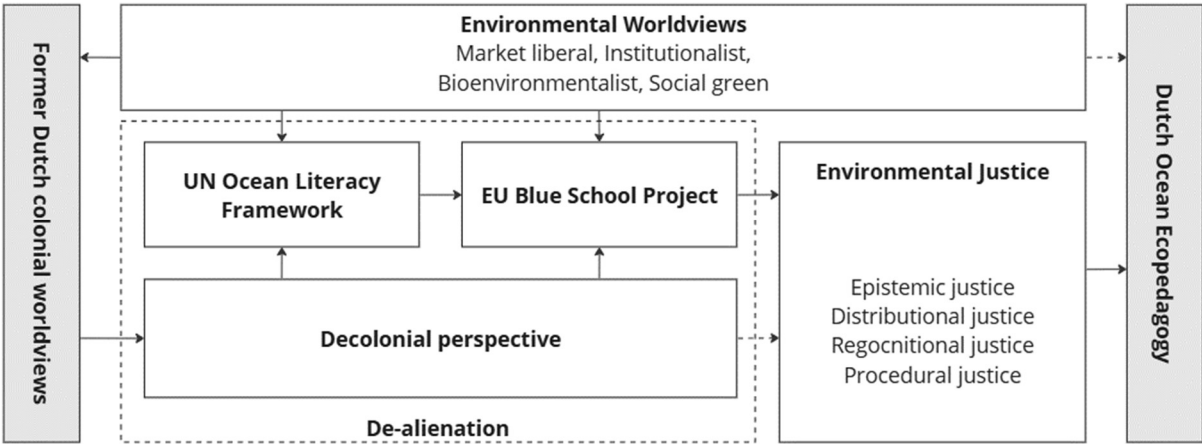
This research aims to create an environmentally just ecopedagogy for Dutch Ocean education, by providing a decolonial perspective to the educational agendas of the UNOLF and the EBSP, through the empowerment of marginalised environmental worldviews of post-Dutch-colonial people.

⁶ This research recognises the existence of a large scala of environmental justice conceptualisations different than those inherent to this research, like conservative justice, transitional justice, restorative justice, retributive justice, etc.

To understand the decolonial perspective, this research recognises the differences in reality construction. How one defines reality can result in broadly different practices, impacting the environment in profoundly different ways. To understand the differences in the educational vision of the UNOLF and the EBSP, and the decolonial perspective, this research aims to understand the influence on the environment based on their specific environmental worldview dependent thinking. Clapp and Dauvergne’s (2011) environmental worldview theory, provides basic structures to understand these perspectives on the Ocean environment.

Furthermore, by decolonialising the UNOLF, inherent to the EBSP, this research aims to create an environmentally just ecopedagogy for the Ocean, for the Dutch context. This aims to break from the perpetuating tendency of contemporary education to foster the colonial, neo-liberal legacy, and de-alienating the educational vision’s human-nature relationship. Therefore, to strive towards a true ecopedagogy, as conceptualised by Freire (1978), an environmental justice perspective allows an approach that strives away from this continuation, towards a just educational vision for the Ocean based on the views of respondents from post-Dutch-colonial nations.

Figure 1
Conceptual framework



3.0 Methodology

In this chapter the research's philosophical orientation will be presented. Furthermore, this chapter will also provide the appropriate methods for data collection, data analysis and data reporting in line with the philosophical orientation to serve the research aim. Lastly, an argumentation for the research's validity and reliability will be presented.

3.1 Research philosophy

This research's ontological perspective is primarily grounded in bounded relativism, yet there are practical implications rooted in a relativist ontology. Moon and Blackman (2014) define bounded relativism as the existence of one shared reality within a bounded group, differing amongst groups. Furthermore, relativism assumes that types of reality do not exist, as each individual mentally constructs his or her own unique reality.

The use of Clapp and Dauvergne's (2011) environmental worldview theory implied the existence of four categorical groups, with contrasting positioning towards environmental change. This research works under the preposition that environmental worldviews of post-Dutch-colonial people, are potentially different than those inherent to the UNOLF and the EBSP. Therefore, a bounded relativist ontology is applied, given the acknowledgement of different group realities. However, this research also recognises that environmental worldviews, within the categorisations of Clapp and Dauvergne, and within post-Dutch-colonial nations are not homogenous (Clapp & Dauvergne, 2011; Smith, 2008; Walshe & Stancioff, 2018). Therefore, recognising the aspect of a relativist ontology that, while assuming group reality, states that reality is an individual construction for the respondents, based on the cultural historic influences on their lives (Moon & Blackman, 2014).

Epistemologically speaking, this research is grounded in constructionism. Constructionism works under the assumption that 'meaning comes into existence in and out of our engagement with the realities in our world' (Moon & Blackman, 2014, p. 1172). It stipulates that the individual understands their world based on historical and socio-cultural perspectives, with meaning emerging from community interactions. This fits with the research, as it recognises the contemporary global power structures in place, influencing environmental worldviews on contemporary Ocean education in reaction to Oceanic environmental change.

Lastly, the philosophical perspective of this research is critical theory, which aims to challenge and reveal conflict and oppression, to bring about change' (Moon & Blackman, 2014). This perspective is inherent to the research as it recognises the Western-centred dominance imposed in education (Smith, 2008). It aims to counter this imbalance by giving voice to the marginalised, providing a decolonial perspective to the UNOLF, inherent to the EBSP, towards an environmentally just ecopedagogy that breaks with the growth-oriented, neo-liberal status quo.

3.2 Research strategy

To answer the research question, this research works with a decolonial methodology. Therefore, in the method selection, this research recognises how Western science is falsely presumed as the optimal, universal form of knowledge production. It must break from the tradition of viewing previously colonised nations as research objectives in the pursuit for epistemic justice in de

global educational order (Smith, 2008). Therefore, recognising their ways of knowing as equally deserving of a place in global knowledge production, acknowledging their claim to humanity and their history is of vital importance to break the cycle of epistemic oppression (Catala, 2015; Kotzee, 2013; Smith, 2008).

To do so, a qualitative approach that draws from current decolonial projects will be used. Epistemologies of post-Dutch-colonial people must be recognised, as they embody diverse ways of knowing which has been historically undervalued by the Western epistemic dominance. It is crucial to break with the epistemic oppression by acknowledging their claim to humanity, and by integrating the marginalised knowledge practices within education. Therefore, by using decolonial perspective methods, questions concerned with understanding the meaning and experience dimensions of humans' lives and the social world, can be addressed, nurturing and acknowledging the existence of a knowledge ecology (Fossey et al., 2002; Smith, 2008).

Lastly, this research has been conducted under the joint supervision of Radboud university and Wavemakers United. Wavemakers United is a Dutch organisation with a global network, seeking to inspire youth in acting in water challenges. They have collaborated closely with countries, governments, and educational professionals worldwide to provide suitable activities and material for water education (Wavemakers United, n.d.). Wavemakers United has been a closely cooperating partner within this research and has made its network available in conducting this research. The focus of this research on the approach respondents, further elaborated on below, is in resemblance with Wavemakers United ambitions to continue their educational work for the world.

3.3 Research methods

In this section, the process of data collection and data analysis, together with an argumentation on the validity and reliability of this research are presented. This research makes use of two data collection methods, processed through one analysis method. First, the data collection will take shape in the form of a document analyses of existing Western educational agendas, to determine the colonial legacy. Second, a series of semi-structured interviews will be conducted with respondents from post-Dutch-colonial nations in the pursuit of epistemic justice and countering the Western colonially imposed legacy through a decolonial perspective. The analysis of the data stemming from the document analysis and the interviews will take place through a Critical Discourse Analysis approach.

3.3.1 Data collection

First, to provide a decolonial perspective to the EBSP and UNOLF's vision on Ocean education, for the Netherlands, a baseline study must be conducted to determine the inherent colonial legacy. To determine this colonial legacy baseline, a document analysis must be performed to uncover the inherent discourses and privileged knowledge practices. First, to decolonialise the EBSP's vision on Ocean education, a baseline of the current state of EBSP Ocean education must be asserted, to determine the inherent colonial legacy of contemporary Ocean Literacy. Therefore, an analysis, to discover the inherent discourse of the EBSP on Ocean education and privileged knowledge practices, for the following documents is required:

- *Concept of Blue School ~ hereafter referred to as EBSP1 (BlueSchools, n.d.)*
This document describes concept of the EBSP as educational agenda. It further provides information on the nature and core principles of the blue school project, explaining its core values and the need for Blue School education in society.
- *Guide for Teachers ~ hereafter referred to as EBSP2 (BlueSchools, 2021)*
This document describes guidelines for EBSP teachers in shaping their own educational practices and the alignment of the school's educational goals with the Blue School agenda, providing clear insight into the desired educational methods.

Continuing, this research cannot fully focus on merely the EBSP as the EBSP is federated by the IOC/UNESCO and has been developed based upon the pre-existing UNOLF. Therefore, an analysis of the colonial legacy of Ocean literacy within this educational agenda does also prove to be valuable. It is essential to perform a document analysis on the UNOLF to uncover the differences, similarities, perpetuations, and structures of the colonial legacy within the IOC/UNESCO's educational model and the EBSP which has largely been derived from this. Therefore, the analysis of the following document is required:

- *Ocean Literacy for all – a toolkit ~ hereafter referred to as UNOLF (Santoro et al., 2018)*
This document provides an historical overview of the UNOLF. It provides a clear mission statement of the UN's goals and further expands on the core principles and practices for the desired future of Ocean education.

Second, after the document analysis, a baseline of the colonial legacy of the dominant educational agendas for Ocean Literacy can be established. The decolonialisation of the curriculum's baseline can be realised with a decolonial perspective for a Dutch environmentally just ecopedagogy for the Ocean. This research, therefore, aims to learn from post-Dutch-colonial environmental worldviews on Ocean education and knowledge production. To realise this, a semi-structured interview approach will be used to collect data. The method of semi-structured interviews is utilised as it facilitates the respondents in unfolding personal narratives, critical for understanding one's reality, which aligns with the constructivist perspective of this research. It further facilitates the participant in conveying their experiences, enabling deeper exploration of underlying motives and reasoning (Galletta, 2013; Horton et al., 2004). From a decolonial perspective, this method is selected as it allows storytelling, which is a common knowledge practice in indigenous communities. It facilitates the respondent in conveying their beliefs, values, and cultural practices, aiming to connect the past with the future (Smith, 2008).

The respondents for the semi-structured interviews were approached through the network of Wavemakers United, the collaborating partner facilitating this research. The Wavemakers United Foundation, based in the Netherlands is setting up water education programmes in different countries on a global scale. As this research focusses on the provision of a decolonial perspective on Western Ocean educational agendas, for the creation of a Dutch environmentally just ecopedagogy for the Ocean, this research focussed on finding willing respondents from post-Dutch-colonial nations. The network of Wavemakers United provided a connection with three

post-Dutch-colonial nations: Indonesia, South-Africa, and the Caribbean. To ensure alignment with Wavemakers United’s objectives, respondents were approached in these three countries.

In total, nine respondents were approached for conducting semi-structured interviews. An anonymised overview of the respondents can be found in *table 3*. The respondents were approached based on their affiliation with the Ocean through their professional, activist and educational activities. From the three post-Dutch-colonial nations, three respondents from the Wavemakers United network were approached from each. The respondents had to be locals from the post-Dutch-colonial nations to ensure a true decolonial perspective for that representative country. Also, in approaching respondents this research sought to ensure a balance between people with a natural- or social-science background when it came to their profession. This was done to ensure an equal representation of both sciences to foster a potential interconnection.

By approaching three respondents per post-Dutch-colonial nations, a total of nine interviews would provide a sufficient body of experiences from which the findings can be deduced. It must be stressed that these respondents are not regarded as subjects of research, but as individuals with alternative non-Western-centric environmental worldviews, who can inspire an environmentally just ecopedagogy for Dutch Ocean education (Smith, 2008). Lastly, it must be noted that the number of conducted interviews was chosen to fit the size of the Wavemakers United network. Furthermore, it must also be noted that any number of respondents would have sufficed as this research holds a constructivist epistemology which recognises that the experience of the respondents would be alternate to each other as they have experience socio-cultural and historical influences differently (Moon & Blackman, 2014).

Finally, in collaborating with the respondents, this approach draws upon other indigenous decolonial projects. Using envisioning and indigenizing strategies, respondents envision a desired future-thinking reality, to rise above marginalised present-day situations of Ocean education. Indigenizing processes then aid to ground the alternative environmental worldview insights in new value systems, transcending the oppressive, thus fostering the decolonialisation of Dutch Ocean education towards an environmentally just ecopedagogy (Smith, 2008).

Table 3
Respondent biographies

Respondent	Biography
RSP1	RSP1 is a South African marine biologist who has devoted her career to educating ‘under-resourced’ community children about the Ocean environment. She sees herself as a person to bridge the gap between the Ocean environment and the local population of South Africa, of which she speaks passionately. She has experienced the colonial legacy and the perpetuation of racism in South African society, which continues to influence her life.
RSP2	RSP2 consist of RSP2a and RSP2b, a South African mother-daughter partnership who actively campaign for the health of the Ocean environment. Their foundation regularly organises community beach clean-up and strives towards maintaining the integrity of the Ocean environment. They also focus on educating the community on marine pollution and how individual change can help keep the Ocean clean.
RSP3	RSP3 is a South African national who is invested in maintaining the Ocean ecosystem and talks passionately about her love for nature. In her daily life she lives right next to the Ocean which has a significant impact on her mental health and life choices. She speaks about how a connection to the Ocean has helped her appreciate this ecosystem and how being away from the Ocean negatively impacts her life.
RSP4	RSP4 is an Indonesian marine biologist, Ocean educator and diver. She works for a foundation that combines the recreational activity with marine science, focussing on the health and integrity of the local ecosystems. She talks passionately about the joy this work brings her, and how she contributes to bridging the gap in Indonesia by educating people of all ages about the Ocean environment.
RSP5	RSP5 is an Indonesian marine biologist who works as a researcher and lecturer at an Indonesian University. She is closely connected to marine biodiversity project and the protection of ocean ecosystems in Indonesian waters. She speaks enthusiastically about her work as an educator, also working on educational material for younger learners to appreciate the beauty of the Ocean.

RSP6	RSP6 is an Indonesian marine biologist who works as professional diver and researcher for the same foundation as RSP4. His work focusses predominantly on the study of marine life in Indonesian waters. Furthermore, he speaks about the importance of environmental activism to counter capitalist dominance in the Ocean sphere.
RSP7	RSP7 is an Aruban local who just finished high school and has taken a gap year between enrolling in university. He has used his gap year to aid in the restoring of Aruban coral reefs. He talks about his passion for the Ocean environment and diving and how this has brought him to the work he is doing right now with the coral restoration foundation, and how this has shaped his perspective on the importance of Ocean education.
RSP8	RSP8 is a local from Curacao who has focused on the nature of colonialism and conservation in the Caribbean during her PhD. Right now, she works as an advisor for Caribbean NGOs who seeks to positively impact the island region by monitoring marine biodiversity and providing educational activities and material for the local population. Besides this, she is also an activist advocating for decoloniality, equality and nature.
RSP9	RSP9 is an Aruban local who has experienced the colonial legacy first hand in education and daily life. She talks about the structural inequalities on the island and the implications for the Ocean environment. She shares her ideas on a decolonial perspective on Ocean education from her standpoints as an activist, striving for a better human-nature relationship and equality on the island.

3.3.2 Data analysis

A critical discourse analysis is used for the document analysis, to establish a baseline for the contemporary colonial legacy in Western-centric Ocean education of the EBSP and the UNOLF. By using Fairclough's (2013) critical discourse analysis, the analysis of the data will help uncover how language associated with particular practices, is inherent to knowledge production processes that constructs aspect of the world associated with certain environmental worldviews, fitting with Clapp and Dauvergne's (2011) theory. Fairclough defines a discourse as a way of construing aspects of the world, both social and mental, which can be identified with different positions or perspectives of social group actors; it facilitates in uncovering the ideological character of a discourse. Furthermore, Fairclough's critical discourse analysis helps uncover the personal and organisational realities inherent to their perceptions on Ocean education, based on their personal or organisational rhetoric.

In assuring a decolonial perspective within the methodological approach of critical discourse analysis, this research follows de Melo Resende (2021) and Guilherme's (2019) argument, pleading for a critical decolonial discourse analysis. This argument holds that Western-centred theories are essentially territorialised and considered universal and superior. Therefore, contextual analysis is necessary, empowering alternative environmental worldviews, to transcend hegemonic discourses, towards a knowledge ecology.

In identifying the decolonial perspective, the semi-structured interviews are analysed through the same decolonial perspective on the critical discourse analysis. Understanding the discrepancies between dominant Ocean education worldview discourses in the EBSP and the UNOLF, and the perspectives from the respondents from post-Dutch-colonial nations helps identify the core concepts of the decolonial worldviews and forms of knowledge production, potentially inspiring an environmentally just ecopedagogy for Dutch Ocean education.

3.3.3 Data reporting

In reporting the data and insights from the data analysis, this research follows a reporting strategy of discussing findings. A deliberate choice was made to use a findings approach, as it allows for the simultaneous reporting and interpretation of the data, given the interpretive nature of qualitative work (McGregor, 2017). Furthermore, a findings approach is justified to use for qualitative research methods, as it acknowledges the subjective nature of data production by respondents, and the positioning of the researcher within their work (Lincoln & Guba, 1985; McGregor, 2017; Shank & Brown, 2013).

Etymologically, logic support the decision for using a findings approach, rather than a result approach in reporting the data. The word 'findings' stems from the Old English 'findan', which means 'to come upon', 'act of discovery', or 'meet with'. Contrastingly, the word 'result' stems from the Old English word 'resultan', which means 'to arise as a consequence' (Harper, 2016). According to this logic, the use of a findings approach is more appropriate as it aligns more with the (bounded) relativist ontology of this research, while the use of a results approach would entail a more realist ontology that believes reality exists as one truth, not acknowledging the plurality of experiences which construct reality (Moon & Blackman, 2014).

3.4 Validity and reliability

In terms of reliability, reproducibility in this line of research is impossible to achieve as worldviews are always subjective and have been individually defined by the lived experience through historical, socio-cultural influences to which the individual has been subjected. The strength in this research is, however, this subjective nature. Working with a decolonial perspective entails working towards a knowledge ecology, that empowers a wide range of alternative ways of being and knowledge production (de Melo Resende, 2021; Guilherme, 2019; Smith, 2008). It recognises that respondents are not heterogeneous, but have personally constructed environmental worldviews, based on their own histories, cultures, and identities. This research therefore does not seek to achieve an ultimate educational model, based on universality amongst the respondents, but aims to learn lessons from the previously marginalised and epistemic oppressed ways of knowing and being in this world.

Furthermore, to enhance the reliability of this research a consistent coding approach was used in Atlas.ti. Both the document analysis and the analysis of the semi-structured interviews were conducted using the same codes and protocols for applying a code to a part of text. When the need for a new code presented itself during the analysis, the previously analysed data was re-analysed to ensure strong intra-coder reliability.

The use of semi-structured interviews allows a base for collecting desired data, while allowing possibilities for alternative important content, contributing to the research's validity. Furthermore, a consistent coding approach, based on an extensive literature review and the construction of a sound theoretical framework has allowed the creation of codes derived from theory, forming a structure through which the data could be analysis. This coding approach contributes to the construct- and content validity of this research.

This research further critiques the desire of maximising external validity by ensuring the generalisability of the findings, as this research strives towards the acknowledgement of a knowledge ecology, essential to opposing the Western epistemic oppression. Allowing the uniqueness and diversity of the data to flourish in this research would aid to establish a decolonial knowledge ecology for the creation of an environmentally just ecopedagogy.

4.0 Findings

After the conduction of nine interviews with respondents from the post-Dutch-colonial nations, a thorough decolonial critical discourse analysis was conducted. On completion of this analysis, the insights from the respondents have been compared comprehensively with the baseline findings from the critical discourse document analyses of the European Blue School Project's (EBSP) and the UN Ocean Literacy Framework's (UNOLF) educational agendas. The findings of this comparison have shown some commonalities, but most of all, severe differences in the discourse on Ocean environmental education, which will be presented in this chapter.

Furthermore, the findings presented in this chapter will show the differences in environmental worldview conceptions between post-Dutch-colonial people and Western-centric educational models, and their implications for Ocean education. In addition, the findings will also show how different knowledge practices are preferred when teaching and learning about the Ocean by the different parties. Moreover, the implications for a decolonial ecopedagogical Ocean Literacy tailored to a Dutch context will be presented, together with the decolonial implication for an environmentally just Dutch ecopedagogy.

4.1 Differences and similarities in Ocean education discourses

Large differences have presented themselves between the discourses of the respondents from the post-Dutch-colonial nations and the analysed baseline documents of the EBSP and the UNOLF. While the baseline documents have shown frequent similarities, the insights from the post-Dutch-colonial respondents have been primarily contrasting. Furthermore, the core values inherent to the discourses have shown to be underpinned by different epistemologies on the Ocean environment, the state of the Ocean environment, the human-Ocean relationship, and more.

4.1.1 Discourse of the European Blue School Project

According to the concept document, the EBSP approaches Ocean education through a believe that its curriculum is 'turned towards its sea, its ocean and its coastline' (EBSP1, p. 4). By starting of the document in this way, a strong signal of Oceanic appropriation becomes evident. This in turn is a strong testimony to what Tsing (2012) understood as human exceptionalism. To illustrate, the EBSP's appropriation of the Ocean, signalling a sense of ownership, shows its assumption of human autonomy, that allows the control of nature. This belief of human exceptionalism and Ocean appropriation has shown to be inherent to the EBSP's suggested interaction with, and functioning of the Ocean environment, and will become clearer throughout the analysis.

The EBSP believes that education should be tailored to accommodate the 'current global context that is conducive to blue growth' (EBSP1, p. 2). The EBSP has shown that its curriculum values the notion of blue growth – as a practice aimed at promoting economic growth and development, through the sustainable use of ocean resources – and therefore prioritises economic incentives in Ocean education. This has resulted in the EBSP's strong focus on approaches to educate young people about ocean-based, economic sustainable development, known as the blue economy, as 'globalisation of the oceans and seas, [is] a reality and even a need in order to acquire all the goods necessary for industry' (EBSP1, p. 2). The educational agenda, therefore, sustains a discourse that accentuates the importance of sustaining a 'marine based economy that provides social and

economic benefits for current and future generations' (EBSP1, p. 3). Furthermore, the EBSP does, however, acknowledge that continued blue growth is not a guarantee, as it believes that 'the marine environment is a fragile wealth' (EBSP1, p. 3), subjected to anthropogenic environmental degradation. According to the EBSP, this is the result of 'limited human and financial capacities, ... administrative and political cultures, [and] the slow awareness of the problems of inclusive sustainable development' (EBSP1, p. 3).

Therefore, to ensure an educational agenda that is conducive to the EBSP's blue growth discourse, it developed three core concepts for blue economy education, to ensure the 'sustainable exploitation [of] marine biological resources' (EBSP1, p. 3). First, the EBSP stresses that education about the blue economy should 'provide social and economic benefits to present and future generation' (EBSP1, p. 3) for the eradication of poverty. Second, it should focus on 'restor[ing], protect[ing] and maintain[ing] diversity, productivity, resilience, essential functions, and intrinsic value of marine ecosystems' (EBSP1, p. 3), 'to avoid devastating accidents economically and environmentally' (EBSP1, p. 2). According to the EBSP, this ought's to be realised through the third core value, which states that measures to ensure economic stability should 'be based on clean technologies, renewable energy, and circular flows of materials' (EBSP1, p. 3).

This discourse of blue growth has shown a clear prioritisation of economic practices within its rhetoric for the development of, what the EBSP believes to be, adequate Ocean education. While this discourse did recognise the importance of the marine environment, it used a monetised approach, conceptualising the marine environment as a fragile wealth. The EBSP's incentive to 'protect' the marine-environment has therefore shown to continuously prioritise the pursuit of blue economic growth, further acknowledging Tsing's (2012) belief of human exceptionalism inherent to Western ways of thinking. Such practices totally neglect the core foundation of Freire's (1978) ecopedagogy that disavows the human-nature dichotomy. The EBSP thus neglects Freire's belief that education should prioritise sustaining life over sustaining the economy, which has clearly not been the case.

Furthermore, by aligning the EBSP's discourse with environmental worldview theory, it becomes even clearer that this educational agenda favours an economic, human-centric approach towards the Ocean. The EBSP's efforts to ensure a continued ocean-based economy, that continues to provide social and economic benefits to future generations, is a clear testimony to the curriculum's market liberal worldview orientation, according to Clapp & Dauvergne (2011). This orientation is, besides the clear economic prioritisation, supported by the EBSP's neglect of an existing environmental crisis. There has been no reference to the existence of a crisis, but there merely is an acknowledgement of negative externalities, which does not represent the seriousness of the threat faced by the Ocean. Continuing, the EBSP's blue growth discourse signals the nature of negative externalities, residing in the existence of limited human financial capabilities, resulting in poverty, which needs to be eradicated. This aligns clearly with Clapp and Dauvergne's (2011) conceptualisation of the market liberal worldview which believes the nature of environmental change to be due to weak economic growth and poverty. The EBSP's promotion of economic growth further support this argumentation.

Furthermore, when looking at Dobson (1996), the EBSP favours a technocratic cornucopian approach to alleviating its believed problems. Such strategies, like the EBSP, prioritises resource exploitation and growth, through the free market. This too aligns well with Clapp and Dauvergne's (2011) belief that the market liberal predominantly focusses on its neoliberal attitude and believe in technological solutions to accommodate blue growth, clearly suggesting the prioritisation of sustaining human capital (Dobson, 1996). This is supported by the EBSP's continuous argumentation of constant sustainable exploitation of marine biological resources, for the economic benefit of future generations, signalling an approach rooted in very weak sustainability according to Dobson (1996).

Building on the previously mentioned core concepts underpinning blue economy education, the EBSP has developed a guide for teachers, consisting of four features, outlining educational strategies to be used as guidance for creating educational materials. First, through the feature of 'the sea belongs to us', the EBSP tries to show that there is an 'undoubtedly case of [the] sea's major value to innumerable human activities' (EBSP2, p. 17). Through this statement, the EBSP once more reiterates its disconnection from nature, as it assumes a one-directional relationship. This rhetoric is also clearly present in the EBSP's second proposed feature of the 'sea is dynamic'. This feature recognises the Ocean as 'a space common to different States and the centre of many human and commercial exchanges' (EBSP2, p. 18). Furthermore, this second feature also acknowledges that 'exploitation of ... resources must not lead to the destruction of its marine ecosystem ... which would result in environmental and financial consequences' (EBSP2, p. 19-20).

The first and second feature clearly shows how the EBSP functions under the perception that the Ocean environment is in servitude to human economic welfare, by stating the Ocean's major value to human activities and the economy. Hereby, the EBSP strongly aligns with what Cronon (1996), Haraway (2008), and Tsing (2012) recognised in their work as separation of society and the natural world, assuming a dominator and servant relationship. However, it does follow-up by acknowledging the Sea's crucial role in the evolution of humanity, that inevitably results in big problems for marine sustainability. Yet, as Escobar (2015) acknowledges, Western centric conceptualisation are flawed in that they serve the economy rather than the environment. And while the EBSP's discourse intends to suggest a moral correction to its extractivist nature by acknowledging the implications of human evolution for marine sustainability, it fails to consider that its conceptualisation of sustainability is in servitude of a prosperous economy.

The third feature of the guide for teachers concerns discovery and exploration. The EBSP's discourse prizes exploration and discovery as a tool for navigating the path to sustainable development. Problematically, they take their inspiration for developing the EBSP's curriculum from a celebration of the colonial history of European explorers, such as Marco Polo⁷ and Christopher Columbus. Lastly, the fourth feature focuses on how the Sea and humanity are interconnected, and how they affected each other over the course of (human) history, to ensure that young generations learn to not repeat mistakes of the past.

⁷ This problematic approach of the EBSP will be further elaborated on in *4.2.1 Privileged knowledge practices of the European Blue School Project*.

This last feature is a testimony to the EBSP's inherent hypocrisy towards its oppressive nature of human exceptionalism to rule nature. The EBSP justifies its neoliberal pursuit for economic growth by placing human welfare over the integrity of the ecosystems, under the cover of so-called 'sustainability'. The EBSP's blue growth discourse is therefore in complete denial of the interconnected relationship of the human and nature, neglecting the essence of a true ecopedagogy that recognises the Earth as an interconnected being.

4.1.2 Discourse of the UN Ocean Literacy Framework

When it comes to the UN Ocean Literacy Framework – the Ocean curriculum developed by IOC/UNESCO – the discourse on Ocean education is primarily linked to the conceptualisation of the Ocean as a resource for the good of humanity. This becomes clear from the opening sentence of the foreword: 'the ocean is a source of food, energy, minerals, increasingly of medication; it regulates the Earth's climate and hosts the greatest diversity of life and ecosystems, and is a provider of economic, social and aesthetic services to humankind' (UNOLF). This opening statement clearly acknowledges the Oceans predominant existence as a provider of services for the good of humanity, which is similar to the discourse of the EBSP. However, unlike the EBSP which sees the Ocean solely as a provider of material capital, according to the argumentation of Dobson (1996), the UNOLF also prizes social and aesthetic services to humankind, which suggests an effort to sustain material- and aesthetic capital. Still, similar in both discourses, there remains the human exceptionalist approach, as argued by Tsing (2012), which becomes clear from the Ocean's subjected role of servitude inherent to the UNOLF.

Building on this, the UNOLF classifies the Ocean as something that 'is part of a collective good ..., recognis[ing] the ecosystem service it provides for human life' (UNOLF, p. 41). The UNOLF's discourse repeatedly stresses the dependence of humanity on the Ocean's many resources, and that it is therefore essential 'to conserve and sustainably use the oceans, seas, and marine resources' (UNOLF, p. 15), to ensure the continued satisfaction of future needs. For this, the UNOLFs discourse prioritises managerial processes, through collective action and the improvement of governance practice, to 'sustainably manage[s] and protect[s] marine and coastal ecosystems to avoid significant adverse impacts ... to achieve [a] healthy and productive ocean' (UNOLF, p. 67). So, the UNOLF does recognise the vulnerability of a deteriorating environment for a continuous resource provision, stating that they believe that there is 'overwhelming evidence that if we continue on the path we are on, there will be severe consequences for the ocean and all the services it is providing us' (UNOLF, p. 49). Through this logic, an argument for the alignment with Clapp and Dauvergne's (2011) institutionalist worldview can be made.

To elaborate, Clapp and Dauvergne suggest that the institutionalist does recognise the possibility of a looming crisis. This is evident from the UNOLF's discourse which believes that if a continuation of current practices takes place, severe consequences would follow. This does not state that a respective crisis is already taking place, but merely acknowledges its possibility. Also aligning with Clapp and Dauvergne's theory, is the institutionalists desire to enhance the institutional, managerial capacity to prevent a looming crisis, which becomes evident in the discourse from the desire to actively manage the Ocean environment. Furthermore, such managerial practices also align with Dobson's (1996) understanding of technocratic

accommodating approaches, fitting with the institutionalist worldview, suggesting the managerial nature of alleviating environmental problems, signalling weak sustainability.

Continuing, despite the more visible presence of conservation in the UNOLF's discourse, compared to the EBSP, the UNOLF shows similar argumentation for the necessity of conservation. The UNOLF discourse's prioritisation of resource conservation, for the pursuit of human wellbeing can, similarly to the EBSP, be linked to an economic incentive. This becomes clear from the UNOLF's discourse through the extensive elaboration on the Ocean's economic worth, stating that 'the ocean is worth at least \$24 trillion ... [putting] the ocean as the seventh largest economy in the world' (UNOLF, p. 51). Contributing, the UNOLF states that 'for many, the ocean is the new economic frontier, [holding] the promise of immense resources, wealth, and great potential for boosting economic growth, employment and innovation' (UNOLF, p. 78). This articulation of the UNOLF's understanding of the Ocean as a new economic frontier, holds a problematic assumption. Not only does it, like the EBSP, differentiate between the human society and the presumed independent nature, effectively severing the inherent interconnection according to the arguments of Cronon (1996), Tsing (2012) and Williams (1972), it upholds a legacy of neoliberal, Western-centric, economic coloniality. To align with the words of Williams (1972), it essentially alienates the Ocean environment by acknowledging the existence of a yet to be discovered and concurred world beyond the frontier. And by conceptualising the Ocean in this way, the UNOLF separates itself from this presumed frontier, marginalising the Ocean's worth down to an economic incentive that facilitates continuous exploitation. Furthermore, according to the words of Ferdinand (2021) such argumentation would uphold the colonial legacy that drives a destructive, exploitation driven, economic incentive. Through this argumentation, the UNOLF's discourse neglects Freire's (1978) recognition of the interconnected relation of the human and nonhuman, essentially reducing the Ocean environment to a scalable sum of parts (Matthews, 2011).

4.1.3 Discourses from post-Dutch-colonial nations

The discourses on Ocean education, inherent to the respondents from post-Dutch-colonial nations, showed to be very contrasting to the discourse of the EBSP and UNOLF. The discourse of the EBSP and UNOLF clearly demonstrated a prioritisation of sustaining the Ocean's natural resources and its economic functioning for the enhancement of human welfare, aligning with their market liberal and institutionalist environmental worldview conception. Contrastingly, the discourse of the interviewed respondents did not actively prioritise the economic interest in Ocean education but fostered a rhetoric of appreciation, love, and beauty, paired with one of vulnerability and worry. Furthermore, this rhetoric of the respondents showed to be underlying to two dominant discourses: one stressing the importance of the Ocean as culture, and one prioritising the functioning and integrity of the ecosystem,

The interviews with the respondents have shown the existence of a cultural discourse, suggesting that the Ocean is something mysterious, powerful, and cultural. For instance, this becomes apparent from the words of RSP1, who says: 'the mysterious ocean creature that takes care... It's like the Ocean Gods that take care of the ocean [and we] don't want to disrespect'. Here, RSP1 suggests that the Ocean plays a major cultural role within lives, which influences behaviour to avoid disrespecting the Ocean. RSP9 states a similar notion, saying that 'the sense of

responsibility [for taking care of the Ocean] is a cultural thing ... a spiritual thing', expressing that the connection one has with the Ocean does not have to be tangible or priced. Such connections, power and cultural heritage is, to more and lesser extent, continuously mentioned throughout all interviews. Through this argumentation, and the representation of the Ocean as interlinked with culture, it strongly suggests the respondents' belief that nature has intrinsic value, acknowledging that nature is a sense of power, commanding respect. Therefore, this argumentation denies the notion of human exceptionalism, as suggested by Tsing (2012), as the Ocean is not something to be denominated as a human domain; it holds its own rights, strongly affecting individuals and communities in their day-to-day lives.

Building on the cultural significance of the Ocean discourse, the beauty of the ecosystem is a reoccurring theme amongst respondents. Here, the respondents do not only speak about the visible aspects of beauty; they talk of the beauty that is within the ecosystem on numerous occasions. A testimony to this are the words of RSP7, who states that for all he cared 'it could all be ugly ... but it's really just ... so important ... it's so beautiful ... it's so giving ... it is so rich of life'. This experience of beauty by RSP7, was best put into words by RSP1 stating that 'the beauty of the ocean ... is the power that the ocean has on a human body'. This argumentation for the beauty of the ecosystem reiterates the intrinsic value of nature and the denial of human exceptionalism. Furthermore, this discourse has also proven to shape the interaction between the respondents and the Ocean. And while this interaction has shown to be rooted in a cultural experience, fostering its intrinsic value and power, this interaction is also met with a discourse of worry, related to the Ocean's vulnerability. This discourse of worry related to the vulnerability of the Ocean, is a commonality amongst all the respondents, who express their concern about the deterioration of the Ocean environment. An example of this is provided by RSP6, stating that 'if we continue to live this way, ... the future of the ocean, especially for biodiversity [is] not going to be good'. This concern is also expressed by RSP5, acknowledging that if action is not undertaken 'as soon as possible, the ocean, the planet, will be destroyed by ourselves' (RSP5).

As stated earlier, the discourse of the EBSP and UNOLF show contrasting findings compared to the discourse of the respondents. The significance of this contrast becomes even clearer when comparing the findings of the respondents with Clapp and Dauvergne's (2011) environmental worldview theory. Very present in the discourse found in the interviews with the respondents was the intrinsic value of nature, together with its cultural significance. This discourse is in alignment with Clapp and Dauvergne's bioenvironmentalist worldview, which also acknowledges the existence of the intrinsic value of nature. Furthermore, the discourse of the respondents also expressed the severity of the threat of environmental degradation, essentially recognising the existence of an environmental crisis in which the Earth is near or beyond its carrying capacity. This too aligns with what Clapp and Dauvergne categorised as the bioenvironmentalist worldview. Building on this, by drawing on this research's expansion of environmental worldview theory by the integration of Dobson's (1996) conceptions on environmental sustainability, the respondent's discourse clearly signals that besides sustaining the environment for human welfare, humanity also has obligations to nature. This becomes clear from its avoidance of human exceptionalism with the recognition of the Ocean as something cultural, with intrinsic value and rights, demanding respect.

Most respondents believe that the earlier mentioned destruction of the environment, is due to negative economic practices based on extractivism, driven by greed inherent to the neoliberal paradigm that governs global policy and education. RSP6 supports this by stating that ‘to save ... nature ... we need to end the capitalist way ... because with capitalism you always want to produce more’. RSP6 further states that ‘we need to speak more about how we [can] actually live side by side by nature, and ... how the economic policy can actually ... [become] an important feature to save the nature’. Continuing, this belief is also shared by RSP2, who pleads that this ‘instant gratification lifestyle’ cannot hold in the long run, which results in companies commandeering resources and using the Ocean for their own to accommodate the growing needs. According to RSP1, this lifestyle is linked to greed, because ‘instead of everybody taking what they need, they take with greed’. In analysis of this rhetoric, the respondents show to negatively view the global economy as a driver of environmental degradation. Bioenvironmentalists negatively assess the economy’s role in environmental degradation, believing that excessive use of ecological space, excessive economic growth, and overconsumption drive the environmental crisis. This negative assessment has shown to be inherent to the respondents’ rhetoric, as the argumentation for greed and instant gratification lifestyle, is closely interlinked with the notion of overconsumption inherent to continuous expansion of the economic production, which shows to align with the bioenvironmentalist negative perception on excessive economic growth. Continuing, the respondent’s statement on companies continuing to take more based on the growing consumption demand, is also inherent to the bioenvironmentalist worldview, signalling the excessive use and claims on the environment.

However, based on a different interpretation, one could also argue for the alignment with the social green environmental worldview. As Clapp and Dauvergne (2011) explained, the social greens view the economy’s negative effect on the environment as the result of global capitalism and exploitation. As was clearly shown, the neoliberal capitalist paradigm was renounced by the respondents, signalling the economies’ inherent failures to truly sustain the environment. Furthermore, the desire for more production and companies taking more to satisfy lifestyle expectations, hints at the inherent nature of exploitation in capitalism. This too shows to align well with the social green worldview. However, contrasting to a social green environmental worldview, the respondents’ discourse shows to favour a reorientation of the global economic process instead of rejecting it, which would again suggest the presence of a bioenvironmentalist worldview (Clapp & Dauvergne, 2011).

Furthermore, on a different note, most respondents seek value in finding a ‘sustainable way to live next to nature... [to live in] balance ... between [the] human and ... the biodiversity’ (RSP6). The respondents talk primarily about sustaining their livelihoods, by ‘taking what you need today, so that you have more for tomorrow’ (RSP1). For the respondents, to sustain this way of life, would be to ‘re-find that connection with nature’ (RSP8), because ‘if we want to protect what we love, we must maximise our efforts’ (RSP4). This approach to sustainability signals the existence of a discourse supporting the integrity of the ecosystem as becomes evident from the desire to maintain the Ocean ecosystem in order to supply in the needs for their livelihood, not driven by greed. This discourse recognises the interconnectedness of humans and nature, suggesting a strong interlinked dependence, once more denouncing Tsing’s (2012) conceptualisation of human exceptionalism. Furthermore, this discourse signals the need for sustainability to be

derived from a perspective that focusses on sustaining for human welfare, but also for obligations to nature as it is rooted in respecting the Ocean by taking what is necessary instead of as much as you can.

So, the discourses identified from the respondents showed to denounce the EBSP's and UNOLF's prioritisation of economic growth for sustainable development. Instead, a clear focus on addressing environmental change by denouncing greed, respecting the environment and culture, and the appreciation of nature's beauty, showed to be present. The argumentation of the discourses showed to align with multiple worldviews, not perfectly fitting either, yet signalling a stronger sense of sustainability, according to Dobson (1996), as inherent to the ecocentric approaches, emphasising ecological balance and nature's intrinsic worth, followed in these discourses.

4.2 Differences and similarities in privileged knowledge practices

Besides the different discourses on Ocean education between the EBSP, the UNOLF and the discourses from the post-Dutch-colonial nations, differences in the privileged knowledge practices within education were also evident. Furthermore, similarities could be detected throughout the data, especially between the EBSP and the UNOLF. Regarding the differences, starker contrast could be seen between the privileged knowledge practices of the post-Dutch-colonial respondents and the EBSP and UNOLF.

4.2.1 Privileged knowledge practice of the European Blue School Project

When it comes to the EBSP's privileged knowledge practices, one can see that approaches to learning are oriented from a banking, autonomy structure, in which education is based on the imposition of knowledge through reproduction, from a certain authority figure who is believed to hold all essential knowledge. According to Freire (1978), the practice of banking educational stems from a colonial history which perpetuates the colonial effort in education, by assuming the existence of a knowledge hierarchy. The alignment of the EBSP with banking educational practices becomes clear from the EBSP's mission, which stresses 'the need [for] teachers to be empowered in order to shape the new idea in their school and to be able to pass the message, educate, teach and orient efficiently their student towards the blue economy' (EBSP2, p. 4). This mission proves the underlying notion of banking education, as it actively shows to spread the EBSP's beliefs regarding the blue economy, which requires a targeted behavioural orientation of students by an authority figure. Furthermore, in the EBSP's mission of teaching young people to value the Ocean for economic growth, the banking educational model alignment becomes further visible from the EBSP's expectation of teachers to 'provide clear and concrete instructions, [including] teachers set[ting] clear goals for each lesson and provid[ing] their students with clear instructions' (EBSP2, p. 48). This expectation further proves that the EBSP supports the need for direct, teacher-based instructions, denying any room for personal development of young people's own beliefs and dreams.

Moreover, the EBSP also relies heavily on experience-based learning, drawing from the expertise of, and opportunities presented by partner associations in 'the sea industry' (EBSP2, p. 40), to ensure the realisation of 'essential learning expected' (EBSP2, p. 39). Contributing, the EBSP believes that the sea-industry can provide real-life learning opportunities by allowing young

people to experience the different working environments in the blue economy. The experienced-based learning presented by the EBSP thus shows to be based fully on experiencing the blue economy. This is problematic, as this approach does not only teach young people that the only possible ways of interacting with the Ocean is through the engagement in economic practices, the EBSP also denies the student the right to discover their own relation with the Ocean.

Furthermore, the EBSP presents a strong focus on young people learning about the importance of historic maritime heritage to increase historical awareness. The EBSP believes the increase of historical awareness to be so important because ‘the marine heritage is linked to a history from which the young generations must learn in order not to repeat the mistakes and build a better future’ (EBSP1, p. 5). However, problematically, the EBSP’s conceptualisation of historical awareness and the development of supporting educational material shows to foster a Eurocentric perspective on the colonial history, aimed at supporting the necessity of discovering and exploring the Ocean. The EBSP’s conceptualisation of historical awareness is in complete disregard of the oppressive, atrocious nature of the colonial implication for non-European people and nature. To illustrate what the EBSP understands under their need for further discovery and exploration, the EBSP uses the stories of multiple European explorers over the course of history such as Marco Polo, and how Christopher Columbus ‘discovered the ‘New World’’ (EBSP2, p. 21). It sheds light on how Vasco Da Gama ‘opened the first sea route connecting Europe to Asia’ (EBSP2, p. 21), and on how Henry the Navigator ‘colonised the Azores and Maderia islands’ (EBSP2, p. 21). This illustration of the EBSP’s content of educational material proves the complete disregard of colonial atrocities, and clearly celebrates the ‘importance’ of the above mentioned to European ‘advancement’, neglecting the question of at who’s expense these ‘advancements’ were made.

Therefore, the educational material supporting the EBSP’s conceptualisation of historical awareness, is a clear testimony to a presence of historic- and social forgetfulness in Eurocentric education, as Boers-Goi (2014) and Weiner (2014) suggested, aimed at upholding the positive self-image, denying any guilt of racism, marginalisation, and exploitative behaviour (Delgado & Mulder, 2014). And while the EBSP claims to want young people to learn to not repeat the mistakes of the future, the EBSP neglects the entirety of its problematic colonial legacy. Therefore, the uncritical expansion of the EBSP to Dutch schools, without addressing and exposing the colonial legacy would perpetuate the Dutch’s societal belief of national innocence, as suggested by Wekker (2016), which continues to marginalise large groups of individuals and communities. Historical awareness must therefore not be addressed through the problematic Eurocentric approach inherent in the EBSP but must raise awareness on the oppressive nature of colonialism, aimed at empowering the voices and knowledge of those colonially marginalised.

4.2.2 Privileged knowledge practices of the UN Ocean Literacy Framework

Similar to the EBSP, the UNOLF also presents some cases of banking education’s knowledge imposition throughout the educational agenda. Despite, the noticeable presence of banking education within the UNOLF, it is less frequent within its educational rhetoric. This becomes apparent from the coding analysis, as the codes indicating banking educational practices appeared only half as many times in the UNOLF, compared to the EBSP. Still, banking education’s presence can be clearly made out from the UNOLF’s prerequisite, stating that the ‘teacher [must] appropriate and adapt the toolbox [of Ocean Literacy], using their own creativity to transfer the

messages resulting from science' (UNOLF, p. 45). This prerequisite signal that the teacher is in charge of 'facilitating the knowledge transfer from science to society' (UNOLF, p. 45), essentially confirming the banking educational approach, which fosters a knowledge imposition through reproduction of the desired content by teachers drawing from the toolbox of Ocean Literacy.

However, contrasting to the UNOLF's use of banking educational practices, is a strong focus on multi-perspectivity. The UNOLF states that, in learning, students should 'not only absorb the knowledge given by the teacher, but ... also [be] actors' (UNOLF, p. 45), which shows the expectation of engaged learning. The UNOLF's focus on multi-perspectivity serves 'to acknowledge that there are many sides, or perspectives to understanding challenges related to the ocean' (UNOLF, p. 88). Furthermore, the focus on multi-perspectivity in the UNOLF became clear from analysing the coding process. This revealed that multi-perspectivity was, besides banking education, the most frequently coded knowledge practice. Upon further analysis, the multi-perspectivity approach showed to focus on two different approaches: an approach of intercultural dialogue and an approach of citizenship education.

First, the development of the UNOLF, the developers from IOC/UNESCO, acknowledged the importance of intercultural dialogue as it 'contributes to sustainable development by facilitating knowledge exchange, as through combining all forms of knowledge, more sustainable practices can be developed' (UNOLF, p. 87). Through the use of intercultural dialogue practices in the UNOLF, the IOC/UNESCO aims to facilitate the equal representation and recognition of knowledge. With this, they assume that the UNOLF curriculum represents and includes all forms of knowledge, essentially realising what Ferdinand (2021) and Fossey et al. (2002) referred to as a knowledge ecology that acknowledges different epistemologies. However, as will later be presented in chapter 4.4.1, *references to epistemic justice*, this is evidently not the case because of the predominant focus on Western-centric epistemologies in the development of the UNOLF.

Second, the multi-perspective approach to citizenship education is evident in the UNOLF, as IOC/UNESCO prioritises the encouragement of 'scientists, educators, and learners to take greater personal responsibility for the ocean ... to enable them to act as citizens ... sharing ideas and experiences and developing new approaches and initiatives' (UNOLF). This statement shows the UNOLF's appreciation of interdisciplinary and personal exchange and facilitation of knowledge. Furthermore, the UNOLF stresses the need for citizenship education as 'individuals have a responsibility to make informed lifestyle choices to minimise [their] impact ... as ocean issues are deeply rooted in individual and collective behaviour' (UNOLF, p. 64). To accommodate individuals in making informed lifestyle choices, the UNOLF seeks to facilitate a shift in values to promote marine pro-environmental behavioural choices, for which they believe that 'understanding ... different people's values, needs, and perspectives on ocean issues are building blocks to develop common actions, and marine citizenship (UNOLF, p. 90)'. In this case, using multi-perspectivity would allow the UNOLF to take account of different epistemologies through which Oceanic issues can be viewed, essentially facilitating epistemic justice. However, as will be presented later in chapter 4.4.1, *references to epistemic justice*, the UNOLF's development is predominantly a product of Western-centric epistemologies. Therefore, taking account of different perspectives, as presented in the UNOLF, to reform individual behaviour would serve in upholding, or pursuing, a Western-centric belief of pro-environmental behaviour.

Continuing, like the EBSP, the UNOLF also favours the use of experience-based learning. Yet, instead of orienting experience-based learning towards engaging in blue economy activities, like the EBSP, the UNOLF prioritises experience-based learning through experimentation. The UNOLF believes that learning through experimentation ‘with the marine environment ... [can] lead to a significant increase in knowledge and positive attitudes towards the ocean’ (UNOLF, p. 69). Furthermore, this privileged practices of experimentation in the UNOLF is strongly connected with learning young people to engage in science-based learning. In addition, in learning through experimentation, based on science-based learning, the UNOLF, prioritises learning about natural science. This becomes evident from the coding analysis, which shows that natural science was coded almost double as much as social science.

The prioritisation of natural science-based learning by the UNOLF, strongly contradicts with the curriculum’s other prioritisation of multi-perspectivity. Ontologically speaking, based upon the work of Moon and Blackman (2014), the focus on multi-perspectivity, in which all forms of knowledge, perspectives, and needs should be recognised, according to the UNOLF, a relativist ontology would be applicable. A relativist ontology would acknowledge the subjectivity of reality, and acknowledge, in essence, the multiple perspectives through which a situation can be analysed. The pursuit of predominantly natural science by using ‘the scientific method ... based on the observation of a natural phenomenon, on the formulation of hypotheses, on the collection of data, on their interpretation, and on the definition of the results to draw a final conclusion’ (UNOLF, p. 88), would support a realist ontology. A realist ontology would fit with the assumption of hypotheses that suggest the existence of one reality, essentially denying subjectivity in meaning making. Therefore, a strong focus on learning based on predominantly natural science in the UNOLF, would deny young people to learn to recognise and foster different epistemologies, contrasting to their own. In essence, fostering realist ontologies through a dominant natural science approach, would entail young learners remaining stuck in ignorant, self-sustaining, superiority images in Western society, if they are not exposed to their inherent privilege and contrasting, and challenging diverse epistemologies.

4.2.3 Privileged knowledge practices of post-Dutch-colonial respondents

Contrasting to both the EBSP and the UNOLF, the imposition of knowledge through banking education is almost not to be found throughout the privileged knowledge practices of the respondents. On the contrary, the respondents speak relatively negatively about this form of education, as becomes clear from RSP1, who states that ‘giving too much information at the same time doesn’t ... have any impact’. Or from RSP2, who say: ‘sometimes ... it’s just another person in the front of the hall or in front of the classroom just speaking, and the kids aren’t really taking it in’. This bears testimony to the negative perception by the respondents of banking education, as it renounces the efficiency and appropriateness of imposing knowledge through direct instruction and reproduction.

However, despite their renunciation of banking educational practices in teaching about the Ocean, respondents from the post-Dutch-colonial nations have shown that their preferred knowledge practices are in fact not completely new in comparison to the EBSP and the UNOLF. For instance, the respondents from the post-Dutch-colonial nations show to prioritise teaching and learning based on experience. And yet, while this was also a strong priority in the EBSP and

UNOLF, the respondents approach to experience-based learning was very contrasting. The respondents approach prioritised a nature and justice like approach, which promotes the appreciation of beauty, environmental awareness, fostering the connection with nature and community service.

Elaborating on this, field experience-based learning has shown to be the most preferred knowledge practice by all respondents. For instance, RSP8 states that ‘the best things that work is getting people out in the ocean and giving them that experience ... as you just see eyes opening, hearts opening ... when they see whatever we come across’. RSP4 contributes to this by stating that ‘if we want to educate more people into a good understanding about the oceans, ... or make a good movement in education, ... it’s really important for us to make [it] more practical; [that way, everyone] would understand what is going on, what is happening, and also what they have in their region’. In this case, the respondents show that experience-based learning is something that can evoke emotion, which contributes to raising environmental awareness. This is largely contrasting to the EBSP’s understanding of experience-based learning, which believes that it should serve in connecting young people with the blue economy. Or compared to the UNOLF, which predominantly approaches experience-based learning through engaging with natural science, essentially denying subjectivity, different possibilities for meaning making and emotion.

Furthermore, in terms of experience-based learning, all respondents stated that some form of community service, ranging from beach cleanups, to educating locals, and restoring coral reefs, is present in their lives. In addition, they perceive acts of community service as positive knowledge practices, which benefit the environmental awareness of children to a large degree. For instance, this was made clear by RSP2, who states that ‘to see what it looks like and to see the states [of the environment] ... makes a difference for their life and then they take back what they’ve learned and hopefully ... encourage others to do the same’. This message is supported by RSP6 and RSP8 who list community service and active participation as important aspects, and by RSP4, who states that ‘it’s just the way [to] contribute to protec[ing] [the] country⁸’. Moreover, a link could be identified between experience-based learning, community service and the appreciation of nature, from the respondents’ argumentation for preferred knowledge practices. This argumentation was best described by RSP3, who believes it to be ‘something beautiful to have, to be able to want to clean up the planet and make it a good place to be’. These words are supported by RSP2, saying that ‘once you get to experience it, you will fall in love with it, and you’ll understand ... why it’s so important to keep it clean’. Once more, an emotional connection with the Ocean becomes apparent in experience-based learning. And, like RSP3, and RSP2, all other respondents expressed their love for the Ocean in numerous ways too. For example, RSP1 states that ‘when the [students] love it ... we get them excited, and it gets them to understand the reason behind protecting [the ocean]’. This is also supported by RSP4 who concluded that ‘if we want to protect what we love, we will maximise our efforts’. The rhetoric used in the argumentation of community service, experience-based learning, and the appreciation of nature is once more completely contrasting to the rhetoric used to describe preferred knowledge practices of the EBSP and the UNOLF. Where the EBSP and the UNOLF uphold cold, somewhat transactional argumentations

⁸ With ‘protecting the country’, RSP4 refers to protecting the nature in Indonesia.

pursuing the advancement of the blue economy and natural science, the respondents reflect on the affiliated emotion and connection based on love and respect with the Ocean environment.

Lastly, on a different note, the respondents state that Ocean education should tailor to a local level, involving local nature and the local community, as it is ‘really important to introduce [young learners to] things that [are] connect[ed] or relate[d] with their life’ (RSP4). This is supported by RSP7 who claims that is essential to ‘make [young people] appreciate [nature] at home, [so that it would be] easier to appreciate [nature] abroad’. In addition, RSP1 also acknowledges the necessity for local education as teaching should aim to ‘keep it so local to a point where ... they relate’. Furthermore, local expertise is essential to educate on the local level. RSP9 best puts this into words by stating that ‘it’d be nice to have somebody that also experienced it first hand, being the one telling you the story of ... what’s happening to our home’. The respondents’ argumentation for local level education is contrasting to the EBSP and UNOLF educational focus. While the EBSP and UNOLF do not specifically mention a desired scale for education, the EBSP is the product of a collaboration of different European organisation, and the UNOLF is a product of the IOC/UNESCO; so, logic dictates that these educational models are more focused on a regional and global approach.

To sum up, the respondents’ privileged knowledge practices concern experience-based learning that has shown to be of service to both the community and nature. Through their practices, the respondents express the emotion that foster a connection inherent to experience-based learning, focused on the local level.

4.3 Coloniality and the possible decolonisation of Ocean education

Within the findings, coloniality and possibilities for decolonisation became apparent through the outlined directives of the UNOLF and the EBSP, and from the respondents’ experiences from the post-Dutch-colonial nations. These findings have presented some contrasting insights in the way education is or should be formed according to all parties. Throughout the document analysis, it became apparent that the UNOLF and the EBSP were predominantly perpetuating colonial legacies within Ocean education, rather than challenging them. On the other hand, the respondents from the post-Dutch-colonial nations, presented thoughts on education that were opposite to the Western educational agendas, acknowledging the hurt coloniality has inflicted and how its perpetuation could and should be challenged.

4.3.1 Coloniality in Ocean education

The findings have shown that coloniality is still very largely inherent to the existing educational models of the European Blue School Project and the UN Ocean Literacy Framework. Especially within the EBSP, the colonial legacy stood out most, with the UNOLF also perpetuating this legacy to a significant, but lesser extent. Out of the documents analysed for this research, the EBSP was the only educational agenda to specifically address the colonial legacy within the curriculum. However, the EBSP’s approach to coloniality aligned with the notion of social- and historic forgetfulness and ignorance in Eurocentric education, as was argued by Boers-Goi (2014), Weiner (2014) and Wekker (2016), leading to a complete misrepresentation of the European’s colonial history and the hurt and oppression it inflicted.

To illustrate, throughout the document, colonialism was approached through a lens of continued discovery and exploitation for the good of European development, not mentioning the negative consequences of European expansion. The EBSP essentially celebrates the European colonial legacy, and therefore has shaped the curriculum's historical awareness education in a way that sustains the European's moral superiority self-image. This claim becomes further grounded by the EBSP's argumentation for the importance of their historical awareness approach, stating that it is important for young people 'to detect the various ways [in which] the sea has given unique opportunities to people in traveling and exploring, in exploiting sea resources, in being part of naval battles and building empires over the seas' (EBSP, p. 29). The EBSP's argumentation for the importance of historic awareness shows to be in complete disregard to the history of oppression that has resulted in the marginalisation of many individuals, denying them a just, empowered place in a Western dominated world. Furthermore, the conceptualisation of the Ocean's use inherent to the argumentation of the EBSP, continues the integral belief of human exceptionalism, as argued by Tsing (2012). The continued perception of human exceptionalism in the EBSP curriculum, as is apparent from the Ocean's role as service provider and the implied exploitation, sustains the destructive idea for young people that the Ocean is essentially nothing more than a tool or resource, essentially disconnecting the human from nature, according to Cronon (1996) and Williams (1972). Therefore, with the uncritical expansion of the EBSP to the Dutch education system, Dutch society runs the risk of further colonial neglect, which severely degrades the Ocean environment and continues to oppress and marginalise large parts of society.

In comparison to the EBSP, the UNOLF has also shown to perpetuate the colonial legacy. However, the perpetuation of the colonial legacy in the UNOLF has presented itself differently. The UNOLF is an effort by the IOC/UNESCO to develop an Ocean Literacy agenda for all members of the 'global community. This becomes clear from the UNOLF document title: 'Ocean Literacy for All – a toolkit' (UNOLF). The need for a universal educational model of the Ocean for the global community, according to the IOC/UNESCO, becomes clear from its argumentation that 'the ocean is a shared resource, uniting people, communities and habitats across vast expanses of space and time' (UNOLF, p. 87). Furthermore, IOC/UNESCO, in the development of the UNOLF, believes that 'the ocean is a great unifier, and that it is our shared responsibility to preserve the Ocean for the current and future generation' (UNOLF). And therefore, the UNOLF has been developed to ensure young people learn the IOC/UNESCO's vision on how society must develop to ensure 'the ocean we need, for the future we want' (UNOLF, p. 37).

The IOC/UNESCO's strive towards the creation of Ocean education for All – the global community – also matches its institutionalist environmental worldview conception, as proposed earlier, drawing from the work from Clapp and Dauvergne (2011) and Dobson (1996). The believe in one educational model for the global community aligns with the institutionalist worldview, as the IOC/UNESCO clearly states the shared responsibility to preserve the current and future generations, in a way to unite people in taking care of the shared resources. This clearly suggests the IOC/UNESCO's belief in stronger international and institutional cooperation to accommodate environmental change and to ensure sustained human well-being.

Furthermore, the IOC/UNESCO's belief, inherent to the UNOLF, that an educational model can be developed that is well suited for the entire 'global community', shows to be in total disregard of

the colonial legacy. The belief of a universal educational model essentially homogenises all individuals on Earth. This becomes clear from the IOC/UNESCO's belief in a common 'all' and 'we'. Yet, as will be shown in chapter 4.4, *References to environmental justice*, the UNOLF is essentially a product of Western epistemologies. Therefore, the classification of a common 'all' and 'we' deliberately marginalises the global diversity in ways of being in and inhabiting this Earth. Once, more the homogenising practices of the IOC/UNESCO, by supporting the idea of a universal global community, denies all forms of epistemic justice, and essentially aims to conform all global young learners to the worldviews inherent to the UNOLF, further perpetuating the Western colonial legacy of epistemic oppression.

Although the EBSP and UNOLF have shown how they perpetuate the colonial legacy throughout today's education, the respondents shared how they have experienced such legacies within their education. For instance, RSP8 and RSP9 are local to the Caribbean islands, and they know firsthand how coloniality has influenced their education. For example, RSP8 states that she 'learned Dutch topography [and] ... Dutch history ...', while they maybe had 'this tiny history book on the Caribbean'. Regarding nature education she 'had to learn what the eikenboom [oak tree] and the beukenboom [beech tree] was' – trees that are not endemic to Caribbean flora. She deems this knowledge to be completely out of place, and a direct influence from the coloniality, neglecting local knowledge and nature. These examples show the literal colonisation of the Caribbean educational system, directly imposed with Dutch epistemologies. This bears testimony to the negative effects of a homogenising strategy, as inherent to the UNOLF. These examples clearly show how homogenisation is simply not possible and that to accommodate and conform a global society would be to further marginalise non-Western epistemologies.

4.3.2 Possibilities for decolonising Ocean education

Out of the experiences of the respondents facing the colonial legacy in life and in education, came insights which could prove to be essential in decolonialising the colonial legacy, still perpetuated in contemporary society and education. The celebration and perpetuation of the colonial legacy, as was identified in the EBSP and the UNOLF are not to be taken lightly. When talking to respondents who have experienced the effects of this historical injustice, a lot of pain is inherent to their experiences. For example, in talking to RSP1, this pain becomes clear as she explains how as a Black person she must 'work so hard – so hard – to just even get the littlest', and that 'it hurts [her] to see [herself] in rooms that [she has] worked so hard for, with people that take it for granted'. Unfortunately, this pain is not limited to RSP1, who talks about difference in class between Black South-African and White South-African members of the community, but is a reoccurring theme for multiple respondents. Like for instance, RSP4, who expresses how she feels underestimated as a woman⁹ by the men working within her field. Yet, there are signs of hope as RSP1 states that 'slowly but surely everything is changing; it's becoming better'. This sign of hope is important to foster improvement towards decolonisation. To achieve this, RSP1 states that 'you need to always have a message of hope, ... a message of urgency, and [a] message of empowerment'.

So, while progress is evidently being made towards further decolonising contemporary life and education, unfortunately, like more of the respondents, RSP1 still experiences that she is

⁹ Here, the term 'woman' and 'men' were used in a manner to express the effects of sexism on her life.

‘suffering from the scars of the past’. And, according to RSP8, this process takes time as ‘we cannot fix this in days; it’s something that needs conversation’. For her, achieving decoloniality is a question of ‘build[ing] those bridges, giv[ing] a voice, to listen to what is happening ..., what the concerns are, and then [to] translate that into action that is beneficial for the people, for the nature, for the world’. RSP8 further states that ‘we ... need to go back to finding ... harmony and balance’, as for her, decoloniality concerns ‘re-finding that connection with nature, and this connection that all the layers of the community always had with nature’.

To achieve the reestablishment of the connection with nature, RSP8 and RSP9 state that the creation of awareness and understanding is of importance. RSP9 states that it requires an ‘understanding [of] what it means to be destigmatising or [to take] down a system that has been impacting an adverse group of people’. It is about ‘how we can ensure that the land that they live on is being reclaimed’ (RSP8). And therefore, it is ‘really important ... to focus on creating more awareness among [young people] on what is happening’ (RSP8). Creating awareness among young people will require, and contribute to...

‘...undoing a lot of the things that we learned from colonial systems ...; it’s unlearning a lot of the things that were set based on a specific standard ... based on specific types of groups of people and trying to build equity [by] including certain ... people that have been targeted, that have suffered adversity because of colonial systems’ (RSP9).

In summary, the neglect of the historic atrocities of colonialism continues to perpetuate a colonial legacy in contemporary society, through the use of the EBSP and the UNOLF. Furthermore, the respondents testify how such perpetuation has a profound impact on their lives, which calls for a recognition of their pain and suffering. In addition, the imposition of colonial epistemologies must be countered to re-find that connection with nature, in striving towards a balance. Essential to this all is ensuring a message of hope to continue the empowerment of those marginalised because of the colonial legacy, to unlearn the imposed systems of oppression. For Dutch Ocean education, this means the curriculum must challenge its inherent colonialism and actively accommodate different epistemologies and recognise the impact Dutch society and education has had, and continues to have, on the marginalisation of many individuals and nature.

4.4 References of environmental justice

Throughout the document analysis and the interviews with the respondents, clear and implicit cases of different accounts of environmental justice and injustice presented itself. While often overlooked or addressed superficially, as an externality within the EBSP and the UNOLF, the respondents have lived and experienced the accounts of environmental (in)justice. Their story provides deeper insight in the implication of the perpetuation of injustice in the struggle for equality and inclusivity.

4.4.1 References of epistemic justice

What strikes out in the analysis of the UNOLF and the EBSP is that there are almost no explicit or implicit mentions of epistemic justice or injustice. This is very contrasting with the information from most respondents, who have repeatedly discussed the implication of epistemic oppression and their pursuit for epistemic justice. However, while the respondents did not explicitly use the

language of epistemic justice, for most, including respondent RSP1, 4, 5, 6, 8 and 9, a discussion on and the desire for the empowerment of marginalised voices was evident in their discourse.

The UNOLF document repeatedly stated the IOC/UNESCO's motivation to create an educational agenda about the 'ocean for all', essentially homogenising the entirety of the global population. Furthermore, the knowledge base on which the UNOLF has been developed shows a clear pattern of Western-centric prioritisation and oppression. The same contradiction goes for the EBSP, who mentions on two accounts the need for more 'inclusive sustainable development' (EBSP1, p. 3) and the 'enhancement of local cultures, know-how and marine heritage' (EBSP1, p. 4). Yet, the UNOLF and the EBSP both fail to address the root causes of the need for more inclusivity and the recognition of local cultures, nor do they address the marginalised stakeholders and their needs, in conceptualising their vision on education for 'all'.

A significant failure in the EBSP's and UNOLF's quest for the creation of an educational agenda for 'all', is the dominant focus on, and use of Western-centric epistemologies in the development of the curricula. For the UNOLF, a look at the authors of the document reveals the Western epistemic oppression within the creation of this document. All authors of the IOC/UNESCO document were from Western countries, including Italy, Sweden, and the United States. Furthermore, the document has undergone both internal and external review by seven different experts, of which six were from Western origin, almost entirely from the United States and Canada¹⁰. Only one of the reviewers was from South-Africa. This disproportionate range of author and reviewers significantly lacks the diversity required for what Ferdinand (2021), Fossey et al. (2002), and Smith (2008) referred to as the knowledge ecology. The UNOLF therefore shows that it favours almost only the input and expertise from Western epistemologies, essentially failing to provide the multi-perspectivity approach the curriculum holds so dear in educational development, as was argued for in chapter 4.2.2, *privileged knowledge practices of the UN Ocean Literacy Framework*. This belief of an Ocean education for 'all' inherent to the IOC/UNESCO's UNOLF document would then assume the existence of one ultimate way of being in this world, which according to the development of this document would suggest the superiority of Western epistemologies, further denying the existence and empowerment of non-Western epistemologies. Through this, the IOC/UNESCO essentially upholds the colonial way of inhabiting the Earth, homogenising the global population in their eyes to one in which all are benefited by a Western epistemology.

Continuing, the IOC/UNESCO further asserts its dominance and its perpetuation of the colonial legacy by claiming that it is the 'only agency with mandate in education and ocean science' (UNOLF, p. 22). This statement expresses the elitist notion of the IOC/UNESCO's Western-centric educational model, essentially denying all other educational models their right to existence and epistemic recognition. Furthermore, this Western epistemic dominance of the IOC/UNESCO's UNOLF becomes even more clear when looking at the coding process of the analysis. The data shows that Western expertise or knowledge is coded 47 times throughout the document, while expertise or knowledge from Asia, Africa, the Pacific and Indigenous People combined, was only

¹⁰ This argument is not an individual assault on the integrity of the authors and reviewers from Western origin but serves as an example to represent the institutional inequality of the IOC/UNESCO, in their effort to create a homogenising Ocean educational agenda.

coded 16 times. Building on this, frequent mentioning was made of the input and importance of Western institutions and government in the facilitation of the curriculum development. It also heavily relied on the development of earlier Ocean education from Western countries as a potential foundation for the development of the UNOLF.

Problematically contrasting to findings in the previous paragraph, for the times non-Western expertise or knowledge was apparent in the UNOLF, non-Western perspective were mostly used as examples or illustration. Problematically, as the above-mentioned coding disparity showed, only on few occasions were non-Western expertise or knowledge evident as contribution to the core content of the curriculum. This shows that the input of non-Western expertise or knowledge is firstly not equally balanced in the creation of the UNOLF's content, and secondly objectified to prove a point, used merely as examples. By merely addressing the non-Western epistemologies in the curriculum through the analysis of an example, they are subjected to the dominant epistemological approach inherent to the Western creation of the document. As Smith (2008) warned, this essentially functions as an objectification of non-Western perspectives, resulting in their worth being reduced to something to study as a subject. This severely contradicts the IOC/UNESCO's understanding of education for 'all', as it fails to acknowledge and empower the epistemic importance of non-Western perspectives.

Furthermore, similar implication of epistemic injustice are evident in the EBSP. Although there has been no specific authors listed, the document clearly shows the collaborating parties which all have European roots. These organisations from Greece, Estonia, Portugal, France, Cyprus, Italy, and Turkey have been funded by the European Union, and federated by the IOC/UNESCO, to create the EBSP. The development of this project serves in the creation of desirable behaviour that favours young people to learn about sustaining the blue economy, which becomes clear from the following statement: 'attitudes must be determined according to desired behaviours' (EBS, p. 44). The contents of this document, as elaborated on earlier in this thesis, show a clear Eurocentric perspective which is rooted in the absence of non-Western expertise or knowledge, once more exposing the Western epistemic dominance and oppression within education. Contributing to this, the deliberate alteration of behaviour towards what the EBSP constitutes as desired behaviour, is a clear reference to the homogenising efforts inherent to the curriculum, marginalising any other way of life that does not fit within the proclaimed desired category. This too essentially relies on a colonial pedagogy as it assumed that the EBSP's epistemologies, and the effort for stimulating desirable behaviour according to their standards, acknowledges the existence of an ultimate way of inhabiting the Earth. It suggests that the EBSP's vision on education is elite and superior to other (non-Western) educational models, denying the people who essentially do not feel represented by this vision, the development and pursuit of education adhering to their worldviews.

For the respondents, epistemic injustice became clear on multiple occasions. For instance, RSP7, RSP8 and RSP9 mention how their 'books at school were from the Netherlands' (RSP8). This reflected a strong Dutch epistemic oppression in their education as they state to have only limitedly learned about their own local environment, as the predominant focus was on Dutch topography and nature. This suggests the continued colonialisation of the educational system in the Caribbean, projecting the Dutch ideals onto a society that clearly still suffers the colonial

legacy. This essentially denies the Caribbean People to shape their own education, further epistemically oppressing their epistemologies. It is once more a testimony to the Dutch's unrecognised continuation of oppression, which is neglected in Dutch mainland education itself.

To break with the Western epistemic oppression, a clear difference can be detected for the respondents in the preferred expertise or knowledge inherent to curriculum development. According to the respondents, the most promising expertise or knowledge to draw on, in the creation of education, includes the community and local partnerships, nature, and youth. They firmly believe that Ocean education should 'address local people['s] needs, local people['s] perspective[s], and what their opinions are ... regarding any topic of the ocean' (RSP9). Drawing on community and local partnership knowledge, and expertise, helps to understand the cultural interaction and connection of the people with the Ocean. Furthermore, knowledge or expertise from nature is also deemed vital for good Ocean education by the respondents, as the direct experience of, and interaction with nature can have a positive influence. For instance, for RSP7 states that 'the water has ... made [him] appreciate [the] environment more than most people'. Or RSP9, who states something similar to RSP7, claiming that a 'fail proof technique is exposure', as 'to experience [is] to so see eyes opening, hearts opening'. Lastly, the contribution of youth as expertise or knowledge in education is valued significantly by the respondents, as they have a voice and their own perceptions of the contemporary problems, which deserves to be heard and empowered. The empowerment of these perspectives is not prevalent in the EBSP, UNOLF, or Dutch education. In order to strive towards a knowledge ecology, a just recognition of these epistemologies is required in the pursuit of epistemic justice for Dutch Ocean education.

4.4.2 References of recognitional justice

A strong interlinkage can be seen throughout cases of epistemic (in)justice and recognitional (in)justice. As for the UNOLF and the EBSP, both try to recognise the need for inclusivity. Both documents state the necessity of a future for all, with the UNOLF moving from their ethos of 'the ocean we need, for the future we want', or 'Ocean Literacy for All – a toolkit', and the EBSP stating the need to 'actively cooperate, shar[e] information, knowledge, best practices, lessons learned, perspectives, and ideas, to realise a sustainable and prosperous future for all'. Yet, no specific reference to who is to be addressed when talking about 'all' was made. And, to link back with epistemic justice, to talk about 'all' would mean to recognise 'all' in the formation of these curricula, which would according to Fossey et al. (2002) and Smith (2008), suggest the existence of a knowledge ecology that adequately and justly empowers and values different epistemologies. Following Young's (1990) theory on justice, the formation of such a knowledge ecology, representative for 'all', would require the explicit recognition of differences in epistemologies to undermine oppression. However, as will be further presented below, a recognition of non-Western epistemologies in the EBSP and UNOLF has not been demonstrated, which, in recognition of Ferdinand (2021) and Krenak (2023), perpetuates the colonial world's ultimate way of inhabiting the Earth.

The efforts of the EBSP and UNOLF to homogenise the global population as one (Western-centric) society, would be to deny the existence of historic atrocities, which have created a global power- and social imbalance, with many cases of oppression and injustice being present to this day. This idea of the homogenous global community, with the same history, needs, and power would be to

perpetuate recognitional injustice. The failure of the EBSF and UNOLF to adequately recognise the existence of non-Western epistemologies within their educational agendas, continues to marginalise historically oppressed epistemologies. The direct application of these models on to a Dutch context would therefore perpetuate the colonial legacy of oppression in education and foster a Western-centric standard of learning for the global population, as was suggested by Vázquez (2012). It would, in accordance with the words of Weiner (2014) and Wekkers (2016), sustain the Dutch's tradition of ignorance and blindness to the systems in place that continue to deny certain groups in society their place, continuously favouring the White, Dutch mainland epistemologies. It is therefore paramount to recognise that these injustices continue to this day, which becomes evident when talking with the respondents.

For instance, RSP1 talks about her experiences as a Black South-African woman and how in her life she has often felt unrecognised within the society she lives. She talks with sadness about how her struggle for equality in the workspace was often marginalised by her White coworkers. She recalls how one of her White coworkers denied her that recognition by stating that 'she does not understand White privilege, because if she was privileged enough, she wouldn't be sitting next to [her] in the same room'. This complete denial by her coworker of the history of oppression, rooted in this experience, is typical for the generalisation of the 'struggles' in society. Her story serves as a testimony to Wekker's (2016) work on White Innocence, showing how the ignorance of White society is blinding in acknowledging the struggles that the colonial history has inflicted on certain people and communities. Therefore, it is essential to recognise the struggles and historic atrocities inflicting society, in contemporary Ocean education. Not only should there be more recognition of the colonial legacy's impact which marginalises the experiences of certain people and communities, to avoid the further perpetuation of a racialised or ethnicised conceptualisation of the other, in the words of Weiner (2014) and Wekker (2016). In Ocean education there should also be a significant focus on the role the Ocean has played in the European colonial effort. The Europeans appropriated this vast ecosystem as a tool for expansion and oppression, which needs to be better understood to adequately challenge the historic and contemporary implications of Western-centric oppression.

Another example comes from RSP8, who states that not all efforts towards environmental conservation are recognised as equally valuable. She states that for instance, the Black Caribbean community's contribution is often neglected or deemed not worthy by Western people. She elaborates that this part of society has historically been 'forced to interact with nature', which has essentially shaped the Black Caribbean community's contemporary actions in environmental conservation as well. Yet, Western people come to the islands and start 'constantly telling people on the island what to do and how to engage with their land' (RSP8). They do not recognise the local practices but assert their dominance as the orchestrating group, denying the Black Caribbeans' their agency. This bears testimony to Ferdinand (2021) and Krenak's (2023) recognition of the Western-centric belief of the ultimate way of inhabiting the Earth. The Western people's contemporary authoritarian behaviour towards the Black Caribbean community aims to uphold and impose the Western-centric understanding of conservation on the local community, by deeming the Western way superior. Essentially, this is a recognition of the existence of what Ferdinand (2021) referred to as the colonial ecology: a system that functions to uphold the colonial inhabitation and domination of non-Western epistemologies.

Continuing with stories from the Caribbean, RSP8 and RSP9 repeatedly express how the Caribbean are not recognised by the Dutch government as island with their own history, culture, and nature, often seen as a 'periphery' (RSP9) in relation to the Dutch mainland. RSP8 and RSP9 state that in school they learned from Dutch educational standards, practically learning nothing about the Caribbean. RSP9 states that to achieve decoloniality in education requires 'undoing a lot of the things we learned from colonial systems'. The respondents clearly express the imposition of Western, Dutch epistemologies that completely neglect the existence of local, non-Western epistemologies on the Caribbean. Therefore, for Dutch education, this oppressive neglect must be stopped to realise the existence of a knowledge ecology, which empowers the non-Western epistemologies to take root in the national education system. This would help teach students about other ways of inhabiting the Earth, possibly showing alternative solutions to the current economic driver of sustainability that severely degrades the Ocean environment. It would further aid in, what Weiner (2014) and Wekker (2016) suggested, challenging the conceptualisation of Western-centric epistemologies, to avoid and dismantle polarisation in Dutch society.

Furthermore, a viewpoint, stakeholder, and perspective also not recognised as something with agency in the UNOLF and the EBSP is nature. Most respondents talk about the importance of recognising the rights and value of nature. For instance, RSP9 states that the Ocean is deserving of a voice, to exercise its own right. RSP6 elaborates on this by stating the importance of 'a symbiotic relationship between the nature and the human'. This argumentation for the rights of nature, and the recognition of the interconnected relationship between humans and nature, is something that lacks in the EBSP, UNOLF and contemporary Dutch education. These educational agendas uphold a cold, transactional belief of interacting with the Ocean, seeking human welfare and economic growth through their human exceptionalist actions. Yet, the respondents show to foster a different approach to nature, which is more in line with the words of Tsing (2012), who strongly advocates for the existence of an interconnected, symbiotic relationship of humans with nature. Recognising such an approach in Dutch education could aid in rediscovering the connection with nature, which stimulates a compassionate relationship that is not driven by transactional principles alone.

To sum up, it is essential for Dutch Ocean education to recognise the existence of different epistemologies to pursue the realisation of a knowledge ecology. This would allow Dutch young people to learn about the Ocean environment in multiple ways, to shift the predominant focus of the Ocean as an economy. Furthermore, it must recognise the historic and contemporary implications of the colonial legacy that negatively and disproportionately impacts marginalised parts of Dutch society. By acknowledging the knowledge ecology in Dutch education, different epistemologies will be empowered, contributing to the demarginalization and depolarisation of Dutch society. Lastly, a recognition of the respondent's acknowledgement of the rights of nature in Dutch Ocean education could aid in rediscovering the bond with nature, to shift towards an education that sustains life, rather than only economy.

5.0 Discussion

As is fitting with reporting the data through a findings approach, as explained earlier in chapter 3, *methodology*, the interpretation of this research's findings, together with the implications of the different theories has largely been done simultaneously with the presentation of the findings in the previous chapter. Therefore, this chapter will not provide a detailed interpretation of the findings of this research, as would be appropriate when using a results approach. Instead, this chapter is devoted to assessing the theoretical implications and limitations on a broader level.

Central to this thesis was Freire's (1978) work on ecopedagogy, which contrastingly to Western-centric pedagogies, offers a critical approach to teaching and learning that addresses the connection between socio-environmental issues. An ecopedagogical approach is aimed at challenging the perpetuation of social- and environmental injustice, by opposing the colonial legacy rooted in neoliberal society. In essence, Freire's pedagogy proposes an alternative to the Western-centric colonial legacy driven by a discourse of sustaining economic development, towards one sustaining life (Freire, 1978; Kahn, 2008; Matthews, 2011; Misiaszek, 2020).

Drawing on Freire's ecopedagogy, the analysis of the European Blue School Project (EBSP) and the UN Ocean Literacy Framework (UNOLF) as a baseline of Western-centric Ocean education, was a clear testimony and concrete proof of Freire's assumption that Western-centric education is rooted in a perpetuation of the colonial legacy that prioritises sustaining economic development. To illustrate, the findings clearly presented a discourse of blue growth – aimed at promoting economic growth and development, through the sustainable use of ocean resources – for the EBSP. In addition, the UNOLF had a strong inherent discourse that prioritised sustaining the Ocean for its resources to maximise human wellbeing for future generations. Both these discourses therefore clearly align with the intrinsic prioritisation of economic interests to Western-centric education.

Furthermore, Freire's ecopedagogy is rooted in a deep respect for all life, recognising an interrelationship of the Earth's species – including humans and nonhumans. Therefore, Freire acknowledged that the human is interconnected with nature. However, Western colonialism has detached the human from the belief of being interconnected with the Earth, which has fostered a way of inhabiting the Earth based on exploitation as a result of human exceptionalism (Freire, 2004; Matthews, 2011; Misiaszek, 2015; Tsing, 2012; Williams, 1972). The findings have shown that the presence of human exceptionalism and a disconnected relationship of the human and nature is evident in the EBSP and UNOLF. Essentially, both the EBSP and UNOLF contribute to learning young people that the human is exceptional to this Earth and therefore has earned the right to engage with nature as they please, under the presumption that nature only exists as a provider of resources of economic growth.

The discourses of blue growth inherent to the EBSP and sustaining resources for human-wellbeing inherent to the UNOLF showed to be very contrasting to the conceptualisation of Freire's (1978) ecopedagogy and the discourses from the respondents of post-Dutch-colonial nations. Contrastingly to the discourses of the EBSP and the UNOLF, the discourses of the respondents did show to be in alignment with Freire's ecopedagogy. From the respondents' discourses, it became evident that their conceptualisation of nature was very different to that of the EBSP and

the UNOLF. While the EBSP and UNOLF upheld a disconnected, extractivist relationship with nature, prioritising human-wellbeing and economic growth, the respondents' approach was more relational and understanding of the interconnectedness. The respondents' relation with nature clearly showed to value the intrinsic worth of nature and practices a more non-human-exceptionalist way of interacting with nature, aligning with Freire's belief on the interconnected relation amongst Earth's species.

Moreover, ecopedagogy recognises the colonially imposed epistemic oppression by White epistemologies and acknowledges that for a liberation of education, marginalised epistemologies and knowledge practices must be recognised, essentially striving towards epistemic justice (Gupta et al., 2022; Freire, 1978; Fricker, 2007; Leibowitz, 2017; Vadiya, 2018; Weiner, 2014). As the findings showed, the EBSP and UNOLF are primarily drawing on, and educating through Western-centric, White epistemologies. Almost no input or recognition of non-Western epistemologies was evident in the curriculum of the EBSP and UNOLF, clearly showing its homogenising effort in creating education, further marginalising learners who are not represented by these epistemologies. Therefore, the EBSP and the UNOLF prove Freire's (1978) understanding of the Western-centric epistemic dominance in education. Contrasting to the EBSP and UNOLF, and aligning with ecopedagogy theory, are the discourses of the respondents from post-Dutch-colonial nations. The findings showed that the respondents are a clear testimony to the need for empowerment of marginalised epistemologies, further showing that these are in fact largely contrasting to the Western-centric epistemologies. Therefore, it is paramount to acknowledge the non-Western epistemologies in the development of Ocean education to demarginalize and empower epistemically oppressed individuals and communities, in shaping education that is not solely based on economic growth, resource sustainability, and human-exceptionalism.

Furthermore, comparing the findings to the theory of Ocean Literacy, the findings provided a testimony to the general conception that Ocean Literacy is a product of Western epistemologies, which was suggested by Catala (2015), Kotzee (2013), MacNeil (2021), and Worm et al. (2021), as became evident from the baseline study of the EBSP and the UNOLF. Comparing the baseline study's findings with the discourses of the respondents from post-Dutch-colonial nations, proves Worm et al.'s (2021) understanding of the difficulty in translating Western-centric Ocean Literacy to different cultures. An homogenised, Western-centric understanding of Ocean Literacy, as inherent to the EBSP and UNOLF, essentially denies the existence of cultural- and epistemological diversity necessary to realise appropriate Ocean education for different individuals and communities. This therefore acknowledges the Western-centric problematic assumption of universal Ocean educational models for a global community, which perpetuates epistemic oppression within contemporary global Ocean Literacy.

On a different note, Clapp and Dauvergne's (2011) environmental worldview theory was used to provide structure to the findings of this research. In alignment with Dobson's (1996) conceptions of environmental sustainability, the findings showed that the inherent market liberal worldview orientation of the EBSP, and the inherent institutionalist worldview orientation of the UNOLF, supported weak sustainability approaches for understanding and acting towards the contemporary environmental crisis. Furthermore, drawing on the same theories, the respondents' discourse showed to be more difficult to align with an environmental worldview conception, as

this discourses showed to align with both bioenvironmentalist and social green orientations. As Clapp and Dauvergne already recognised, the different categories presented in their theory on environmental worldviews are not ideal and are in reality often flued between each other. This understanding became evident in the findings as a merging of the bioenvironmentalist- and social green worldview showed to have a better practical implication for understanding the respondents' discourse worldview orientation. However, despite the fluid interpretation of the bioenvironmentalist- and social green orientation, the ellaboration on this theory by Dobson (1996) showed that, contrastingly to the EBSP and UNOLF, the respondents' discourse supported approaches of stronger sustainability for understanding and acting towards the contemporary environmental crisis.

Lastly, in the operationalisation of environmental justice through Fricker's (2007) conceptualisation of epistemic justice, as presented in Gupta et al. (2022), was expanded upon by Schlosberg's (2004) conceptualisation of environmental justice, to provide a clearer practical approach to understanding the implication of epistemic justice. Schlosberg's (2004) conceptualisation of environmental justice provided clearer insight into the underlying justice issues inherent to epistemic justice, by providing distributional-, recognitional- and procedural justice dimensions. However, after the analysis of the data, the implications for distributional- and procedural (in)justice were not significantly evident. Therefore, in reporting the findings of this research, the analysis of distributional- and procedural (in)justice was left out, as recognitional justice provided ampel opportunity to support the argumentation for the implications of epistemic (in)justice.

6.0 Conclusion and recommendations

This thesis aimed to answer the question: *What might a decolonial Ocean Literacy look like for a Dutch environmentally just Ocean ecopedagogy?* In conclusion, Western-centric Ocean education has shown itself to uphold a human-exceptionalist image which allows the domination of nature, for the pursuit of economic gain and human-wellbeing. In its track, Western-centric Ocean education perpetuates a colonial legacy that thrives on the exploitation of nature and marginalised communities, completely neglecting any form of responsibility for the global implications of injustice. The Western educational models are locked in a foundation of ignorance that sustains the hypocritical image of Western epistemological superiority, which continues to deny non-Western epistemologies the recognition needed to challenge the colonial legacy inherent to society and education. Therefore, the uncritically adaptation of Western-centric Ocean Literacy agendas studied in this research, to a Dutch context, would further perpetuate the oppressive and exploitative legacy of colonialism. Such adaptation would be a catastrophic addition to the Dutch curriculum in which the colonial legacy is already largely represented and unchallenged. Therefore, to answer the question of what might a decolonial Ocean Literacy look like for a Dutch environmentally just Ocean ecopedagogy, this conclusion builds upon four recommendations.

First, this thesis recommends a further review of the existing Dutch Ocean Literacy, to critically challenge the epistemological base on which education has been built. It is critical to understand the existing power structures and practices of epistemic oppression, subordination, and prejudice in the development of Dutch Ocean Literacy, to challenge the inherent ignorance and marginalisation spread throughout the Dutch educational system.

Second, it is therefore paramount to prioritise the recognition of different, challenging, non-Western-centric epistemologies in the Dutch educational agenda, to strive towards epistemic justice. It is essential to strive towards a knowledge ecology that acknowledges the value and plurality of different ways of being and understanding the Ocean. Dutch education must therefore empower the voices oppressed during the colonial history, in order for young Dutch learners to be confronted with the true history of the Netherlands' colonial campaign, so that they understand the contemporary delusional belief of Dutch moral and intellectual superiority. Therefore, this research recommends reaching out to people marginalised under the Dutch colonial legacy and to start the conversation on the implications of coloniality, and how the Dutch society and educational agenda can work towards correcting the perpetuated historic injustices.

Third, this research concludes that an environmentally just ecopedagogy for Dutch Ocean education must draw on the epistemologies of post-Dutch-colonial people, to shape a truly sustainable way of interacting with nature. The currently preached approach to interacting with nature has disconnected Dutch people from the Ocean, essentially teaching young Dutch people that the Ocean should function primarily as a provider of economic value in support of human-wellbeing. Therefore, to achieve a true ecopedagogy that prioritises sustaining life, for Dutch Ocean education, young Dutch people must learn to engage with nature in different ways than those prioritising economic utility. It is essential for a Dutch ecopedagogy to appreciate the beauty and achieve a balanced relationship with the Ocean that values its intrinsic worth. Therefore, this research recommends an overhaul of the Dutch educational system of experiencing nature.

Dutch education should strive to appreciate the Ocean environment local the Netherlands, to foster the ecosystems' life and beauty. A Dutch ecopedagogy must thus aim to allow young Dutch people to connect with nature in their own way, which allows them to create a personal relation with the Ocean, instead of an imposition of desired behaviour in servitude of the Dutch economy.

Fourth, and above all, this research recommends a full stop of the expansion of the Western-centric Ocean Literacy, inherent to European Blue School Project and UN Ocean Literacy Framework's curricula, in Dutch Ocean education, until it's content has proven to empower a true knowledge ecology that can abolish colonialism. It has been long overdue, but Dutch education must carry its responsibility to ensure environmentally just education, that strays away from idolising the economy as a misbelieved sanctity to human survival. It is paramount that Dutch Ocean education strives towards sustaining a habitable Ocean for the survival of all life. Time is running out, the Ocean is degrading fast, we must open our Blue Hearts to connect, respect, and protect, because we know: life cannot exist without a healthy Ocean.

7.0 Reflection

In the process of conducting the necessary research for the completion of this Master Thesis, together with putting everything down on paper, I was confronted with my personal shortcomings, experiences, and biases many times. Yet, this process has opened my eyes to the extent of colonialism, inherent to Western-centric education, which showed me a side of Dutch society and education that was quite shocking. I must acknowledge that writing this thesis, arguing for decolonising Dutch education, was difficult from my personal perspective as a White individual from the Dutch mainland. I have for instance been limitedly educated on the negative effects of the colonial legacy as a young learner. It was not until later, during my time at university that I discovered the full extent of the colonial atrocities and historic blindness of Dutch society towards our colonial past in our educational system – or so I thought.

During the analysis of the Western-centric educational documents of the EBSP and the UNOLF, the use of a decolonial critical discourse analysis showed me how deeply rooted the colonial implications are in contemporary education for the Ocean. I was shocked to find out how before, I never really paid attention to these perpetuations of the colonial legacy, yet this approach has granted me many valuable insights in seeing through the bigger picture, allowing me to recognise the inherent oppression. Since the start of my thesis, I have noticed that I have become more critical to my personal practices of educating the young Dutch generation as a high school geography teacher. I find myself continuously correcting, adjusting, and contributing to the material used in my work, which further worried me about the extent of the colonial legacy in the Dutch curriculum.

Furthermore, the most valuable experience for me during the research process, was the opportunity to interview wonderful people from post-Dutch-colonial nations. The way these people talk about their relationship with the Ocean and their perception on coloniality and oppression moved me and helped me understand that there are so many different epistemologies out there, from which one can learn. Their perspectives were a refreshing alternative to the educational model that is perceived as so natural in the Netherlands. Yet, here, I must also recognise the limitations of my research. I must recognise that I too am essentially shaped by the educational and societal structure of the Dutch mainland, which for most of my life I deemed natural and quite frankly, just fine. I have personally never experienced any kind of colonial oppression that limited me in my chances, opportunities, or ordinary life. And therefore, I recognise that I will never be fully capable of experiencing or feeling what the respondents experience daily. It must thus be stated that, despite endless reflection and my awareness of me being a White, Dutch mainland individual, I will never be able to express an experience the impact of coloniality and oppression, as eloquently as the respondent could have.

I recognise that I too am influenced by my personal worldview and subjectivity, yet I tried hard to present the decolonial perspective as accurately as I could. Through this thesis I aimed to become an ally in the struggle for empowerment of marginalised people and communities, oppressed under Dutch colonial rule. This thesis allowed me to see the historical systemic injustice inherent to Dutch society. It required rigorous self-reflection to allow myself to understand and recognise my personal subjectivity, so that I did not get in the way of the respondents in telling their stories and expressing their emotions and experiences. Through active listening and providing room for

the respondents to engage in storytelling, a world has opened for me in which I as a Dutch person am confronted by the society I live in. However, this thesis has taught me the value of, as Gumbs (2021) puts it, identifying with the struggle instead of aiming to identifying the essence of the struggle. My engagement with this practice, through constant reflection and sensitive listening, has allowed me to expand my empathy with the injustices perpetuated in Dutch society and education, and encouraged me to aid empowering the voices marginalised by dedicating this thesis to them.

To illustrate my pursuit of self-reflection in the struggle with personal subjectivity, I would like to draw on two examples by which I was confronted during this process. First, after the conduction and analysis of the interviews, it was time to start communicating the thesis. After having handed in my first draft, my supervisor asked me why I referred to the respondents as ‘respondents from former Dutch colonies’. In all honesty, this question did not make sense to me, yet, after giving it some more thought, the problem started to dawn on me. By referring to the respondents as ‘respondents from former colonies’, the use of ‘former’ would indicate that the colonial rule has ended. Yet, for the respondents of the Caribbean, their nation is still part of the Kingdom of the Netherlands, which essentially still is an overseas territory; in other words, a modern form of coloniality. Furthermore, implying the end of colonialism by using ‘former’, would be widely inaccurate, because as this thesis shows, the colonial legacy is still very evident and oppressive in contemporary society. Therefore, I reflected on my actions – acknowledging my personal limitations in lacking the capacity to fully understand the implications of colonialism in doing research – and started referring to the respondents as ‘respondents from post-Dutch-colonial nations’. Here, I started to use the term post-colonialism integrated with the specification of the Dutch colonial legacy to refer to respondents. I drew on Young’s (2016) conceptualisation of post-colonialism as this concept acknowledges that despite the end of historical, formal Dutch colonial rule, there is still an enduring impact of colonisation on colonised countries, people, and communities. I therefore sought to overcome my personal limitation by integrating the specification of Dutch colonial history with post-colonialism, to critique the perpetuated legacy of colonialism on contemporary individuals from post-Dutch-colonial nations.

Second, I recognised the need for continuous reflection to overcome my personal limitations in conducting this research. In this thesis’s methodology, I drew on Smith’s (2008) work on decolonial methodologies. What I found very important in her message was the necessity of recognising the respondents as a participant in research, instead of a subject to be studied. Yet, while I set out with this in mind while conducting the interviews, during the analysis and writing process, the respondents’ humanity started to increasingly slip away. I needed to constantly remind myself that these were actual persons, actual stories I listened to. They did not lose their humanity because I intentionally dehumanised them, they lost their humanity because I was so engaged with what needed to be on paper, instead of realising that I was expressing the stories they lived each day, which is much more valuable. Therefore, I had to reiterate my findings multiple times to express their stories as adequately and justly as possible. I must however once more recognise the limitation in my ability to precisely communicate an experience that what I have not lived myself, but I can assure you, the reader, that through rigorous reflection, I have tried to do justice to the people I interviewed as much as I could.

Lastly, I must recognise another limitation of this research. I acknowledge that there are other Western-centric educational documents for Ocean Literacy available, instead of the EBSF and the UNOLP, that could have been used to assert a colonial baseline for this research. The absence of these other potential documents in this thesis, could have provided different aspects of colonialism inherent to education that were absent in the documents studied for this research. Furthermore, in approaching the respondents, I recognise that I drew upon the network of Wavemakers United, which included respondents from Indonesia, South-Africa, and the Caribbean, but simultaneously excluded other post-Dutch-colonial nations, such as Suriname, Guyana, Venezuela, Angola, Ivory Coast, Senegal, Tanzania, Sri-Lanka, or Taiwan. Moreover, for this research, only nine respondents were interviewed. This means that, combined with the exclusion of people from post-Dutch-colonial nations not approached for this research, there remains a large and diverse world of different epistemologies which have not been included in this research. Therefore, I must recognise that there is still a lot to learn that would allow us to challenge the colonial legacy and foster the true realisation of a knowledge ecology.

8.0 References

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