

**MASTER'S THESIS**  
**Master`s Programme in**  
**International Education and Development**  
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From International Plans to National Practice:  
How are Issues of Inequality Addressed in Education for Sustainable  
Development in Teacher Training?

*A Case study research on how issues of inequality are addressed through Education for  
Sustainable Development in teacher training in Botswana, Namibia, and Zimbabwe*

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## **Abstract**

Sustainable Development Goal (SDG) 4.7 on Education for Sustainable Development (ESD) is an international goal, which needs to be implemented nationally to be achieved. By using theories on globalization and coloniality, as well as transformative learning, this case study research investigates how ESD is being understood in the national context of Botswana, Namibia, and Zimbabwe. The focus is on the social justice dimension of sustainable development, SDG 10: Reduce inequality, and how this is addressed in ESD in teacher training in the three countries. The research focuses on teacher educators who are participating in the Advanced Regional Training Programme (ARTP) in ESD, a cross-national project in Southern Africa. Based on the findings, there is a need to decolonize ESD and the global structures that promote sustainable development. The tug of war between the different dimensions in sustainable development, as well as between ESD, GCED, and EE, must also be addressed in order to steer away from silo thinking and towards holistic approaches in education. In the context of Southern Africa, findings show that there is no division between ESD, EE and GCED. UNESCO, on the other hand, has until recently treated GCED and ESD as two educational disciplines, however, connected. The political dimension, a fourth dimension of sustainable development, applied in Southern Africa, may be a way to include GCED with ESD. It may also be a means to address structural inequality and contribute to decolonialization, which is needed for the transformation to sustainability.

**Keywords:** Education for Sustainable Development (ESD), Global Citizenship Education (GCED), Environmental Education (EE), Inequality, Coloniality/decoloniality, Teacher training, Southern Africa, Transformative learning, System approach.

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## List of Acronyms

AU	African Union
ARTP	Advanced Regional Training Programme
CP	Change Project
EE	Environmental Education
EEASA	Environmental Education Association of Southern Africa
ESD	Education for Sustainable Development
HRE	Human Rights Education
GAP	Global Action Programme
GCED	Global Citizenship Education
SADC	Southern African Development Community
SD	Sustainable Development
SDG	Sustainable Development Goal
SST	Sustainability Starts with Teachers
SWEDES	Swedish International Centre of Education for Sustainable Development
T-learning	Transformative and Transgressive learning
TEI	Teacher Education Institution
TVET	Technical and Vocational Education and Training
UDHR	Universal Declaration of Human Rights
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization

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## 1. Introduction

Every literate person passes through the guidance of a teacher; therefore teacher education can enormously contribute to the achievement of sustainable development goals specifically SDG4. (Silo & Ketlhoilwe, 2020, p. 220).

Education for sustainable development (ESD) has for several years been a priority for the United Nations Educational, Scientific and Cultural Organization (UNESCO). 2005-2014 was the decade for ESD, where the aim was to “mobilize the educational resources of the world to help create a more sustainable future” (UNESCO, undated 1). This commitment was reinforced by the Sustainable Development Goal (SDG) 4.7, which aims at being achieved by 2030.

We are now six years into the SDGs, and it is thus interesting to study how countries have implemented SDG 4.7. SDG 4.7 is an international goal but needs to be implemented nationally to be achieved. By using theories on globalization and coloniality, as well as transformative learning, this case study research investigates how ESD is being understood in the national context of Botswana, Namibia, and Zimbabwe. The focus is on the social justice dimension of sustainable development, SDG 10: Reduce inequality, and how this issue is addressed in ESD in teacher training in the three countries. The research focuses on teacher educators who are participating in the Advanced Regional Training Programme (ARTP) in ESD, a cross-national project in Southern Africa. The ARTP is a cooperation between SWEDESD at Uppsala University in Sweden, UNESCO offices, and African Regional Universities Association (SARUA) (SWEDESD, undated 1). The ARTP started in 2018 and is scheduled to run until 2022, and it is thus interesting to study the impact of the ARTP on issues of inequality in ESD in Botswana, Namibia, and Zimbabwe this far.

The research questions for this master’s thesis project are:

1. How is SDG 4.7, an international goal, followed up in Botswana, Namibia, and Zimbabwe, on policy level and through teacher training? What can the global community learn from them?
2. How are issues of inequality (SDG no. 10) addressed in ESD in teacher training in Botswana, Namibia, and Zimbabwe?

At a recent webinar by UNESCO, as part of an online series prior to the UNESCO World Conference on ESD in May 2021, there was a live poll asking, “What is the most urgent global challenge for ESD to address?” It was possible to tick out two suggested topics, and about 360 persons from across the world participated. The topic “Climate Change” got 65 %, whereas “Inequality and poverty” got 43 %. Other topics were “Green economies and sustainable consumption/production”, “Biodiversity”, “Health and resilient” and “Technology” (UNESCO, 2021). This recent poll shows that the environmental dimension of sustainable development is prioritized, but that inequality and poverty is also seen as important issues. One of the speakers, Zitouni Ould-Dada, deputy director at the Food and Agriculture Organization, commented that we should be careful with ranking issues if we are not also saying that they are interconnected. If one tries to fix climate change in isolation, we get problems elsewhere (ibid).

One of the hypotheses of this research is that ESD tends to emphasize the environmental dimension of sustainable development, thus giving less space to the socio-economic dimensions. This case study research addresses this possible gap by focusing on the social justice dimension of ESD and how issues connected to inequality (SDG 10) are addressed in teacher training, and which competencies are emphasised. If the world is going to achieve the SDGs, it is essential that we cooperate across countries and cultures. However, different types of inequality are still present today e.g., in terms of representation, wealth, and power. Thus, the need to address issues of inequality on global, regional, and local levels.

To support the implementation process, UNESCO has provided guidelines on how to implement ESD in the various nations across the world through several publications. This case study provides the opportunity to research the implementation of ESD in teacher training on various levels; through national policy documents (Botswana and Namibia), through the ARTP on ESD in teacher training and its documents, as well as through interviews with ARTP coordinators and teacher educators participating in the programme. The thesis is structured into seven chapters. Starting with a background chapter (2) and a literature review (3), before presenting the research approach and methodology (4), as well as the theoretical framework (5). Chapter 6 presents, analyses, and discusses findings from document analysis (6.1), data collection on teacher educators (6.2), the impact of the ARTP this far (6.3), and what we may learn from these three countries and the ARTP (6.4). Finally, the conclusion, with the main findings of this case study research (7).



## 2. Background

This background chapter starts by a brief presentation of SDG 4.7 (2.1), before presenting the ARTP, the programme which all the teacher training educators participating in this research are part of (2.2). Finally, some background information about the three countries in Southern Africa in this research study: Botswana, Namibia, and Zimbabwe (2.3).

### 2.1. Sustainable Development Goal 4.7

SDG 4.7: By 2030 ensure all learners acquire knowledge and skills needed to promote sustainable development, including among others through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development (UNESCO, 2017).

Indicators for SDG 4.7.1: The extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment. (UNESCO Institute of Statistics, 2017)

Students across the world go to school to learn, and acquire competencies, which are useful in life, particularly the working life. SDG 4.7 is thus highly relevant in any educational contexts, as it aims at providing competencies that are relevant in societies where democracy and active citizenship is valued. Education for Sustainable Development (ESD), which is included in SDG 4.7, also contribute to quality education as

it provides a critique of the philosophical proposition that the primary goal of education is knowledge transmission and, instead, asserts that education must provide each generation with the capacities and skills to improve on the work of previous generations and overcome the most pressing challenges of their time. (Didham & Ofei-Manu, 2018, p. 88).

Didham & Ofei-Manu (2018) further argues that “this quality ESD perspective has challenged educational policy-makers, school administrators and teachers to reconsider the nature and objectives of education for the betterment of children and youth” (ibid).

SDG 4.7 encompasses many approaches and elements and there are debates on how to interpret this goal, including the different educational disciplines in the goal, such as ESD, which will be discussed in this thesis. SDG 4.7 is often referred to as ESD, as is the case of the ARTP. Thus, in this thesis, the main reference is to ESD. However, the overall

understanding of SDG 4.7 in this thesis, is as the nexus of ESD and Global Citizenship Education (GCED), as GCED is highly relevant in terms of addressing issues of inequality. As for the indicators of SDG 4.7.1, the focus of this research is on a) national education policies, and c) teacher education.

UNESCO (2015) defines global citizenship as “a sense of belonging to a broader community and common humanity. It emphasises political, economic, social and cultural interdependency and interconnectedness between the local, the national and the global.” (p. 14). As with ESD, GCED is concerned that education must emphasize how we are connected across national borders as we share the same earth. Whereas the interconnectedness is focusing on societal matters in GCED, these are also relevant in ESD, but perhaps more so our negative impact on the environment and the climate.

This brings us to another relevant educational discipline, namely Environmental Education (EE), which emerged prior to ESD, and which ESD builds on. According to Hume & Barry (2015) “EE in its current form emerged in the mid to late 1960s as a response to environmental problems caused through processes of modernity such as industrialization, consumerism, and urbanization.” (p.733). In addition to learning about the biophysical environment, the focus was also on motivation to solve environmental problems. The first journals on EE came in the late 60s, and the first Southern Africa Journal for Environmental Education (SAJEE) was published in 1984. SAJEE is published by Environmental Education Association of Southern Africa (EEASA), established in 1982. Hence, there has been an active engagement for EE in the Southern Africa region for many decades. EEASA writes on their webpage that the association

has always taken a broad view of the environment and environmental processes: these are socio-ecological, socio-political, socio-economic, and at the heart of it there is the need to protect the integrity and viability of the ecological systems. This broader view of environment resonates with the principles of Education for Sustainable Development (ESD). (EEASA, undated).

I include this statement, as it is relevant for the analysis of the data collection from Botswana, Namibia, and Zimbabwe, all countries in Southern Africa. I will return to discussions on interpretations of ESD both in the literature review, chapter 3, and in the analysis, chapter 6.

Going back to GCED, it is grounded on UNESCO's own Constitution, which "aims to build peace in the minds of men and women" and is based on the Universal Declaration of Human Rights (UDHR) and the Education 2030 Agenda and Framework for Action (SDG 4.7), as well as other policies (UNESCO, undated 2). Andreotti (2010) argues that GCED

should equip people to live together in collaborative, but un-coercive ways, in contemporary societies. This requires an acknowledgement that contemporary societies are complex, diverse, changing, uncertain and deeply unequal. (...) the role of global citizenship education is one of decolonization: to provide analyses of how these inequalities came to exist, and tools to negotiate a future that could be 'otherwise'. (p. 239).

Andreotti's argument can be related to that of Mutua (2008) in arguing that we need to challenge the 'established' world system. Thus, an important skill is to understand the cultures of the world as dynamic and not static. Andreotti (2010) argues, in terms of GCED, that learning to unlearn is an important skill, where students learn that what "we consider 'good and ideal' is only one perspective and this perspective is related to where we come from socially, historically and culturally." (p. 246). These perspectives are especially relevant when studying how issues of inequality are addressed in ESD in teacher training in the context of Southern Africa, a region where countries were colonised.

In terms of knowledge and skills, UNESCO (2017) has made a publication on learning objectives for ESD where they advocate for eight competencies that students should acquire through ESD. These competencies are as follows: Systems thinking, anticipatory, normative, strategic, collaboration, critical thinking, self-awareness and integrated problem-solving (p. 10, see figure 1). Most of these competencies are important not only for sustainable development (SD), but also to be an active citizen in a democratic system. What we must keep in mind is that these competencies cannot just be taught in theory, "(...), but have to be developed by the learners themselves. They are acquired during action, on the basis of experience and reflection." (ibid).

Teachers are central in the implementation of SDG 4.7 nationally and must follow the national educational policies. At the same time, teachers may also shape the learning processes according to their own preferences and competencies, within the curricula framework. Thus, this research has aimed at studying how teacher educators address ESD. In

chapter 6, national policy plans (Botswana and Namibia) will be analysed, as well as what the teacher educators from Botswana, Namibia, and Zimbabwe, interviewed in this study, say about which competencies that needs to be emphasised to respond to inequalities.

## 2.2. The Advanced Regional Training Programme

This research has collected data from teacher educators, who are part of the Advanced Regional Training Programme (ARTP) in ESD, a cross-national project in Southern Africa together with SWEDES at Uppsala University in Sweden. The partners are the ESD Division of UNESCO, Paris; UNESCO Regional Office for Southern Africa (ROSA Rhodes University); the Southern African Regional Universities Association (SARUA) and SWEDES. The project is funded by The Swedish International Development Cooperation Agency (SIDA) (SWEDES, undated 1). The ARTP started in 2018 and is scheduled to run until 2022. The programme has its own website:

<https://sustainabilityteachers.org/>. The programme is rolled out in phases, with three Southern African countries joining at a time. In total 11 countries will join. The first three countries who joined in 2019 were Botswana, Namibia, and Zimbabwe, which are the countries this research focuses on. The participants are teachers from both Teacher Education Institutions (TEIs) and Technical and Vocational Education and Training (TVET) Colleges.

### Box 1.1. Key competencies for sustainability

**Systems thinking competency:** the abilities to recognize and understand relationships; to analyse complex systems; to think of how systems are embedded within different domains and different scales; and to deal with uncertainty.

**Anticipatory competency:** the abilities to understand and evaluate multiple futures – possible, probable and desirable; to create one’s own visions for the future; to apply the precautionary principle; to assess the consequences of actions; and to deal with risks and changes.

**Normative competency:** the abilities to understand and reflect on the norms and values that underlie one’s actions; and to negotiate sustainability values, principles, goals, and targets, in a context of conflicts of interests and trade-offs, uncertain knowledge and contradictions.

**Strategic competency:** the abilities to collectively develop and implement innovative actions that further sustainability at the local level and further afield.

**Collaboration competency:** the abilities to learn from others; to understand and respect the needs, perspectives and actions of others (empathy); to understand, relate to and be sensitive to others (empathic leadership); to deal with conflicts in a group; and to facilitate collaborative and participatory problem solving.

**Critical thinking competency:** the ability to question norms, practices and opinions; to reflect on own one’s values, perceptions and actions; and to take a position in the sustainability discourse.

**Self-awareness competency:** the ability to reflect on one’s own role in the local community and (global) society; to continually evaluate and further motivate one’s actions; and to deal with one’s feelings and desires.

**Integrated problem-solving competency:** the overarching ability to apply different problem-solving frameworks to complex sustainability problems and develop viable, inclusive and equitable solution options that promote sustainable development, integrating the above-mentioned competences.

**Figure 1:** The eight ESD competencies (UNESCO, 2017, p. 10)

30 teacher educators/TVET educators participate from the three countries, with the majority from Zimbabwe.

The aim of the ARTP is

to provide capacity building to support educators for the implementation of Target 4.7 of SDG 4, which requires educators to integrate Education for Sustainable Development into all areas of education. The project is focused on Southern Africa, which is one of the region's most at risk from climate change and the ongoing impacts of poverty (SWEDESD, undated 1).

The programme includes both in-country workshops as well as a two-week course called Sustainability Starts with Teachers (SST), held at Rhodes University in South Africa. The main driver of the programme is the Change Project, which each participant develops him/herself with supervision from coordinators and fellow participants, and carries out at his/her teaching institution. The choice of this structure for the ARTP builds on experiences from a flagship programme in 2015-2018 called "Sustainability Starts with Teachers", which was an ESD action learning programme for secondary teacher educators in Southern Africa (SWEDESD, undated 2). Thus, ESD in teacher training is not a new focus in the region. The ARTP aims at including participants with less knowledge of ESD in order to expand the network of teacher educators with high level of competencies in ESD, as a strategy to reach SDG 4.7.

In addition to the participants' Change Projects, the ARTP also focuses on policy dialogue:

UNESCO will work systematically with education and sustainable development government partners to ensure that the ESD activities of the network are aligned with national and regional aims for inclusive sustainable development, and that these are mainstreamed. Policy dialogues to advance ESD in teacher education will be held annually. ESD will also be integrated into teacher education professional standards and into curriculum revision processes where relevant." (SST, undated).

Because the national curricula and teachers' own knowledge and pedagogy impact what teacher students learn, it is interesting that the ARTP addresses both levels. The teachers interviewed for this research project have had training through the SST course, as well as participated in in-country workshops and meetings. Hence, it is likely that they have a higher level of knowledge of ESD than other teachers who have not had this training.

It is important to note that due to Covid-19 many of the participants have experienced that plans had to be changed regarding their Change Projects etc. However, for this research the main purpose has been to research how teacher educators address issues of inequalities in ESD, and not how well they have succeeded in their Change Projects.

### 2.3. Botswana, Namibia, and Zimbabwe

Botswana, Namibia, and Zimbabwe are neighbouring countries in Southern Africa, connected by the Zambezi river. Whereas Botswana and Namibia are small countries, in terms of their population, with about 2,2 million and 2,5 million respectively, Zimbabwe has about 14,4 million people (The World Bank, 2018).

This research project studies how issues of inequality are addressed in ESD, and it is thus relevant to include some statistical data on this topic. All three countries are rich in terms of natural resources such as diamonds, minerals, agriculture, as well as fisheries in Namibia. However, according to The World Bank (undated), the Gini index of inequality shows that it is 53.3% in Botswana (2015), 59,1 % in Namibia (2015) and 44,3 % in Zimbabwe (2017). Based on these numbers, Namibia, and Botswana rank within the five countries in the world that are most unequal in terms of income distribution. Zimbabwe is further down the list, but also relatively high. The data is some years old, however, all three countries still face challenges when it comes to inequality of income and wealth distribution.

The UN Human Development Index from 2019, measuring life expectancy, education, and income per capita, ranks Botswana as number 94, Namibia as number 130 and Zimbabwe as number 150 (UNDP, 2019). The lower the number, the higher human development, which means the three countries are in the upper and lower middle section of the countries in the world. The World Bank (2020) writes about Namibia that “political stability and sound economic management have helped anchor poverty reduction. However, this has not yet been translated into job creation, and extreme socio-economic inequalities inherited from the years it was run under an apartheid system persist, despite generous public spending on social programs.” Namibia became a German colony in 1884, but as a result of the Second World War, Namibia became occupied by South Africa in 1949. Being under the South African apartheid government, Namibia only got its independence in 1990, thirty years ago. And as The World Bank writes, this still impacts Namibia today. As with Namibia, Botswana and

Zimbabwe were also under European control during the colonial era: Botswana as a British protectorate until 1966, and Zimbabwe, formerly Rhodesia after the British colonialist Cecil Rhodes, got its independence from Britain in 1980 after nearly hundred years as a colony. As I will return to in chapter 5.3, theories of coloniality are relevant when studying how issues of inequality are addressed in ESD. When trying to change the present into a more sustainable future, the history must also be included, as current systems may still carry the inheritance from the past.

In terms of educational systems, all three countries have seven years of compulsory primary education (SAAEA, 2014). Botswana has adopted a 10-year basic education policy, which is free. Primary education is also free in Namibia, but not in Zimbabwe (ibid). According to the World Bank the net enrolment was 94 percent in Zimbabwe (2013), 88 percent in Botswana (2014) and 97 percent in Namibia (2018). When it comes to net enrolment for secondary education the percentage varies between 49-60, but here some of the data is old, going back to 2003 (ibid).

Regarding the SDGS, Botswana published a voluntary report to UNESCO in 2017. Botswana has also published a plan for the implementation of SDG 4 (UNESCO, 2018a). Namibia and Zimbabwe are expected to publish their voluntary reports on the SDGs in 2021 (UN, undated 1). Namibia has also published a policy document on the implementation of EE and ESD (Namibia Ministry of Environment, Forestry and Tourism, 2020), which will be analysed in chapter 6.1 together with Botswana's implementation plan of SDG 4.

### 3. Literature review

The literature review will address key issues related to ESD and GCED (3.1), including literature on ESD in teacher training (3.2), as well as a brief presentation of relevant articles on ESD by participants in the ARTP in Southern Africa (3.3). Finally, relevant research on the issue of inequality (SDG 10) will be discussed (3.4), as it is the specific topic of this research.

#### 3.1. Literature on ESD and GCED

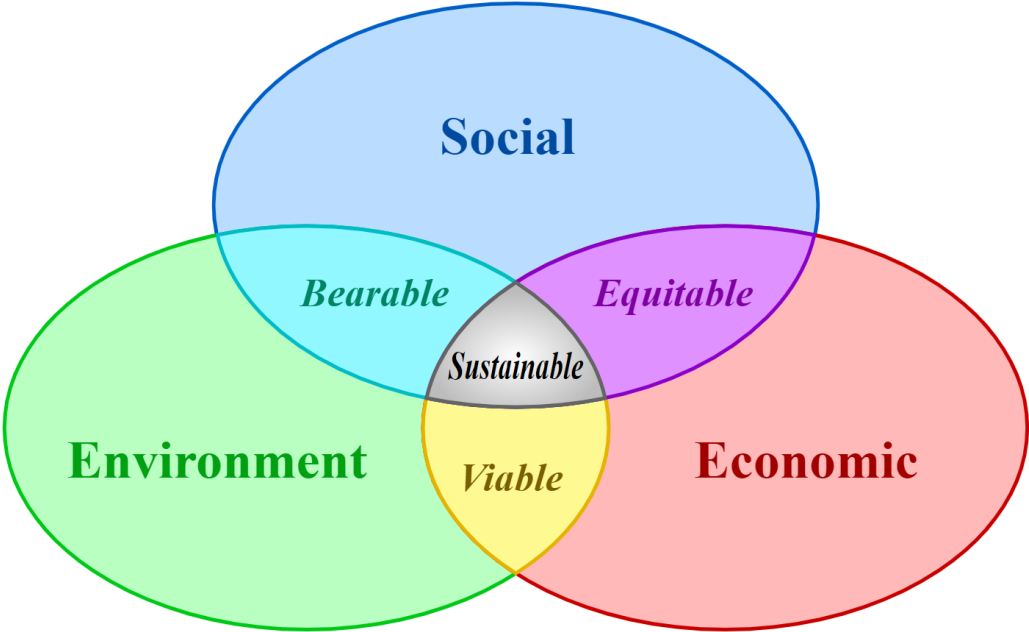
Although Sustainable Development Goal (SDG) 4.7 is a recent target, ESD has for many years been advocated by the UN. Since the 1960s there was a focus on Environmental Education (EE), however the Brundtland's report in 1987 "Our common future", catalysed a shift towards ESD combining the environmental and developmental side of sustainability (Hume & Barry, 2015, p. 734). A brief overview of the literature and debates on EE and ESD is given by Hume and Barry in their article from 2015. There are many issues about ESD that can be raised, however, in this review I have prioritized the most relevant discussions for my project. There are four sets of research literature that I will review regarding ESD, including GCED: Interpretations of sustainable development and its three dimensions: economy, society and environment (3.1.1); Whether the emphasis in ESD should be education *about, for, in, as* or *from* sustainable development (3.1.2); and discussions on *individual* or *system* approach to ESD, seen in relation to discussions of which paradigm ESD operates within (3.1.3).

##### 3.1.1 Interpretations of the concept sustainable development

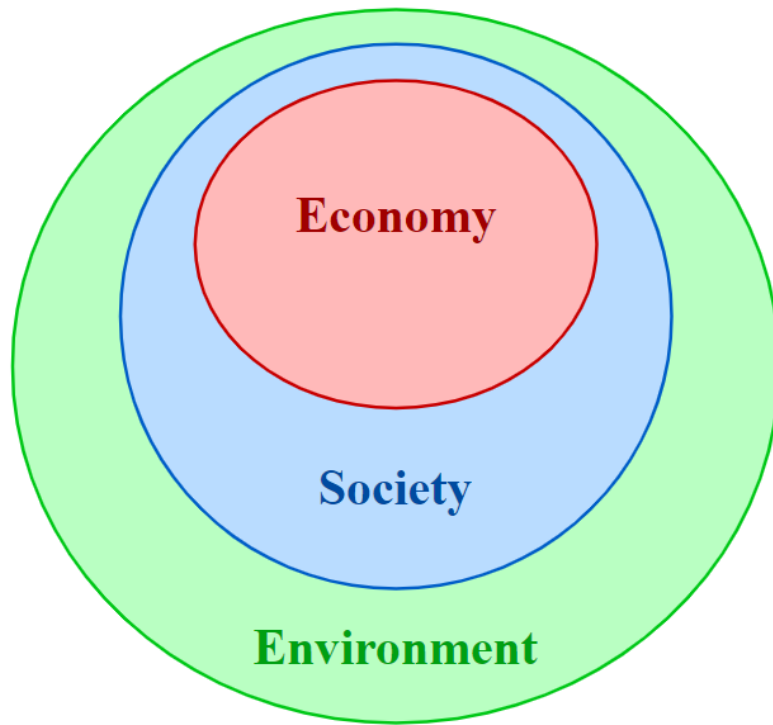
Sustainable development (SD) is a highly interdisciplinary and holistic concept, which aims at representing the world in its complexity. Hence, the need to include the three dimensions: Society, environment, and economy. The concept of sustainable development is much contested (Hume & Barry, 2015). A recent critique by Pirbhai-Illich & Martin (2019) shows how UN/UNESCO's presentation of SD and ESD represent an "a-cultural view that assumes universal applicability across all nations and thus evades the notion that different cultures will have different interpretations of the relationship between society, economy and environment" (p. 22). They argue that this representation of the universality of SD must be questioned and that this is a representation of coloniality. I will return to discussions on coloniality in chapter 3.1.3.



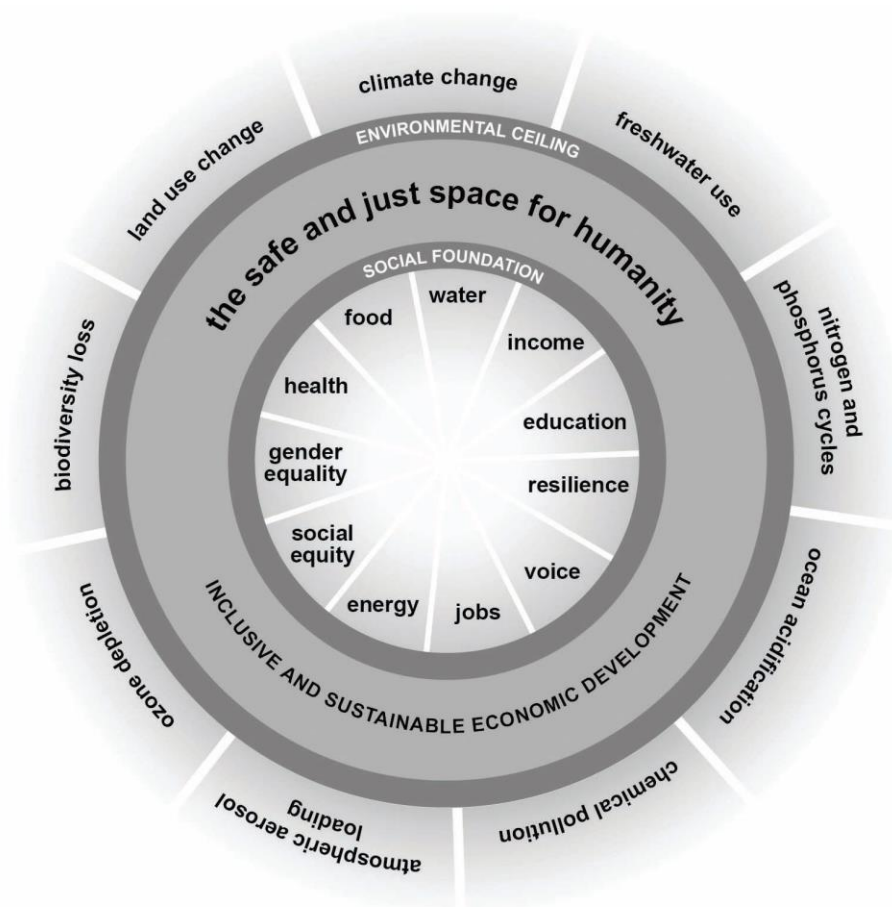
Another issue regarding the three dimensions of SD is how to interpret their relations. The perhaps most known illustration of SD is the three dimensions drawn as three circles that are connected to one another in a triangular shape, and thus indicates that they are regarded as equal components (see figure 2). The main discussion has been on the relationship between economic growth and environmental sustainability, and the terms “weak” and “strong” sustainability has been used to describe two opposing views (Neumayer, 2003). Within this framework, the model in figure 2 has been described as “weak” because it attempts to integrate a sustainable environment with economic growth (Pelenc, J., 2015). A “strong” sustainability interpretation and model is shown in figure 3. This model shows that it is the environment that sets the limits for the society and economy – if we do not have a liveable planet, we cannot have a functional society and economy (ibid). Another model that may be considered as “strong” is Raworth’s (2017) *Doughnut of social and planetary boundaries*. Raworth is critical of the present economic system and argues that we need the Doughnut model, which puts humanity at its centre. She argues that “extreme inequality, as it turns out, is not an economic law or necessity: it is a design failure. Twenty-first-century economists recognise that there are many ways to design economies to be far more distributive of value among those who help to generate it.” (p. 222). As Raworth argues, there is a need to go more in depth regarding the social justice dimension in SD, which this research has aimed at contributing to.



**Figure 2:** Three interlinked dimensions of sustainable development (Wikimedia Commons, 2006).



**Figure 3:** Model of “strong” sustainability (Wikipedia, 2020).



**Figure 4:** The Doughnut for social and planetary boundaries (Raworth, 2017).

### 3.1.2. Education *about, in, for, as or from* sustainable development

Moving to how to teach ESD, we find many options of interpretation. Should it be education *about, in, for, as or from* sustainable development? Sinnes (2015) gives a brief overview of the four first approaches in her guidebook to ESD. Students can learn theory *about* SD, which may be taught *in* the environment outside the school's building (p. 51). Further, students may practice skills *for* SD, including competencies such as creativity, critical thinking, systems thinking, and collaboration, to mention a few of the eight competencies in ESD listed by UNESCO (2017). Sinnes (2015) argues that education *for* SD is also teaching which enables students to act towards a more SD. (p. 51), which has an emphasis on the individual's capacity to act. Education *as* sustainable development emphasises how education may be carried out in a sustainable way, through actions and activities that promotes sustainability. Education *as* SD should also develop competencies, which are relevant for students to be active participants in a democracy (ibid).

Before moving to the approach of education *from* SD, it is important to note that education is not value neutral and the role of education in development has been widely discussed (see e.g. Nussbaum, 2010). The dominant ideological development has for many decades been economic growth, and the capitalist, neoliberal model has had a huge impact on nations' development across the world (see e.g., Eriksen, 2016). Neoliberalism has also affected educational systems, both ownership of schools as well as how students are being tested for their knowledge (Klees, 2008; OECD 2010). The first sentence in the foreword of the PISA report of 2009 states exactly this: "One of the ultimate goals of policy makers is to enable citizens to take advantage of a globalised world economy" (OECD, 2010, p. 3). Hence, the main aim of education should be to increase human capital and PISA has been testing this through mainly focusing on reading skills, as well as skills in mathematics and science (p.17). The ESD approach can thus be understood as yet another way of seeing education as an instrument for a specific cause (Van Poeck, & Vandenabeele 2012). However, with its critique to the single story of what the goal of development should be (economic growth), ESD expresses a need for more critical thinking, cross-disciplinary learning, and as I argue also unlearning, which I will return to in chapter 3.1.3.

The final approach to ESD presented here, is education *from* SD. Van Poek & Vandenabeele (2012) argues that "Learning *from* sustainable development shifts the focus from the competences that citizens must acquire to the democratic nature of educational spaces and

practices” (p.13). This, they argue, is an alternative approach to ESD which acknowledges “the plurality of voices and the controversy surrounding many sustainability issues without resorting to an ‘anything goes’ relativism.” (ibid). These different approaches to ESD are relevant when studying the social justice dimension of SD. Is ESD mainly being taught as a prescription for how students ought to think and act (see e.g., Sund & Lysgaard, 2013), or does it invite critical discussions around why the world is as it is and the possibility to explore what the alternatives might be?

### 3.1.3 Paradigms and ESD

Thirdly, I will bring in some key arguments of the discussions on individual versus system approach to ESD, seen in relation to discussions of which paradigms ESD operates within. According to Hume & Barry (2015) it was identified in the 1990s that ESD operates within positivist, interpretivist, and critical paradigms (735). More recently, poststructuralism and multi-voice have had increased influence on education (ibid). Hume & Barry further list three approaches to ESD; instrumental ESD, intrinsic ESD and the third approach, which may be called transformative ESD (p. 736-737). The instrumental ESD is based on a behaviouristic and outcome-based approach, and intrinsic ESD is based on critical thinking and the process of learning (ibid). Both these approaches have an individualistic approach, where students are taught that they, as individuals (or groups) are part of the solution for a more SD.

The third, and more critical approach, transformative ESD, may also “be seen as an education in citizenship” (ibid). It is thus relevant to include some key aspects of Global Citizenship Education (GCED), which is interrelated with ESD. As referred to in chapter 2, Andreotti (2010) argues that the role of GCED is decolonization (p. 239). Coloniality may be defined as the legacy of colonialism and how it seeks to control the lands, body, and mind of ‘the Other’ (Pirbhai-Illich & Martin, 2019, p. 20). There is a wide literature on coloniality and decoloniality, especially from scholars of the global South, the former colonies, which dates to the times of struggles for independence (see e.g., Thiong’o, 1981). In a more recent article, Maldonado-Torres (2016) argues that coloniality still continues to manifest itself through e.g., “contemporary “development” policies, nation-state building practices, (...), the increasing concentration of resources in the hands of the few, the rampant expression of hate and social phobias, and liberal initiatives of inclusion” (p. 1). The manifestation of coloniality is also present in education, as Maldonado-Torres shows in his article, using examples from academia. Pirbhai-Illich & Martin (2019) analysed UN/UNESCO websites about ESD/GCED,

and their analysis demonstrates “a coloniality of mind in which knowledge is structured as binary, categorical and oppositional, and treated as something that can be commodified and divided up into ‘objectives’ that drive educational activities towards a predetermined end.” (p. 24). For the teacher training in ESD to be open to alternative ways of thinking, these issues must be addressed. To unlearn or unthink is also crucial in order to decolonize education. And, in order to achieve transformative ESD, the teachers would have to use an integrative approach including both individual and systems thinking: Each one of us has the possibility to create change, however, if we are going to transform societies, it has to be on a system and institutional level. In this research, I have aimed at finding some answers to how former colonies, Botswana (protectorate), Namibia and Zimbabwe, are approaching these issues in ESD, addressed in chapter 6.

### 3.2 ESD in teacher training

There is a wide literature on ESD in teacher training, especially in terms of pedagogical approaches to ESD. I will here only mention a few contributions, which are relevant to this master’s thesis research. The book *Teacher Education for Sustainable Development and Global Citizenship: Critical Perspectives on Values, Curriculum and Assessment* (Bamber, 2020), includes a range of articles from various authors. The authors of this book emphasise the interrelation of ESD and GCED. Although they are interrelated, they “are emerging from different policy and research programmes, perhaps even responding to somewhat different agendas, audiences and narratives. How to reconcile these audiences and agendas is a complex task.” (ibid, p. xxi). SDG 4.7. includes both ESD and GCED, however, according to the authors of this book, “It seems that a majority of people, facing the global warming crisis, tend to agree with the need for sustainability, but it is not that clear that there is the same generic agreement for GCE.” (ibid). This viewpoint may be in line with the debates within sustainable development, in terms of which dimensions get the most emphasis, addressed in chapter 3.1. However, the main aim of SD and ESD is to have a holistic approach, considering the complexity of issues, and therefore one may argue that ESD is inseparable from GCED.

In the same above-mentioned book, Simpson (2020), argues in chapter 8, *Learning to Unlearn* that we need “to move from a ‘charity mentality’ towards a ‘social justice mentality’” (p.40). This is what Andreotti (2006) calls moving from ‘soft global citizenship’

to ‘critical global citizenship’, addressing how coloniality may be reproduced if a critical lens is not applied in GCED. Critical thinking is one of the core competences of GCED (UNESCO, 2015), which is also found as one of the eight competences of ESD, (UNESCO, 2017). When learning about different cultures through GCED, Roman (2003) warns against what he calls “intellectual tourism” and “consumption of cultural differences”. This type of tourism and consumption only creates bigger gaps between cultures, and do not attempt to equip students with cultural sensitivity or the ability to compare different practices and traditions across the world, and thus provide a more nuanced understanding. Niens & Rielly (2012) raise this issue in an article about GCED in Northern Ireland. They found that GCED had some positive impacts, but also contributed to both reproduction of stereotypes and a lack of critical engagement with North-South power relations and imbalances (p. 110). Simpson (2020) argues that learning to unlearn is invaluable for teachers’ practice to address this kind of reproduction, and thus should be central in ESD/GCED (p. 50).

Another relevant book is *Schooling for Sustainable Development in Africa* (2017), edited by Lotz-Sisitka, Shumba, Lupele & Wilmot. Here, ESD is discussed in the context of Africa, by African scholars. According to the publisher, the book series aims to counter the prevailing Western character of current research. Several of the contributions in this book will be presented in chapter 3.3.

UNESCO has also made publications on ESD in teacher training. One, which is particularly relevant, is the *Guidebook on Education for Sustainable Development for educators: Effective teaching and learning in teacher education institutions in Africa* (UNESCO, 2018b). This guidebook aims at contextualising ESD in Africa – a similar agenda as the above-mentioned book by Lotz-Sisitka et al (2017). The UNESCO guidebook brings in perspectives from Afrocentric philosophy, such as “ubuntu”, as well as Afrocentric indigenous knowledge and pedagogy (pp. 49-53).

Adopting an Afrocentric paradigm to ESD would mean that in the curriculum process the African experiences of the learner are placed at the centre, moving away from the margins, to empower the learner by making him or her the subject and not the object of the learning encounter.” (ibid, p. 49).

Central aspects of Afrocentric philosophy are “inclusivity, cultural specificity, critical awareness, commitment and political awareness.” (ibid). Contextualisation of ESD will be discussed in chapter 6.

### 3.3 Literature on ESD by ARTP participants and partners

I will here briefly present some contributions on debates about ESD from some of the scholars who are active in the ARTP, such as Lotz-Sisitka in South Africa, Silo in Botswana, Tshiningayamwe in Namibia, and Chikunda in Zimbabwe. All four have published articles in the book *Schooling for Sustainable Development in Africa* (2017), edited by Lotz-Sisitka, Shumba, Lupele & Wilmot. Silo writes about how to integrate learners’ voice through dialogue to acquire action competence in the context of Botswana, and Lotz-Sisitka, together with Lupele, argues “that it is possible to improve educational quality in schools in Africa through ESD learning processes” (p. 20). Chikunda, together with Ngcoza, address how “learning of science in schools could potentially be enhanced through the integration of Afrocentric - indigenous knowledge as a means of strengthening epistemological access to complex and often abstract scientific concepts” (pp. 79-80). And Tshiningayamwe critically assesses the uptake of ESD in the Biology Namibian Senior Secondary Certificate (NSSC) curriculum in Namibia (p.107). Tshiningayamwe has also contributed with research on scaling in ESD (Spira & Tshiningayamwe, 2018). This is relevant, as this case study research addresses scaling both as a concept to understand globalization processes, as well as a tool in developing ESD projects, the latter discussed in Spira & Tshiningayamwe’s article. From Zimbabwe, Chimbodza addresses issues of project sustainability for donor-funded environmental education projects in Zimbabwe (Van Ongevalleetal, J., Van Petegem, P., Deprez, S., Chimbodza, I. J-M., 2011). This issue may be related to scaling, addressed by Tshiningayamwe, in how to strengthen ESD projects.

It is also important to mention that a Swedish master’s student, Schrage (2015), did research in Botswana on a similar programme to ARTP, called Education for Strong Sustainability and Agency (ESSA) (p.1). Although we have different research questions and approaches, his findings are relevant as a reference in my own research. Schrage, together with Lenglet (2016), both from Uppsala University, later published a paper from Schrage’s research, combining theories of change, of education for sustainable human development and of transformative learning, which are all relevant to my research (p. 87).

### 3.4 Literature on inequality

As mentioned earlier, ESD has a large literature on the environmental dimension, however, having searched different databases, I find it more difficult to find research on how issues of inequality in ESD are addressed. However, inequality and its impact on (lack of) development has been widely studied, especially in countries in Africa. Economic inequality in the world is measured mainly through the Gini coefficient, either between or within nations (Milanovic, 2013). In studying development, Jerven (2013) has criticized the way data about income and economic growth in African countries are measured and argues that “the data are unreliable and potentially seriously misleading.” (p.8). Another who criticises the Gini index is Piketty (2014), who argues that it is misleading, as it does not consider people’s inherited wealth. Piketty argues that in a capitalist system, inherited wealth will always grow faster than wealth from income. Hence, inequality between those who have and those who have not, will increase with time. Other discussions regarding income and growth are related to the power by multi-national companies and how they are major players in development both nationally and globally (see e.g., Phillips, 2017). However, you may be equally rich or poor, but still be treated differently depending on your gender, ethnicity, age etc. Fukuda-Parr, Yamin & Greenstein (2014) writes: “Many argue that development should ultimately be judged by people’s well-being, defined as capability expansion or the realization of human rights.” (p. 114). Sen (1999) developed the concept of capabilities, which contributed to the establishment of the United Nations’ Human Development Index, which measures are more complex than merely the economic situation of a country. Therborn (2013), thus argues that equality is “the equal capability to function fully as a human being, where one e.g. has the capability to the freedom of choosing your own life path” (p. 41).

When researching literature about inequality and its driving forces, my impression is that those in favour of leftist politics are more likely to argue that we need a strong state and equitable social welfare systems, whereas those who sympathize with the right wing, advocate for liberal economies where people can “work their way out of poverty”. The issue of inequality is thus a matter of politics and political controversy. Colonial heritage and coloniality play a major role in shaping global power dynamics and development, which many argue is also the case in educational policies (see e.g. Andreotti, 2010; Pirbhai-Illich & Martin, 2019).



## 4. Research approach and methodology

The approach of a research determines a study's methods and which data that will be collected. It is also vital in terms of how interviews are conducted, the communication with the interviewees, as well as how the research data is analysed. In this chapter I will elaborate on my choice of research approach and methodology for this master's study, including research paradigm (4.1), access (4.2), research methods (4.3), data analysis (4.4), ethics (4.5) and researcher's biases (4.5.1).

### 4.1. Research paradigm and the position of the researcher

We live in a complex world, with a variety of belief systems, political ideologies and perceptions about the world and us who live in it. This complexity is also represented in the various paradigms that exists within social science, which have developed over the years. One challenge with paradigms is that when you include certain perspectives, others are excluded, and one easily create dichotomies and boundaries that are rather sharp. In recent years, these issues have been addressed, where some argue for mix methods research. Mixed methods research “concerns not only mixing data but mixing paradigms, ontologies, epistemologies and axiologies in order to give a fair, rounded picture of the phenomenon under investigation.” (Cohen, Manion & Morrison, 2018, p. 34).

Further, it is vital to be aware of how the paradigm a researcher operates within influences the research study itself. This includes how the researcher interprets and analyses the data collection. Cohen et al (2018) argue that it is the *purpose* of the research that drives it, and not the paradigm (p. 9). However, as you cannot separate the body from the mind, the purpose of the study is very much interlinked with the research paradigm(s) that the study is based within. Thus, I have had to be conscious of my own biases as a researcher in this process (see chapter 4.5.1).

The agenda of ESD is to transform societies to become more sustainable, through education (UNESCO, 2017). It is thus relevant to apply epistemology and methodology which is found in the critical and transformative research paradigm. Key terms here are power and ideology; consciousness-raising; emancipatory, advocacy/participatory approaches; transformatory; politically oriented and activist; qualitative and quantitative (Cohen et al, 2018, p. 9).

This research has been collecting data from countries which are former colonies/protectorate. Hence, it is relevant to bring in perspectives from the post-colonial research paradigm. Chilisa (2012) argues that whereas most of the social science paradigms are Euro-Western, the post-colonial research paradigm is a reaction to the power imbalances and lack of representation of indigenous and marginalized people in the global South in research ontology, epistemology, axiology and methodology. Chilisa further argues that the ontology is relational, and there is “an emphasis on an I/We relationship as opposed to the Western I/You relationship with its emphasis on the individual (p. 21). This principle is captured in the African philosophy of “ubuntu”, which may be translated to English as “I am because we are; we are because I am” (ibid). Thus, relationships between people as well as people’s connections with the earth, animals etc. is central in the post-colonial research paradigm where epistemology is built on relationships (ibid). Historically, social science research has mainly been carried out by Europeans and Americans in the former colonies in the global South. When carrying out research in Southern Africa today, the (European) researcher must be informed about ethical issues dealt with in the post-colonial paradigm, which I will return to in chapter 4.5.

Both the *context*; teacher training in Southern Africa, and the *purpose* of the study; how issues of inequality are addressed in ESD, are important in defining the research paradigm of this study. Drawing on Homi Bhabha’s (1994) concept of ‘the space in between’ (cited in Chilisa, 2012, p. 25), and questioning the many dichotomic perceptions we live within; I have applied concepts from both the critical/transformativ and the post-colonial paradigm, thus applying a form of paradigm triangulation (Cohen et al, 2018, p. 265). Chilisa (2012) argues that

The space in between involves a culture-integrative research framework. This is a tapestry, a mosaic of balanced borrowing of less hegemonic Euro-Western knowledge and its democratic and social justice elements and combining it with the best of the democratic, liberatory, and social justice essentialized indigenous knowledge and subgroups' knowledges (p. 25).

This approach is very much in line with the thinking of many of the people that were interviewed in this research: ESD is about taking the best from modern and traditional ways and create a sustainable future (see chapter 6).

## 4.2 Access

Access to data very much determines the outcome of a research. The research topic and questions will guide the researcher in the data collection process, but it is not always easy to

get access to those who are most relevant for the research. Thus, a researcher must be flexible and “open to let findings in the field change our perceptions, prejudices, theories, and research strategies.” (Hansen, 2018, p. 9). The initial plan was to conduct fieldwork in Botswana for a couple of months, focusing on students in secondary schools. Due to Covid-19, I was not able to travel, and had to make changes accordingly. In the process of getting in touch with relevant people in Botswana, I came across a website about the ARTP at SWEDESD at Uppsala University in Sweden. Having to collect data from Norway via digital means, it would be easier to do so if I could access people already involved in a project. I found the ARTP very interesting and ESD in teacher training is a very relevant topic today as many countries are finding their ways to adapt ESD into their curricula and teacher training.

Through the snowballing method (Cohen et al, 2018, p. 220), I established contact with the coordinators and national representatives of the ARTP in the three first countries that were already involved in the project; Botswana, Namibia, and Zimbabwe. Dr Shepherd Urenje at SWEDESD at Uppsala University kindly put me in contact with Dr Charles Chikunda, UNESCO coordinator for the ARTP, based in Zimbabwe, as well as the three national representatives: Dr Ntha Silo (Botswana), Iris Jane-Mary Chimbodza (Zimbabwe), and Dr Sirkka Tshiningayamwe (Namibia). The coordinators were very helpful in assisting me to get in touch with the participants of the ARTP, and after a few months of correspondence, I could finally invite the 30 participants from the three countries to be part of the research. With the kind guidance from Prof Pansiri at University of Botswana, I also obtained a research permit from the Ministry of Education in Botswana. Dr Chikunda provided me with project documents, such as a project implementation evaluation report as well as resources designed for this project, available for the participants.

The coordinators/national representatives interviewed in this research, who all consented to their identity being known, are:

- Dr Shepherd Urenje (programme coordinator, SWEDESD/Uppsala University)
- Dr Charles Chikunda (programme coordinator, UNESCO, Harare)
- Dr Ntha Silo (national representative, Botswana)
- Dr Sirkka Tshiningayamwe (national representative, Namibia)
- Iris Jane-Mary Chimbodza (national representative, Zimbabwe)

Participating in a research is voluntary and getting access does not necessary mean that those approached choose to participate. I was told by all the ARTP coordinators/national representatives that the participants were very busy, working as teacher educators or TVET educators. The situation with Covid-19 was also an extra challenge, with many having home office, new ways of teaching/following up the students etc. For these, and other possible unknown reasons, only 13 of the 30 ARTP participants in Botswana, Namibia and Zimbabwe participated in this research. Hence, the findings of this case study research are based on a relatively low number of interviewees (as well as various documents). Flyvbjerg (2006) argues that “the case-study method in general can certainly contribute to the cumulative development of knowledge”, compared to quantitative studies (p. 241). Flyvbjerg further argues that “case study contains no greater bias toward verification of the researcher’s preconceived notions than other methods of inquiry”, such as quantitative research methods (p. 237). Thus, this case study research can contribute to valuable insights through the analysis of relevant documents, as well as teacher educators’ answers to the questions discussed in this research.

All the respondents in this research have higher education and are training teacher students to become educators at different levels and types of formal education. Eight of those who took part of the digital survey had some prior knowledge of ESD, whether two had little knowledge and one answered “none”. However, it may be that those who are not so familiar with ESD and the SDGs, do have knowledge about sustainable development, just in different terms and approaches. As Dr Shepherd Urenje pointed out, some have been doing ESD, but calling it something else, like “good education”.

As already mentioned, one of the partners in the ARTP is UNESCO. There is a strong reference to UNESCO policy documents e.g., in the resources made available for the ARTP participants, and it is thus more likely that the participants who are part of this case study research will refer to UNESCO’s recommendations and approaches to ESD. All those that took part in this case study research had been to a two-week course at Rhodes University in South Africa in 2019, as part of the ARTP, called “Sustainability Starts with Teachers” (SST).

### 4.3 Research methods

This master's thesis is a study of how issues of inequality are addressed in ESD in teacher training. This cannot easily be done through the means of quantitative measures, as the intention was not to find out e.g., how many times inequality related topics are taught through ESD, but how these issues are addressed, and which competencies are emphasised for the students to respond to these issues. In other words, the aim of the research has been to study people's reflections on these topics and their reasoning behind these reflections, by e.g., using opinion and value-based questions (Chilisa, 2012, p. 206). A couple of questions had optional answers, such as the ranking of the importance of teaching issues related to inequality in ESD and weighing the focus on local versus global issues of inequality in ESD.

This research includes data from three countries in Southern Africa, and thus could be a comparative study. However, all the people interviewed are participants in the same project and have been through the same two-week course through the ARTP. Due to this, and that participants are teachers within three different educations: Early childhood education training, teacher education and TVET, a comparative study would have a low validity, given the few number of participants in the research. On the other hand, the document analysis of the countries' implementation of ESD allows for a comparison on how Botswana and Namibia have followed up this matter at a national level.

#### 4.3.1 Document analysis through discourse analysis methods

To gain an understanding of the field and work that has been done on ESD internationally, nationally in Botswana and Namibia, as well as the impact of the ARTP so far, it is central to conduct a document analysis, by applying discourse analysis methods. Discourse “designates how language represents meanings, conventions, codes in specific socio-cultural, temporal and historical contexts” (Cohen et al, 2018, p. 686). Through discourse analysis, the researcher does not take a stand on “truths”, but presents and analyses texts and statement. According to Cohen et al (2018) one may distinguish between ‘discourse analysis’ and ‘critical discourse analysis’ (ibid). The analytical approach in this research applies a more critical lens, attempting to link language and society, where the researcher reads “along, between and beyond the lines”. (ibid, p. 688). Thus, interrogating ideological, political, social and/ or economic power, and how this is expressed in the documents and texts. The outcome of such an analysis will, however, be influenced by the researcher's cultural background and

cognitive biases. To challenge this, I have attempted to be conscious of my Western lenses, when analysing documents and texts in this research.

Some documents were available online, such as UNESCO papers, handbooks, learning objectives etc. on ESD on an international level, as well as national policy documents on implementation of ESD in Botswana and Namibia. I was not able to find national implementation plans on ESD from Zimbabwe. In terms of ARTP documents, the UNESCO project coordinator and the national representatives were very helpful and provided me with project implementation reports and evaluations, as well as resources that were available for the participants, designed specifically for this project.

#### 4.3.2 Digital survey

As already mentioned, this research used mainly qualitative methods, such as interviews and focus group interviews. In addition, all the 30 participants of the ARTP in Botswana, Namibia and Zimbabwe were invited to complete a digital survey, which mainly had open questions that would allow the participants to write in the narrative form, elaborating on their views. One challenge with this form of data, as with qualitative interviews, is that the participants of the research may act as “authored authors” (Kvale & Brinkmann, 2015, p.3). They write their subjective narratives which they are the authors of, however, they are “subject to discourses, power relations, and ideologies that are not of their own making but nonetheless affect and perhaps constitute what they talk about and how.” (ibid). Thus the “authored authors” term. Although it was stated in the introduction to the questions that the participants should apply critical thinking and write what *they* think is important, all the respondents are working as a teacher educator at an institution of higher education and are participants of the ARTP. It is therefore possible that some authored themselves in line with their institution’s values and policies and/or those of the ARTP.

11 teacher educators/TVETs participated in the digital survey. Due to challenges with internet connection and access to the online form, one of the responses to the survey was done orally over the phone with the researcher. The 30 participants of the ARTP got several reminders of the invitation to take part in the digital survey by e-mail and via Whats App. However, as already mentioned, there could be several reasons as to why they chose not to participate.

### 4.3.3 Video interviews

The digital survey was followed up by focus group interviews using the Zoom platform, one interview from each country. According to Kvale & Brinkman (2015) “The aim of the focus group is not to reach consensus about, or solutions to, the issues discussed, but to bring forth different viewpoints on an issue” (p. 175). One benefit with group interviews is that the dialogue between the participants can bring out interesting spontaneous reflections when hearing each other’s views and opinions (Chilisa, 2012, p. 206). The focus group interview lasted for about 60 min or more.

Before, during and after these country group interviews, I also interviewed the ARTP coordinators and the national representatives of the project. The Zoom platform was used, and the interviews lasted for about 60 min or more. I first interviewed Dr Urenje at SWEDES at Uppsala University, then the three national representatives, and finally, an interview with Dr Chikunda, after I conducted all the group interviews with the ARTP participants. Conducting one coordinator-interview first and one last allowed for a better understanding of the ARTP. A better insight into the topic by the researcher at the final interview, also allowed for more in-depth questions and reflections.

The intention was that some of those who participated in the digital survey, would also participate in the group interviews in each country (4-5 in each interview). However, some were too busy and could not participate, another issue was to find a time that worked for everyone. In selecting who to contact for the group interview, I asked for guidance from the national representatives. After numerous invitations to the participants and attempts to find suitable dates and times, the result was that two ARTP participants joined for the focus group interview in each country. Some had answered the digital survey, others not. However, this did not cause any difficulties. The benefit of only two people participating in the focus group interview was that it allowed for more time for those who participated to share their thoughts and opinions. As already mentioned in this chapter, the researcher’s ability to be flexible and open for new strategies, is important when conducting data collection in the field (Hansen, 2018).

Video interviews consumes a lot of internet data, thus most of the group interviews were conducted with the video switched off, using only audio. However, the video was for most of the interviews on in the beginning and the end, so that we could see and greet one another.

But audio interviews meant that I could not observe the persons behaviour, body language etc. during the interviews, and had to rely on what they communicated orally. Observing the context and other non-verbal behaviours, will allow for a thicker description (Kvale & Brinkmann, 2015, p. 90). However, when this was not possible, the benefit of using audio only, is that you focus better on what is being said, and how it is being said. All the interviews, in total eight interviews, were audio recorded, using a Dictaphone app, approved by the Oslo Metropolitan University.

To sum up, the methods that have been applied in this research are; an ESD discourse and document analysis, qualitative interviews with coordinators and national representatives (5), digital survey with mainly qualitative questions (11 respondents), followed up by digital focus group interviews – one from each country (6 interviewees in total). Using mixed methods to gather data contributes to a more holistic understanding of the topic in question and to a higher degree of validity to the findings (Cohen et al, 2018, p. 43).

#### 4.4 Data analysis

Qualitative data analysis is an ongoing, non-linear process in a research, and the analysis is very much based on the researcher's interpretations (Cohen et al, 2018, p. 643-644).

According to Wellington (2015), there are seven stages (not necessarily linear) of making sense of qualitative data (cited in Cohen et al, 2018, p. 644):

- Stage 1:* 'Immersion' in data;
- Stage 2:* 'Reflecting, standing back';
- Stage 3:* 'Analysing' ('dividing up, taking apart, selecting and filtering, classifying, categorizing');
- Stage 4:* 'Synthesizing, re-combining' data;
- Stage 5:* 'Relating to other work, locating' data;
- Stage 6:* 'Reflecting back (returning for more detail?)';
- Stage 7:* 'Presenting, disseminating, sharing' the findings.

As already mentioned, having time in between the first and the last interview (about 2,5 months), allowed the researcher to process the conducted interviews and the collected documents, and thus getting a better insight into the purpose of this study. That involved the researcher going back and forth between the different stages, before moving towards completing stage 7. By applying decolonizing methodologies (see Smith, 2012, and Chilisa,



2012), stage 7 also involved sharing the findings with those interviewed in the research to allow feedback. Those interviewed, who have shared their knowledge and reflections on the research questions, also have ownership to the study. This allows the research to be a two-way process and is a way of giving back to those involved, by sharing the knowledge produced in the study.

After completing the data collection, all the eight interviews were transcribed, and the digital survey was set up in an excel sheet to allow for comparison between the respondents. The findings were then organized, coded, and categorized into five categories by themes, each with several subthemes. These themes and subthemes were then analysed together with the various project evaluations and reports obtained from the ARTP coordinators. The role of the researcher is to triangulate the different data sources to verify the findings. This process of verification legitimizes the validity and reliability of a study's findings (Cohen et al, 2018, p. 43). This, along with decolonizing methodologies, is a time-consuming process leading up to the finalizing stage. However, it is vital in guiding the researcher's interpretation of the data collection.

#### 4.5 Ethical considerations

There are several ethical considerations that a researcher needs to make when conducting a study. Some are required by the research institution, in this case the Oslo Metropolitan University. Other ethical considerations are less clear and contextually situated and may raise dilemmas for the researcher (Cohen et al, 2018, p. 111). At a minimum, research should 'do no harm', but also aim 'to do good' and e.g., contribute to empowerment (Scheyvens, Nowak & Scheyvens, 2003, p. 2).

One of the ethical requirements of the Oslo Metropolitan University is to report to the Norwegian Centre or Research Data (NSD) and get an approval prior to starting the data collection. This approval was then shared with the researcher's supervisor. Further, all those participating in the study were given an information letter which informed the purpose of the study, the rights of those participating, how the data would be stored and for how long, and whom to contact other than the researcher, in case of any issues. Participants of this study gave their consent either in writing or orally. By permission, all interviews were audio recorded.

In correspondence with data protection laws, I anonymized the interviewees names, unless they agreed to keep it known. In the case of the interviews with the coordinators/national representatives of ARTP, they all agreed to keep their identity known. This is in line with decolonizing methodologies where the interviewees obtain ownership to the knowledge shared with the researcher (Chilisa, 2012, 207). Several of the ARTP participants, who were interviewed in the group interviews, also agreed to have their identity known. However, to accommodate those who requested to be anonymous, all the group interview participants were anonymized. It is also important to stress that those interviewed in this research expressed their opinions as their own, and not on behalf of their institution or workplace.

The first draft of the data analysis was sent to all the persons interviewed in this case study research, five coordinators/national representatives and the six persons participating in the focus group interviews, to allow for comments, clearing possible misunderstandings etc. This is also in line with decolonizing methodology. It is thus not only the researcher who owns the data, and it may be more of a joint knowledge production. That being said, it is the researcher who is responsible for securing that the final product meets the ethical standards of social science research. As an academic researcher, from an institution based on Eurocentric traditions (see e.g. Maldonado-Torres, 2016), one has a responsibility to critically analyse the findings and share these in relevant forums in order to address issues of decoloniality (Smith, 2012; Chilisa, 2012).

The power and position of the researcher is a central issue in research. “The researcher is often seen to be, or is, in an asymmetric position of power with regard to the participants; the former may have more power than the latter, be this by status, position, knowledge, role or whatever.” (Cohen et al, 2018, p. 136). It is the researcher that determines the agenda, leads the interview and/ or meetings etc. Compared to the researcher, all those who participated in this research are senior in regards of age, and in most cases also in terms of level of education. Many have PhD and have worked for several years in the field. This may have contributed to meetings on more equal terms and contributed to some of the interviews going in the direction of conversations rather than strictly questions and answers. Those interviewed expressed that they were happy to have participated, and both researcher and the interviewees learned something new during the meetings. Reciprocity is also a central topic in research (ibid, p. 137). If the participants in this research experienced that they also gained new perspectives

etc. during the interview, one may see it as a situation where both the researcher and the participants gained something. Also sharing the drafts to allow feedback, challenges the power relations between the researcher and the participants. One of the participants decided to join the interview, thinking that she one day might be in my shoes, asking people to participate in a research, and thus should take the time to participate.

#### 4.5.1 Researcher's biases

As mentioned in the introduction of this chapter, the researcher must be aware her own biases and preconceived ideas when conducting a study. The researcher should not actively look for findings that support her own perceptions but keep an open mind and analyse the data collection critically. The researcher's reflexivity is thus important and may be defined as "the process of a continual internal dialogue and critical self-evaluation of researcher's positionality as well as active acknowledgement and explicit recognition that this position may affect the research process and outcome." (Berger, 2015, p. 220). Thus, "the idea of reflexivity challenges the view of knowledge production as independent of the researcher producing it and of knowledge as objective." (ibid).

One of my biases is that I already have knowledge and interest in ESD through working for several years on this topic in non-formal education in Norway. I also have an interest in Southern Africa, through having lived and travelled, as well as having relatives in the region (Phuthi is a common last name in Botswana). However, having the role of an 'insider' has its advantages, such as "easier entrée, a head start in knowing about the topic and understanding nuanced reactions of participants." (ibid, p. 223). Because of my knowledge of the topic and region, I experienced that I quickly got good communication with those I interviewed, and they did not need to spend much time on explaining terms and concepts that were shared as they were familiar to me. On the other side, as Berger (2015) argues, being an 'insider' "carry the risks of blurring boundaries; imposing own values, beliefs, and perceptions by a researcher" (p. 224). One such boundary may be maintaining the separation between the ideas of the researcher and those of the interviewees. This is especially important when analysing the data, e.g., when choosing which quotes to include.

When the researcher is applying a reflexive approach to her study, measures can be taken to avoid blurring boundaries or imposing her own perceptions etc. Measures applied in this

study has been discussions with other colleagues, in this case my supervisor and peers, as well as feedback from the interviewees as part of the writing process.

#### 4.6 Conclusion

In this chapter I have presented and discussed the research approach of this case study, including the choice of research paradigm, access, methodology, data analysis, and finally ethical considerations. A researcher has many choices to make throughout a study. Thus, contextual awareness, and ability to be reflexive and ethical is crucial, both in terms of the outcome of the research project, but also for the respect for the persons who volunteer to be involved in the study. In the following chapters I will proceed to elaborate on the theories that have been applied in this research, as well as presenting, analysing, and discussing the findings of this study.

## 5. Theoretical framework

As shown in the literature review, the discussions of defining equality and inequality are related to which lenses one looks through. In studying how inequality is addressed in ESD in teacher trainings in Botswana, Namibia, and Zimbabwe, I have thus applied theories of globalization (5.1), the concept of scale (5.2), and theories of coloniality and decoloniality (5.3). I also include theories of transformative and transgressive learning (5.4), as it is a central aim of ESD. In this chapter I will present and discuss the main aspects of these theories and how they apply to this case study research.

### 5.1 Theories of globalization

We live in a highly globalized world where people, commodities, knowledge, ideas, and ideologies etc. frequently travel across borders. These kinds of border crossings are not new, but the speed and amount have increasingly grown over the past few decades. This accelerated process in the era of the Anthropocene is what Eriksen (2016) calls “overheating” – the world is too full and too fast, uneven, and unequal. Eriksen analyses the impact of three interrelated crises of acceleration in the world today: environment, economy, and identity. One of the consequences, he argues, is literally the overheating of the world, which causes climate change. Other issues raised by Eriksen is energy (coal), mobility (tourism and migration), cities (urbanisation), waste and information overload (mobile phones). The Covid-19 pandemic has also shown how quickly a virus can spread in a globalized world.

Globalization, modernity, and neoliberalism are connected, where the free market plays a central role. What is perhaps particularly interesting is how globalization is bringing certain (American) products, such as coca cola, across the world, making it possible to travel almost anywhere and still be able to find products that you recognize from your hometown (Spechler, 2011, p. 22). This process is also found in the field of education when mass-schooling became a global phenomenon. One interesting aspect is that the curriculum is strikingly similar across the world, and as a result of this, a new world cultural system in mass education emerged, which has been promoted by mass educational systems (Benavot, Cha, Kamens, Meyer & Wong, 2017, p. 41). Who then dominates this world culture, and who is at the top of the hierarchy of world power? Silova, Millei & Piattoeva (2017) argues that “the foundation of modern knowledge production remains both “territorial and imperial”” (p. 75). Western hegemony has been increasingly criticized, as well as colonial legacies in education, and they

argue that there is a need for decolonization of knowledge (ibid). I will return to this topic in the chapter on theories on coloniality and decoloniality (5.3).

When the Second World War finally ended, nation states saw the need for an organisation for peace and cooperation, and the United Nations (UN) was established in 1945. Soon after, several UN organisations were founded, such as UNESCO, which was established already a few months later the same year. The establishment of such world organisations, which aim at securing peace, promoting Human Rights etc., are also playing a central role in the globalized world. The focus of this case study is ESD, which is one of the main agendas of UNESCO, and is an example of how certain agendas are being promoted worldwide. Most people would agree that we need to educate for sustainable development. What this case study examines, is how seemingly universal ideologies are interpreted and implemented nationally in Botswana, Namibia, and Zimbabwe. As much as UNESCO is a world organisation, with 193 member states (UNESCO, undated 3), with one vote each, the world power structures are also present. House-Soremekun & Falola (2011) argue that “Africa experiences globalization “from above,” that is, a situation where powerful nations and companies with more resources are able to control the major actions and policies that determine the characteristics of global encounters.” (p. 1). They further highlight the paradox that “The actors who control globalization from above often call on African countries to practice democracy, but the same democratic principles do not apply to the United Nations Security Council, where a handful of countries have veto power.” (ibid). This view may be connected to Eriksen’s (2016) analysis of globalization, who argues that globalization affects people similarly, but also differently, depending on factors such as where you live. As much as there are changes in how countries across the globe cooperate compared to fifty years ago, it is still the global North that has the most power. House-Soremekun & Falola (2011) further argues that "If Africa is part of the equation of globalization “from below,” any discussion of its place in the global system will draw us into issues of nationalism and resistance—how Africans can mobilize themselves to win power and privileges, and how international institutions must be reformed.” (p. 1). These perspectives are relevant when analysing the findings from Botswana, Namibia, and Zimbabwe in this case study research.

Globalization, as a phenomenon, has both defenders and critics: On the one side, globalization is seen as representing the world’s progress. On the other side, critics point out the negative impacts such as global warming, exploitation of workers, marginalised people, devastation of

natural resources etc. (Eriksen, 2016). If one reads reports like the *Global Education Monitoring Report 2020. Inclusion and Education: All means all* (UNESCO, 2020a), there are examples of the positive outcomes of cooperation between countries through common goals e.g., the SDG 4 monitoring framework. On the other side, the same report has numerous examples of how unequal the world is, e.g., that poorer people and girls are the losers:

Identity, background and ability dictate education opportunities. In all but high-income countries in Europe and Northern America, only 18 of the poorest youth complete secondary school for every 100 of the richest youth. In at least 20 countries, mostly in sub-Saharan Africa, hardly any poor rural young women complete secondary school. (UNESCO, 2020a, p. xviii).

The same report also states that “In Latin America, learning materials omit or misrepresent the history of Afro-descendants.” (ibid, p. 4). When Oxfam International year after year reports how rich the richest people are, compared to the poorest people in the world today, it is clear that we live in a highly unequal world. In 2020 Oxfam International reported that the 22 richest men in the world have more wealth than all women in Africa. The topic of the same press release was: “The world’s 2,153 billionaires have more wealth than the 4.6 billion people who make up 60 percent of the planet’s population.” (Oxfam International, 2020). A year after, the focus was not unexpectedly on the effects of the Covid-19 pandemic and the organisation reported in January 2021:

The world’s ten richest men have seen their combined wealth increase by half a trillion dollars since the pandemic began —more than enough to pay for a COVID-19 vaccine for everyone and to ensure no one is pushed into poverty by the pandemic. At the same time, the pandemic has ushered in the worst job crisis in over 90 years with hundreds of millions of people now underemployed or out of work. (Oxfam International, 2021).

The positive and negative impacts of globalization are relevant when analysing the data in this case study, looking at ESD in teacher training. The impact of the Covid-19 pandemic in education will also be discussed in chapter 6. when analysing the interviews with teacher educators in Botswana, Namibia, and Zimbabwe. Education is seen as a major key in contributing to reaching the SDGs, and it is therefore relevant to include perspectives on the different levels of globalization and its impact on education. This brings us to the next chapter, namely the concept of scale, which may be used as an analytical tool in understanding globalization processes.

## 5.2 The concept of scale

The concept of scale is applied in several different disciplines such as geography, environmental governance etc, when analysing societies (see Padt & Arts, 2014, p. 1). One such example is globalization and new media. Slater (2013) uses the example of the internet as a ‘scaling device’: “people made and imagined connections both in the practical use of its affordances and in the kind of spatialized world they could imagine in and through it.” (p. 131). Scaling can be applied as a tool to analyse the different levels of globalization processes, as well as the reach of actions, and emphasises that the global phenomena are also always local. Eriksen (2016) brings in the concept of scale in his book *Overheated*. Here he refers to social, physical, cognitive, and temporal scales: The reach of your networks, the compass of an infrastructural system, the size of your perceived world, and the time horizon you imagine, forwards and backwards (p. 29). Eriksen explains further:

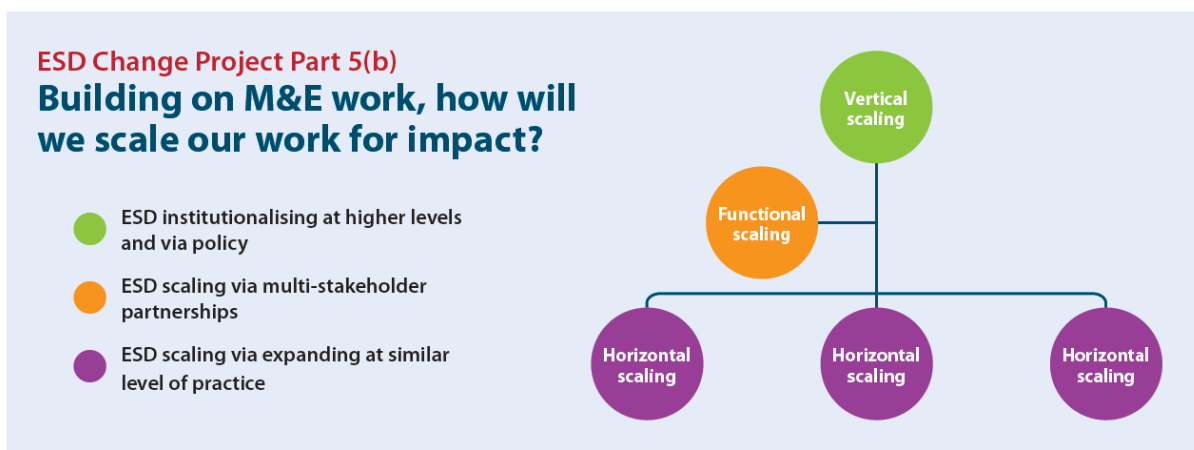
Solutions to global crises typically include pleas to scale up socially and spatially (world government, more power to the UN, international climate agreements and so on) and equally passionate pleas to scale down socially and spatially (small is beautiful, local economies are more equitable and sustainable and so on), while simultaneously scaling up cognitively and temporally (act locally, think globally). (ibid).

Eriksen also applies the concept of clashing scales, which is when “the intersection of two or more levels of scale leads to a contradiction, a conflict or friction.” (ibid). One such example of clashing scales is “when a local community is being overrun by large-scale interests” (ibid, p. 132). This clashing of scales may also be on a cognitive level, where the world of your experience, or “warm data”, to use Nora Bateson’s (2017) term, may clash with the statistical information, “big data” or “cold facts”, you get from other sources. Bateson argues that we need “warm data”, which gives a different kind of information that preserve the complexity of situations, as opposed to thinking in “silos”. ESD is a global agenda, which needs to be implemented nationally and locally. Are there, in this implementation process, clashing scales, or is ESD designed in such a way that it connects all the scales? Eriksen (2016) argues that the main premise for a global conversation, and thus reduce the clashing of scales, is “a continuous process of cultural hybridisation or creolisation.” (p. 153). One of the competencies needed then, is the ability to listen, which Eriksen argues is short in supply today (ibid). He further argues: “A cosmopolitan ethics may be a starting point, one contributing simultaneously to decolonising the minds of previously colonised peoples, and to bridging the gaps of intercultural relations through forms of communication where the



symbolic power has been decentralised.” (p. 155). Regarding decolonising the minds, I would argue that it is a matter relevant for all people, both people from countries which were colonized, and those that colonized. As Freire (1999) argued, it is not only the people who are being oppressed who need to be liberated, but also the oppressors.

In terms of the ARTP, the concept of scale is also applied by participants in this programme, who were interviewed in this research. The type of scales that was mentioned was *horizontal* and *vertical* scaling in regard to the participants’ individual Change Projects. This type of scaling is explained in one of the five resource publications for the ARTP participants in a series called *Learning Action*. The final publication in the series is called *Learning Action 5: Monitoring, Evaluation and Scaling for Impact* (Lotz-Sisitka, Tshiningayamwe, Chikunda, Mandikonza & Urenje, 2019a). Here, the concept of scale is applied as a practical tool to further develop the different Change Projects in order to increase their impact. It is here referred to three types of scale: *horizontal*, *vertical*, and *functional* scale, named the *Re-Solve model* (p. 18). Here scaling describes “the progress and strength of your Change Project, and its potential to be replicated or expanded within and across your institution(s) or beyond – i.e., its potential for being extended.” (ibid, p. 17).



**Figure 5:** Vertical, functional, and horizontal scaling (Lotz-Sisitka et al, 2019a, p.18)

The concept of scale in this master’s thesis research is thus a concept to analyse and understand the globalized world in regard to sustainability issues. It is also a concept which is used to maximize the impact of the ARTP participants’ Change Projects, which aims at contributing to more sustainability within small scale learning communities and bigger scale policy development.

### 5.3 Theories of coloniality and decoloniality

Coloniality may be defined as the legacy of colonialism and how it seeks to control the lands, body, and mind of ‘the Other’ (Pirbhai-Illich & Martin, 2019, p. 20). There is a wide literature on coloniality and decoloniality, especially from scholars of the global South, former colonies, which dates to the times of struggles for independence (see e.g., Thiong’o, 1981). Today, theories of coloniality may be applicable in explaining Western hegemony and ideas of universality (Pirbhai-Illich & Martin, 2019, p. 21). Maldonado-Torres (2016) also connects coloniality and modernity and argues that “the continued unfolding of Western modernity is also the reinforcement, through crude and vulgar repetitions as well as more or less creative adjustments, of coloniality” (p. 1). Living in a world dominated by the global North, theories of coloniality and decoloniality have a critical approach and questions status quo. Ndlovu (2013) argues that “Decolonization is better understood as a terrain of illusions of liberation and myths of freedom.” (p. 66). Hence, although colonialism is history and countries were liberated, the colonial structures are still present and impact people’s lives.

One central aspect in theories of coloniality, is power. The discourse on power theories within social science is rather extensive, and I will here only briefly discuss some theories that I find relevant in how inequality is maintained. Is it individuals that are controlling situations, or are there structures in place that impose power on individuals? Lukes (2004) explains power in terms of three dimensions: The first and second dimension of power is observable and in line with the Weberian actor-oriented perspective. The first is about who gets the bigger piece of the cake, to use a mundane analogy. The second dimension addresses the issue of what was left out from the coffee table, why only cake was served, and who were not invited. The third dimension (based on Gramsci) is a critique of the first two dimensions, arguing that they are insufficient. It addresses the superstructures, to use Marx’s term, where the ruling class uses cultural institutions/ideology to maintain power. Power is more hidden and difficult to observe; hence it may also be more effective. It is the underlying, or rather overlying structures that we willingly comply to. The discussion then is how aware or unaware we are of these structures. Are oppressed people conscious of their situation, or is it hidden from them through hegemony?

“I am the master of my fate. I am the captain of my soul”. This verse is from the poem *Invictus* by Henly (1888) and is known to have been of great inspiration for Nelson Mandela during his 27 years in prison in South Africa under the apartheid regime (Eastwood, 2010). Apartheid was an extreme situation where the apartheid hegemony was infiltrating almost every sphere of society, both physical and psychological, and one could argue that all three dimensions of Lukes’ (2004) power theory were at play. However, history has shown that people were able to imagine a different society and kept the struggle going for a more just society, both through small everyday- and large-scale resistance. *The Freedom Charter* by the African National Congress Alliance (1955) advocated for a revolution, where the superstructures would be changed in order to establish a system where all people would be equal.

I include this part, to show how one may be conscious at the same time as having to live within a racist hegemony. The apartheid regime ended in 1994, but one may argue that both physical and psychological structures of colonialism still prevail (Maldonado-Torres, 2016). Although colonialism belongs to the past, coloniality still continues to manifest itself through e.g., “contemporary “development” policies, nation-state building practices, (...), the increasing concentration of resources in the hands of the few, the rampant expression of hate and social phobias, and liberal initiatives of inclusion” (ibid, p. 1). I will use an example from a study on partnership between NGOs in the global South and North to illustrate how hegemony of coloniality affects relations in recent times.

The word partnership indicates equal relations between the parties, where one should not be dominating the other. However, in the case of partnership between North and South developmental NGOs, Elbers & Schulpen (2013) findings show asymmetrical power relations: “Northern agencies largely exercise power (over Southern partners) indirectly through the rules.” (p. 64). More importantly, because it is exercised indirectly, it remains hidden from sight (ibid). One main factor for the asymmetrical relationship is that the North NGOs hold the economic power, as well as the control of what projects’ money should be spent on. One may argue that the intention behind such partnerships is good and based on equality, however, my analysis is that this case is an example of coloniality. It might not be easily traced, but it is nevertheless embedded in values and the way the parties think, act and exercise power (Maldonado-Torres, 2016). And even if we are conscious of the hegemony and manage to address and resist these issues, we may find ourselves reproducing the same

system, just in a little less unequal way. In terms of addressing inequality, what often happens is that we try to improve situations within the existing structures, without dealing with the core issues.

Another issue that needs to be addressed to overcome inequality is recognition (Fraser, 2009), to view people as equal human beings. Fraser argues that we need perspectival dualism and therefore also to address the issue of redistribution. Fraser has added a third political dimension of justice to her theory; representation, “which allows us to problematize governance structures and decision-making procedures” (Dahl, Stoltz & Willig, 2004, p. 380). To combat inequality, I argue that we need financial redistribution, cultural and social recognition, and equitable representation. This is easier said than done, as we find ourselves living in unequal structures, where one issue is that those few who are enormously wealthy and powerful prefers to keep it that way (Therborn, 2013, p. 30). This implies that the issue of power imbalances is not only one between the global North and the global South, but also an issue of power distribution between the elite and the ordinary citizen. Power distribution is also an issue in terms of people living in urban versus rural areas (see chapter 6.2).

Education is no exception of the impact of coloniality and has long been central to the colonial project (Pirbhai-Illich & Martin, 2019, p. 21). Learning institutions are places where theory of coloniality might be taught in the curriculum and/or hidden curriculum, “the unwritten, unofficial, and often unintended lessons, values, and perspectives that students learn in school” (The Great Schools Partnership, 2015). At the same time, it can be a place where youths and students “get to explore ideas and share expressions that would help them to make and remake themselves, their space, and their sense of time.” (Maldonado-Torres, 2016, p. 2-3). An example of this is the result of the relatively recent student campaign #RhodesMustFall in South Africa, where students challenged the powers of coloniality (ibid). Another example of reproduction of coloniality was shown in the previous chapter on how learning materials in Latin-America omit or misrepresent the history of Afro-descendants (UNESCO, 2020, p. 4).

Pirbhai-Illich & Martin (2019) argues that “Western-European education and its colonial ideology limits the potential of education to develop the type of thinking and creativity that is needed to secure sustainable and just futures for the planet.” (p. 21). As mentioned in chapter 3, Andreotti (2010) also addresses these issues through a critical analysis of GCED. She

argues that GCED “should equip people to live together in collaborative, but un-coercive ways, in contemporary societies. This requires an acknowledgement that contemporary societies are complex, diverse, hanging, uncertain and deeply unequal. (...) the role of global citizenship education is one of decolonization” (p. 239). Andreotti’s argument can be related to that of Mutua (2008) in arguing that we need to challenge the ‘established’ world system. Mutua has a critical approach to Human Rights Education (HRE), which, like GCED, is closely connected to ESD. He argues that there is a need for a wider debate around the concept of human rights:

The paradox of the (human right) corpus is that it seeks to foster diversity and difference but does so only under the rubric of Western political democracy. In other words, it says that diversity is good so long as it is exercised within the liberal paradigm, a construct that for the purposes of the corpus is not negotiable. (Mutua, 2008, p. 3).

Mutua has earlier written about this issue where he looks at the African Charter on Human and People’s Rights and how the Universal Declaration of Human Rights (UDHR) can be understood in an African context. Mutua (1995) argues that “individual rights cannot make sense in a social and political vacuum, devoid of the duties assumed by individuals.” (p.340). He thus emphasises that human rights need to be understood in a local context in order to realize them in a meaningful and constructive way (Mutua, 2008). In challenging the ‘established’, Andreotti (2010) argues that learning to unlearn is an important skill, where students learn that what “we consider ‘good and ideal’ is only one perspective and this perspective is related to where we come from socially, historically and culturally.” (p. 246). These examples from critical analysis of GCED and HRE, together with ESD, shows that theories of coloniality and decoloniality are relevant when conducting research on how issues of inequality are addressed in ESD in teacher education.

One of the eight competencies of ESD is critical thinking, and ESD aims at transforming societies (UNESCO, 2017, p. 10). ESD is seen as a key in achieving the SDGs, where ESD is about “empowering and motivating learners to become active sustainability citizens who are capable of critical thinking and able to participate in shaping a sustainable future.” (ibid, p. 54). To achieve this, UNESCO argues for action-oriented transformative pedagogies (ibid). This leads us to the final part, namely theories of transformative and transgressive learning.

#### 5.4 Theories of transformative and transgressive learning

Jack Mezirow started developing theory on transformative learning in the late 1970s through his study of re-entry programs for adults at community colleges (Baumgartner, 2012). It has since been further developed and one of the underpinnings of theory of transformative learning is Paulo Freire's concepts of conscientization and perspective transformation, where critical reflection through dialogue was essential for transformation to take place (ibid, p. 102).

The Assistant Director-General for UNESCO, Stefania Giannini, argues that: "We need to ensure education goes beyond literacy and numeracy. In today's world, education must be about building peace, sustainable development, greater justice, social equity and gender equality." (UNESCO, 2019, p. 2). This view can be related to Klafki's (2001) arguments on what is essential to learn in school. Klafki argues that learning processes should aim to build self-determination, co-determination, and solidarity (p. 69). Learning processes should also be based on key issues in the society, many of which are universal and timeless, such as peace/conflict, inequality, environment/climate, and existential relations. By including an individualistic and a communal approach, Klafki argues for expanding the perspectives of the students through seeing oneself in connection to the world. By viewing key issues through multidimensional perspectives, emphasising both cognitive, emotional, aesthetic, social and practical skills, education can contribute to 'bildung' (p. 89-90). Critical thinking is also central to Klafki's 'critical-constructivist didactics' (p. 105). In addition to critical thinking, Klafki argues for didactics that develops argumentation, empathy, and contextual understanding.

Klafki's approach may be related to Paulo Freire, who argued that education must emphasis issues that matter for the students. In the book *Pedagogy of the Oppressed*, Freire (1999) is critical to what he called 'the banking model of education', a copy-and-paste methodology where the teacher would dictate to the students. Instead, he advocated for 'problem-posing education', where students should think critically and engage in the matters that are dealt with through dialogue. Teacher and students should discuss issues, and together investigate what the solutions or answers might be. The issues should be relevant to the students and based on what the students themselves experience and view as current in their everyday lives, in other words, contextual. As humans we have a heart, a head, and hands, and Freire argued that education must include all three dimensions. Based on the social reality of their own life,

Freire argued that students experience learning that enables them to express their opinion about the world, reflect, and thus change it. New understanding and knowledge open the eyes of students and enables them to act (Haltli, 2020).

In terms of reducing inequality, which is the goal of the SDG 10, Freire (1999) argued that it is not only the oppressed people living in poverty and lack of self-determination that must be liberated, but also the oppressors, as they are also a product of the oppressive systems. In terms of ESD competencies, this could be connected to systems thinking, where one not just puts a band aid on the wound (reducing poverty), but goes beyond and studies the structures that caused the wound. To give an example, the Norwegian folk high schools (non-formal adult education) developed 'Pedagogics for the Rich' in 2005, inspired by Freire's philosophy. This project challenges the perceived idea that it is the rich countries in the world that should 'lift people out of poverty': "What we need now is not primarily schooling to teach the poor in developing countries to read and write, but a reschooling of the rich in the North." (Mokthari & Sødal, 2005, p. 5). This quote is by Sibusiso M. Bengu, who was the Minister of Education in Nelson Mandela's government in South Africa in the 90's. This statement may be interpreted as an advocacy for addressing the core issues in the world, such as inequality and power imbalances, and challenge the root causes behind these issues. Reading and writing skills are of course important, but education may contribute to addressing key issues and develop competencies in students to challenge the status quo through transformation to more sustainable structures, practices and thinking. This is also partly what the UNESCO Assistant Director-General addressed, and here teacher educators have a major part to play.

In UNESCO's publication *Education for Sustainable Development Goals: Learning Objectives* (2017) transformative learning is highlighted several places and explained that it is best "defined by its aims and principles, rather than by any concrete teaching or learning strategy. It aims at empowering learners to question and change the ways they see and think about the world in order to deepen their understanding of it." (p. 55). Transformative learning and transformation to a more sustainable world are thus key terms when studying ESD. Lotz-Sisitka, Wals, Kronlid & McGarry (2015) argue that "sustainability concerns are most often described as 'wicked problems' or nexus issues characterized by high levels of complexity, ambiguity, controversy and uncertainty both with respect to what is going on and with respect to what needs to be done" (p. 73).

Transgressive learning goes one step further and “underlines that learning in ESD has to overcome the status quo and prepare the learner for disruptive thinking and the co-creation of new knowledge.” (UNESCO, 2017, p. 55). Among the ARTP material, is a publication addressing both transformative and transgressive learning: *Action Learning 3: Transformative Learning and Learning Environments* (Lotz-Sisitka, Tshiningayamwe, Chikunda, Mandikonza & Urenje, 2019b). Here transformative learning is linked to indigenous knowledge, arguing that

it is important to ensure that learning is socio-culturally situated and meaningful to learners. Such an approach can facilitate ‘learning as connection’, where learners are able to make sense of more abstract concepts through also relating them to that which is more familiar to them. Including indigenous knowledge in ESD activities can also offer learners a wider range of knowledges to work with in education, allowing for a wider ecology of knowledges to co-exist in our classrooms. This recognizes and affirms plurality of knowledge and diverse ways of knowing (i.e., there is not just one way of knowing something) (ibid, p. 11).

They further refer to the model of T-learning, which includes both transformative and transgressive learning, developed by O’Donoghue, see model below. T- learning includes both transformative and transgressive learning.

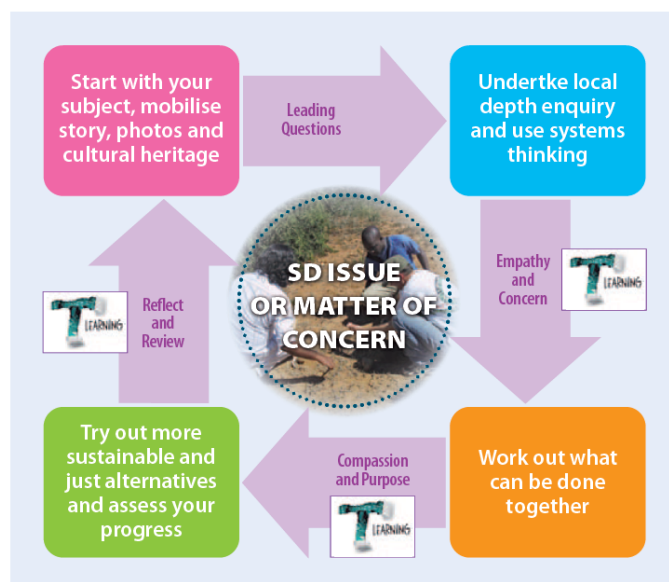


Figure 2 A T-learning process framework guiding ESD processes reflecting heritage, action taking and ethics of care (adapted from O’Donoghue, 2019)

**Figure 6:** T-learning process framework, referred to in one of the materials for the ARTP participants (Lotz-Sisitka et al, 2019b, p. 15).



One important aspect is that the educator starts “by focusing on a sustainable development issue or matter of concern, then consider how they can start teaching this from their subject point of view.” (ibid, p. 14). How to approach ESD in the classroom and which competencies to develop in the learners are central questions in the ESD discourse. The aim of ESD is to foster sustainability, thus the relevance of transformative and transgressive learning. It is therefore interesting that the ARTP emphasises this aspect in ESD. In the following chapters I will present and analyse the responses from the participants interviewed in this research in light of theories on transformative and transgressive learning.

## 5.5 Conclusion

In this chapter I have presented the theoretical approach of this case study research, namely theories of globalization, including the concept of scale, theories of coloniality and decoloniality, and finally, theories of transformative and transgressive learning. ESD is a global goal where the concept of scale is both relevant in understanding the impact of our actions, as well as how to further develop these impacts. We live in a world that is highly unequal, and when studying how issues of inequality are addressed in ESD, theories on coloniality and decoloniality are applicable. The goal of ESD and the teachers who are involved in the ARTP, is transformation to a more sustainable world. Theories of transformative and transgressive learning are thus central in the ESD discourse and this study. In the coming chapters, I will present and analyse policy documents from Botswana and Namibia, as well as the findings from the interviews conducted in this research.

## 6. Data analysis and discussion

In this chapter, the data collected through this master's thesis research will be presented, analysed, and discussed. Starting with a document analysis of publications on ESD by UNESCO and national implementation plans from Botswana and Namibia (6.1). Secondly, the data collection from the digital survey and interviews will be presented and discussed (6.2). Thirdly, an analysis and discussion on the impact of the ARTTP on how issues of inequality are addressed in ESD in teacher training (6.3), and finally a brief discussion on what we may learn from Botswana, Namibia, and Zimbabwe in terms of ESD and teacher training (6.4).

### 6.1 ESD from international to national implementation plans

The main driver behind the agenda of implementing SDG 4.7 is the UN through UNESCO, which has published several resources, reports and policy documents addressing how ESD should be implemented nationally across the world. This chapter analyses a selection of policy documents and publications on ESD on a global, regional, and national level, with the aim of studying how these international plans are being interpreted, understood, and implemented nationally in Botswana and Namibia. I was not able to find an implementation plan for SDG 4.7 from Zimbabwe, thus Zimbabwe is not included in this chapter. Zimbabwe produced a voluntary national review of the SDGs in 2017, but without reference to target 4.7 (UN Sustainable Development Goals, undated). Zimbabwe will report again in 2021 at the UN High Level Political Forum in July, and it will be interesting to see if and what Zimbabwe will report regarding SDG target 4.7.

Starting with the global level, I include a brief analysis of the role of education in an international context.

#### 6.1.1 ESD at the global level

After the second world war it was argued that the world would be safer if people were educated. However, as Jones (2007) points out, education can be used both to teach and promote peace and democracy, as well as the opposite; racism and denial of human rights (p. 327). Education is thus a powerful means to promote the government's agenda, and it may be clearly communicated through the curriculum, or implicit through the hidden curriculum. As shown in the chapter on theoretical framework (5.3), power of coloniality is presently

communicated explicit or implicit in education, as illustrated in the cases from South Africa with the #RhodesMustFall movement and in Latin-America on how learning materials omit or misrepresent the history of Afro-descendants.

With the Universal Declaration of Human Rights (UDHR), and article 26, which states that education is a human right and should be free and available to all, there was a rise of education with a Human Rights approach (Ramirez, Suárez & Meyer, 2006). This approach was founded on the principle that we are global citizens that are both entitled members and proactive agents in the world that we live in (p. 36). The emphasis in article 26 of the UDHR is that education should contribute to “the full development of the human personality” and “shall promote understanding, tolerance and friendship among all nations, racial or religious groups” (UN General Assembly, 1948). To follow up these promises the UN initiated the Education for All programme, as well as the Millennium Development Goals, which in 2015 got replaced by the SDGs. With the UN having agreed on a common sustainable development direction towards the year 2030, emphasis is continued to be placed on education as playing a key role in development.

#### 6.1.2. UNESCO as the driver for ESD

The goal of *ESDfor2030* is to build a more just and sustainable world through strengthening ESD and contributing to the achievement of the 17 SDGs. (UNESCO, 2020)

UNESCO has promoted ESD for several decades, and through the SDGs education is both a goal on its own (SDG 4) and means for attaining the other SDGs. (UNESCO, 2017). Although ESD has been promoted for many years, it has a much stronger position now, mainly due to the urgency of climate change and the need for a transformation in how we think and act (p. 1). This is evident in UNESCO’s (2020) latest Roadmap for ESD, *ESDfor2030*, which I argue places a major emphasis on the environmental dimension of sustainable development, as compared to the social and economic dimension (see e.g., p. 6). This is also communicated implicit through the pictures, which are mainly of nature and images such as children involved in gardening.

One challenge for educational policies is exactly how to include ESD and thus also the SDGs in the curriculum, and to make it coherent. To mention a few, SDGs include both ending poverty, promoting economic growth, reducing inequality within and among nations,

achieving gender equality, as well as stopping climate change. UNESCO's answer to this challenge is to promote critical and contextualized understanding of the SDGs through ESD: "ESD raises questions on the inter-linkages and tensions between different SDGs and provides learners with the opportunity to navigate the required balancing acts with its holistic and transformational approaches." (ibid, p. 16).

It is a huge task for the world's nations to address all the 17 SDGs through education. As we will see in the analysis of the national implementation plans, the countries prioritize certain goals, at the same time as pointing out the importance of a holistic approach to sustainable development. A recent UNESCO study, which reviewed policy documents of 10 countries, "shows that ESD is mostly associated with the teaching of scientific knowledge on environment." (UNESCO, 2020b, p. 9). UNESCO continues, and states that "This is not enough to bring the transformative power of education to its full force." (ibid). In terms of issues of inequality in ESD, it is interesting to analyse how the social and economic dimension is included, or not, in policy documents and implementation plans.

Botswana and Namibia's policy plans on SDG 4.7 have been written prior to the release of the latest *UNESCO Roadmap ESDfor2030* (2020), and it is thus more relevant to analyse earlier UNESCO documents and publications that may have guided the nation states when designing their implementation plans. Thus, the UNESCO documents that are included in this analysis are the following:

- *Education for Sustainable Development Goals: Learning Objectives* (2017)
- *Roadmap for Implementing the Global Action Programme on Education for Sustainable Development* (2014)

Before analysing Botswana and Namibia's national implementation plans in light of UNESCO documents, I will comment on two aspects in the UNESCO documents; a) the general message UNESCO sends to its member states on how to implement ESD into national plans, and b) UNESCO's action plan for implementation of ESD in teacher training.

Starting with a), there is a text box named "Crucial issues for the successful implementation of policies promoting ESD" in the publication *Education for Sustainable Development Goals: Learning Objectives* (2017). Here UNESCO writes that "There is no 'one size fits all' version

of ESD. Political and socio-cultural realities and specific environmental and ecological challenges make a contextual grounding of ESD essential. That is why we need locally and nationally relevant interpretations of ESD and related forms of education.” (p. 49). UNESCO thus recognizes that nation states need to interpret ESD into their own contexts, which may be different from one nation to another. UNESCO also writes “local” interpretations, which one may understand as local communities, including indigenous communities. At the same time, in the same publication, UNESCO uses sentences like “ESD *has to* be integrated in all curricula of formal education, including early childhood care and education, primary and secondary education, technical and vocational education and training (TVET), and higher education” (ibid, my emphasis). Another example: “ESD *should not*, first of all, be seen as an adjectival education or an isolated stand-alone subject. For instance, in school education, it *must* become an integral part of teaching and learning of core subjects (e.g., math, sciences, social studies and languages).” (ibid, p. 51, my emphasis). Here UNESCO uses the commanding words *has to*, *should not* and *must*, and thus contradicts itself in saying that there is no ‘one size fits all’, by giving clear instructions on how to implement ESD nationally and locally. Instructing on a recipe on how to implement ESD nationally implies that this approach is applicable everywhere, and thus universal.

Pirbhai-Illich & Martin (2019) have analysed UN websites on the SDGs and the UNESCO publication *Education for Sustainable Development Goals: Learning Objectives* (2017) and found that “the following discourses prevailed: universalism, modernism, Othering and neoliberalism” (p. 21). At first glance, one may agree that ESD is universal, however, as mentioned in the literature review (chapter 3), the concept of sustainable development is much contested. Pirbhai-Illich & Martin (2019) argues that the idea that a balance between the social, economic, and environmental needs of life on earth is “an a-cultural view that assumes universal applicability across all nations and thus evades the notion that different cultures will have different interpretations of the relationship between society, economy and environment.” (p. 22). They further refer to Burford et al (2013), who argue that “ethical values in the form of a fourth dimension that might be variously described as cultural-aesthetic, religious-spiritual, and political-institutional should be included as part of a process of ‘contextual localization of items, which can nonetheless fit into a generalizable framework’” (ibid). This fourth dimension might be what UNESCO expresses when writing that there is no ‘one size fits all’ in terms of implementing ESD nationally. However, as shown above, this perspective

is overshadowed by the instructions on how to implement ESD presented in *Education for Sustainable Development Goals: Learning Objectives* (2017).

This incongruence between standardised models and the need for local adaptations may be connected to debates within the development discourse. Green (2003) looks at international development projects and asks:

Why are development projects so similar in so many places? And why, despite the rhetoric of participation in which the poor apparently contribute to the design of strategies to ‘lift them out’ of poverty, is the current incarnation of development so uniform wherever it appears? (p. 123).

In terms of planning in development, Green argues that agencies are more concerned about “the shorter-term ‘purpose’ of specific funded activities which are intended to produce measurable ‘outputs’ at the end of a finite three- to five-year period”, and “less concerned with the goal, the higher-tier objective which the purpose is intended to contribute towards.” (p. 128). This incongruence may be labelled as clashing scales (see chapter 5.2), both in terms of temporal scales, but also in terms of how global, mainstreamed models do not match the local terrain. The long-term goal of SDG 4.7 is “By 2030 ensure that all learners acquire the knowledge and skills needed to promote sustainable development”. Whereas the indicators for SDG 4.7.1 are the “extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment”. (UNESCO Institute of Statistics, 2017). Green (2003) argues that the development discourse does not operate solely within the development discourse, but also involves New Public Management and neo-liberalism (p. 130). This argument may also be relevant in terms of SDG 4.7, which is not only about learners’ knowledge and skills, but also about education politics and policies, and ultimately which competencies the future workers should have, according to the authorities.

It is a global achievement that we have SDG 4.7, which has the potential to challenge the status quo, and develop necessary competencies in students to contribute to the transformation to a more just and sustainable world. With SDG 4.7 building on ESD, EE, GCED, HRE etc, it thus acknowledges different educational disciplines, as well as “appreciation of cultural diversity and of culture’s contribution to sustainable development” (SDG 4.7.). However, Pirbhai-Illich & Martin (2019) argue that because ESD “is tied to the neoliberal agenda of

monitoring and measurement of quality, it requires educators who are tasked with implementing it to be critically aware of (...) how they reflect a continuing coloniality of thought. This, they see “as a first step to the process of decolonizing responses to SDG 4.7” (p. 23). These perspectives are relevant when studying how Botswana and Namibia, which are former protectorate and colony, interpret SDG 4.7. and implement it nationally. On the other hand, one may argue that SDG 4.7 gives a large space of opportunity to challenge othering, neoliberalism, coloniality and universality by not reproducing these structures, e.g., through transformative learning and the whole-institution approach.

Moving on to b), regarding implementation of ESD in teacher training, the UNESCO Roadmap for ESD from 2014 is relevant. Here the Global Action Programme (GAP) is presented with five priority areas, where teacher training is one of the areas (p. 15):

- 1) Advancing policy,
- 2) Transforming learning and training environments,
- 3) Building capacities of educators and trainers,
- 4) Empowering and mobilizing youth, and
- 5) Accelerating sustainable solutions at local level.

GAP priority area 3 states that:

Educators and trainers are powerful agents of change for delivering the educational response to sustainable development. But for them to help usher in the transition to a sustainable society, they must first acquire the necessary knowledge, skills, attitudes and values. To address sustainable development issues, they must also develop the requisite motivation and commitment.” (UNESCO, 2014, p. 20).

This may be understood as a lot of pressure being put on the teachers and trainers: They must acquire not only knowledge and skills, but also attitudes and values, as well as being motivated and committed in order to deliver on ESD. This brings us back to the literature review (chapter 3), and whether ESD should have an individual or system approach. Although priority area 3 emphasises on the role of other stakeholders to achieve this plan, teachers and trainers are seen as the main players. Teachers do of course play a major role, however, this emphasis on teachers as individual catalysts in ESD, may also be passed on to the students as agents of change. This is in line with learning objectives of ESD, that students should both have knowledge, skills, attitudes, and actions towards sustainability. However, the pitfall

might be that the system approach is overshadowed by the individual perspective. If transformation to a more sustainable world is to happen, there also has to be structural changes, as argued in theories of coloniality (see chapter 5.3). On the other hand, UNESCO is also emphasising the whole-institution approach, which is supported in priority area 1 on policy: “An institution-wide process is organized in a manner that enables all stakeholders – leadership, teachers, learners, administration – to jointly develop a vision and plan to implement ESD in the whole institution.” (UNESCO, 2014, p. 35). It is here recognized that there needs to be a strong cooperation between different stakeholders, thus addressing the system, in order to implement ESD.

GAP is also devoting special emphasis on certain groups, where Africa, which according to this publication is the one of the continents which are most vulnerable to climate change, has priority: “ESD can help address several major needs in the region, especially by developing greater synergies between school and community and re-aligning education with local contexts.” (UNESCO, 2014, p. 14). This brings us to the next chapter, ESD in the context of Southern Africa.

### 6.1.3 The regional level: Southern Africa

Countries in Southern Africa have a long history of cooperation, e.g., through the Southern Africa Development Community (SADC), and there is reference to joint efforts and cooperation for sustainable development in both the national implementation plans from Botswana and Namibia. In addition, there is also reference to Agenda 2063, which is the long-term plan for the countries on the African continent, adopted by the African Union (AU) in 2013 (African Union, undated). The second goal in Agenda 2063 addresses education, but compared to the SDGs, there are no goals in Agenda 2063 that specifically address ESD. However, several of the goals in Agenda 2063 address issues such as inequality, climate change, human rights, and democratic values, but not specifically in connection with education (ibid).

As mentioned in chapter 2, there has for several decades been cooperation between nations in Southern Africa on EE through Environmental Education Association of Southern Africa (EEASA), established in 1982 (EEASA, undated). EEASA states that the association



has always taken a broad view of the environment and environmental processes: these are socio-ecological, socio-political, socio-economic, and at the heart of it there is the need to protect the integrity and viability of the ecological systems. This broader view of environment resonates with the principles of Education for Sustainable Development (ESD). (ibid).

This interpretation, which include multiple dimensions in sustainable development, is important to keep in mind when analysing the national plans. It also refers to what is called “strong sustainability” (see chapter 3.1), placing the environment at the centre, setting the limits for the socio-economic and political spheres.

A recent regional study of the implementation of SDG 4.7 in the Nordic countries, also a region with long history of cooperation, found that there is a strong emphasis on the environmental dimension: “Although sustainability education has a clear application in the fields of social and political life and economic activities in all of the Nordic countries, it is still the case that when sustainability education is discussed, an environmental perspective is most often taken.” (Jónsson, Guðmundsson, Øyehaug, Didham, Wolff, Bengtsson, Lysgaard, Gunnarsdóttir, Árnadóttir, Rømoen, Sund, Cockerell, Plummer & Brückner, 2021, p. 64). The possible explanation given by the authors, is that ESD “originated as a concern in schools within environmental education, at least in Finland, Norway, and Sweden, and it still has some of the character traits as a subject area within the environmental sciences.” (ibid). This explanation was also brought up by some of the teacher educators interviewed in this research, which will be discussed in chapter 6.2.

In terms the socio-economic dimensions in sustainability, it is relevant to mention again that both Botswana and Namibia have a high level of inequality in terms of income distribution (see chapter 2), and it is interesting to see if this issue is brought up through SDG 4.7 in the policy documents.

#### 6.1.4. The national level: Implementation plans for ESD

Policy is a key factor for integrating ESD in all formal, non-formal and informal learning settings. (...). The Ministries of Education around the globe have an important responsibility to ensure that education systems are prepared for, and responsive to, existing and emerging sustainability challenges. This includes, among others, integrating ESD into curricula and national quality standards, and developing relevant indicator frameworks that establish standards for learning outcomes. (UNESCO, 2017, p. 48).

In many countries, according to Didham & Ofei-Manu (2018), “the initial entry point of inclusion for ESD has been National Plans for Sustainable Development. However, these mandates for ESD do not always translate quickly into strong integration into educational policy.” (p. 94). Botswana and Namibia are both ahead regarding national implementation plans for SDG 4.7. These are recent plans, and it is perhaps too soon to assess how well these plans have been implemented and followed up in practice. However, it is relevant to study these documents through discourse analysis methods to understand how SDG 4.7 is understood and followed up in these two national contexts.

Ministry of Tertiary Education, Research, Science and Technology in Botswana published a national implementation plan for SDG 4 in April 2018. Namibia became the first country in the SADC region to have a stand-alone National Environmental Education (EE) and Education for Sustainable Development (ESD) Policy (UNESCO, 2020c). The Namibian implementation plan for EE and ESD (2019) was launched in August 2020 (Namibia’s Ministry of Environment, Forestry and Tourism, 2020). In this chapter I will give a brief analysis on these two implementation plans in light of the relevant UNESCO documents and publications mentioned in chapter 6.1.2. This include emphasis on how issues of inequality are or are not included in these implementation plans.

As much as sustainable development is understood to include economic, social, and environmental dimensions, there are debates regarding SDG 4.7: Should the emphasis be on EE, on GCED or HRE, or perhaps all three disciplines make up ESD? It is e.g., noteworthy that UNESCO in the *ESDfor2030* roadmap (2020), writes that the goal of SDG 10 is to “Tackle inequalities in all forms, with particular emphasis on *environmental justice*” (p. 17, my emphasis). None of the ten targets of SDG 10 mentions environmental justice, and it is interesting that this goal, which is clearly emphasising the social and economic dimension of sustainable development, in this UNESCO publication, places particular emphasis on the environmental dimension. This tug of war between which of the three dimensions in ESD will be kept in mind when analysing Botswana’s and Namibia’s implementation plans.

#### 6.1.5. Botswana’s implementation plan for SDG 4, including target 4.7. on ESD

As UNESCO (2017) has stated, there is no ‘one size fits all’ (p. 49), and each country has to interpret and understand the SDGs into their own national and local contexts. At the same time, as shown earlier in this chapter (6.1.2), UNESCO has clear communication on what

nation states should do to implement ESD. Botswana's implementation plan for SDG 4, was developed in cooperation with different stakeholders, including Botswana National Commission for UNESCO Secretariat, and was funded by the Korea National Commission of UNESCO (UNESCO, 2018a, p. 2). All the stakeholders who participated in developing this plan were divided into groups according to their department or institutional mandate. The group that worked on 4.7 also worked on 4.2 and 4.6 (p. 17). Each group was then asked to contextualise and "indicate their own understanding of the assigned target, within the context of their institutional mandate." (ibid). This shows that the Ministry saw the importance of contextualising the targets in order for the measures listed in the implementation plan to be meaningful in Botswana. At the same time, it is stated in this plan that Botswana's vision and way forward for the next education agenda "is not different from the global ideals of the Education 2030 agenda. In summary Botswana's education agenda for the next fifteen years is pulling in tandem with the global education agenda as encapsulated in the Sustainable Development Goal 4 –Education 2030." (Botswana Ministry of Tertiary Education, Research Science and Technology, 2018, p. 13)

Botswana's implementation plan is for SDG 4, and includes all the targets of goal 4, however, I will here focus on what is written about target 4.7. As a general observation, the plans for implementation of SDG 4.7 in Botswana encompasses both ESD and GCED, and places equal emphasis on these two educational disciplines. The conceptual description of the content of SDG 4.7 is as follows: "This (target 4.7) entails empowering the next generation of learners with competencies required to lead productive lives and make informed decisions on issues of *environmental sustainability, humanity and civic education for sustainable development.*" (p. 259, my emphasis). Humanity may here refer to the Setswana word "Botho", which refers to the expression "Motho ke motho ka batho ba bangwe". In English this can be translated to "person is a person with, through and because of other people" (Morapedi, 2018, p. 180). This philosophy is found across Southern Africa, perhaps more commonly known as "ubuntu" (in Zulu), and may be explained as followed:

*Botho* involves interdependency and communal belonging, which is part of the essence of traditional African life. It means approaching people by respecting their culture or the way visitors normally greet and behave among their hosts. It is a process of earning respect, where one gives it before one receives it. The benefit of exercising such an approach is mutual understanding, trust and respect between members of a community. (ibid, p. 181).

“Botho” is explicitly mentioned in the section called “Performance Indicators” where one indicator is: “Responsible learners who are compassionate, caring and demonstrate Botho.” (Botswana Ministry of Tertiary Education, Research Science and Technology, 2018, p. 25). This shows that “Botho” is a valued quality and philosophy, and this demonstrates how SDG 4.7 is interpreted in the national context. To achieve long lasting sustainable development, which promotes equality, it is vital with mutual respect between members of a society, as well as members of the global society. It is therefore interesting that “humanity” is mentioned as one of three main areas, together with civic education for sustainable development and environmental sustainability.

Of the listed performance indicators, all but one is referring explicitly to ESD and GCED in which competencies the students should acquire through SDG 4.7. (ibid). This implies that there is a strong social-economic dimension in the implementation plan, and many issues related to inequality are addressed regarding current status and/or associated challenges in light of SDG 4.7. Examples of issues are gender inequality and women empowerment, eradication of poverty, anti-corruption policy, youth unemployment, issues related to violence and crime, including in schools. These are all addressing various types of inequality, which are present in Botswana today, and thus the implementation plan seems to have a strong national contextualisation of SDG 4.7.

<b>Initiatives</b>	<ul style="list-style-type: none"> <li>● Develop and review national policies and programmes to ensure a wide coverage of GCED and ESD themes.</li> <li>● Promote an interdisciplinary, multi-stakeholder approach to ESD and GCED.</li> <li>● Ensure proper mainstreaming of ESD and GCED at all levels of education.</li> <li>● Develop robust assessment systems for ESD and GCED for cognitive, socio-emotional and behavioural learning outcomes</li> <li>● Invest on prospective opportunities that promote ESD and GCED (freedom parks, cultural villages/centres, national dialogue centre, and sustainable environment parks).</li> <li>● Strengthen implementation of the Child Friendly Schools' Programme.</li> <li>● Develop strategies for elimination of bullying and other violent behaviour in schools.</li> <li>● Promote establishment of school based peace and human rights clubs.</li> </ul>
<b>Performance Indicators</b>	<ul style="list-style-type: none"> <li>● % of teaching hours dedicated to education for sustainable development/global citizenship education</li> <li>● % of students showing proficiency in knowledge and understanding of ESD and GCED</li> <li>● Availability of national policies and programmes promoting ESD and Global Citizenship Education</li> <li>● Availability of assessment tools and techniques to measure knowledge and understanding of ESD and GCED</li> <li>● Improved level of investment on prospective opportunities that promote ESD and GCED (freedom parks, cultural villages/centres, national dialogue centre, sustainable environment parks)</li> <li>● Responsible learners who are compassionate, caring and demonstrate Botho.</li> </ul>

**Figure 7:** From Botswana’s National Implementation Plan for SDG 4 (2018), on SDG 4.7.

The “Reporting Template for SDG 4.7” (pp. 51-52) has listed several “achievements”, based on the “initiatives” of the implementation plan of SDG 4.7. (see figure 7), which includes “Invest on prospective opportunities that promote ESD and GCED (freedom parks, cultural villages/centres, national dialogue centre, and sustainable environment parks).” (p. 52). This is another example of contextualization of SDG 4.7, and includes the wider communities, which is something that is often promoted through ESD - to learn in different environments.

When it comes to teacher training, pedagogical approach, and methodology, this is not mentioned regarding plans for SDG 4.7. However, teacher education is addressed in the policy plan regarding target 4.c, which focuses on teachers (p. 28). This might be why SDG 4.7 mainly focuses on the students, and not on e.g., training teachers in ESD/GCED. As mentioned earlier, one of the priority areas of GAP is teacher training and capacity building in ESD. It is thus interesting that teacher training is not mentioned regarding the plans for implementing ESD in Botswana. A study by Mathews, Oats, & Kgotlaetsile (2020) on the *Status of Education for Sustainable Development in teacher training institutions in Botswana* concluded that “information on ESD has been fairly disseminated at teacher training

institutions” (p. 519). However, they also found that the majority of the teachers they interviewed could not answer how “Botswana embraced the concept of ESD” (p. 525), and thus concluded that it is “imperative for the Ministry of Education, through the department of training as the producer of teachers to take a deliberate initiative of internalizing the ESD concepts” (ibid).

In the conclusion of Botswana’s implementation plan for SDG 4, it is stated that “the successful implementation of this plan requires formulation of a decentralization policy with a clear plan of action. It will include provision of leadership and governance reforms, whereby each region and each department are given autonomy and the necessary resources to ensure provision of quality education as per the needs of the region.” (p. 29). This may be understood as a way of down-scaling plans to implement SDG 4 in Botswana, by giving autonomy to regional authorities to provide quality education. ESD is also about understanding the different scales in the world – from the very local to the large global processes. By giving more power to local authorities, people may feel a greater sense of ownership, which is particularly relevant in terms of ESD. If we - individuals, societies, and institutions – do not have ownership and experience that we can contribute to change by playing an active role, it is much more difficult to create a sustainable future.

With this brief analysis of Botswana’s national implementation plan, it is evident that the national contextualization of SDG 4.7 is ESD and GCED, with a strong emphasis on the socio-economic dimension of sustainable development, including issues of inequality. This is also in line with *Botswana Vision 2036*, which goal is “Achieving prosperity for all” (Botswana Vision 2036, undated). The four pillars of Vision 2036 are:

- Sustainable Economic Development
- Human and Social Development
- Sustainable Environment
- Governance, Peace and Security

Botswana is thus in tandem with the global education agenda for 2030, but also communicates clearly what the national priorities are in terms of SDG 4.7, where values such as “Botho” is emphasised. What is less clear, is Botswana’s plans for training teachers in ESD and GCED. This, however, will be discussed in the next chapter where interviews with teachers in

Botswana, Namibia, and Zimbabwe will be analysed, but first an analysis of Namibia's implementation plan for target 4.7.

#### 6.1.6. Namibia's implementation plan for SDG 4.7 – EE and ESD

Training and capacity building in EE and ESD is recognised in Namibian policies, curricula and strategies as one of the main strategies for addressing sustainable development challenges as it is expected to build a critical mass of citizens, who are not just informed and trained, but who are above all capable of using their achievements to bring about the economic, social, cultural and political changes required for sustainable development. (Namibia's Ministry of Environment, Forestry and Tourism, 2019, p. iii)

Namibia's implementation plan for SDG 4.7 is a cooperation between the Ministry of Environment, Forestry and Tourism (MEFT) and the Ministry of Education, Arts and Culture (MEAC), and is called *National Environmental Education and Education for Sustainable Development Policy* (2019). It is, however, interesting that on the front page there is only reference to MEFT and not MEAC.

The plan was launched in August 2020, but "The development of this policy was originally initiated already in the early 1990s" (MFET, 2019, p. 1). According to Tshiningayamwe (2017) the "infusion of ESD across the curriculum approach has been supported by three major ESD development projects: the Enviroteach project, Life Sciences project (1991–2000) and the Supporting Environmental Education in Namibia (SEEN) project (established in 2001) (p. 110). Through SEEN, issues related to the environment were addressed across the curriculum under "the six broad themes: natural resources and their management, poverty and inequality, society and governance, development and the environment, health and the environment and globalisation." (ibid).

Namibia's implementation plan is aligned to global, regional, national, and local contexts, and there is mention of Namibia's obligation to follow up and "mainstream EE as part of implementation of the agreed objectives of all the SDGs, in particular target 4.7." (p. 5). There is further reference to several African and regional policies, such as *Africa Environmental Education and Training Action Plan 2015–2024* as well as the *SADC Regional Environmental Education Programme (REEP)* (p. 6). These policies appear to have a strong emphasis on the environmental dimension of sustainable development. In terms of the national context,

The SADC REEP (2013) has played a key strategic role in facilitating the shaping of environmental education policy and practices in Namibia for many years, including the establishment of the Namibia Environmental Education Network (NEEN), the development of the environmental education training programme at Namibia University of Science and Technology and the conceptualization of the Khomas-Erongo Regional Centre of Expertise in ESD (ibid).

As much as it is stated that this policy “is designed to support the *holistic* approach and/or integration of EE and ESD” (p. 1, my emphasis), there is a strong emphasis on environmental issues throughout the document, and very little mention of socio-economic issues, and no mention of GCED. This might be explained by the following statement in the introduction: “At a time when environmental issues threaten Namibia’s development and the quality of life of its citizens, EE and ESD are of utmost importance in creating environmental literacy to sensitize the nation on the role that each individual person has to play.” (p. 1). Namibia relies on income from farming, agriculture, and fisheries, as well as mining, which all depends on the exploitation of natural resources. Also, the tourism industry relies on nature conservation, and this national contextualisation of target 4.7. shows why EE is emphasised:

Namibia has the opportunity, through EE and ESD, to build on these successes by changing negative attitudes and values to pro-sustainability through environmental awareness and education campaigns thus creating environmental citizenry. Through eco-friendly, recycle-entrepreneurship skills training, a new “green” economic sector can be developed that will create employment opportunities that are much needed for sustainable development. EE and ESD is a key factor in the long-term development of Namibia and must go hand in hand with short-term environmental remedial and mitigation solutions. (MEFT, 2019, p. 3).

The environmental focus is also evident in the thirteen principles for the EE and ESD policy, which are listed on p. 9 in the document:



### 3. Guiding Principles

The National EE and ESD Policy is guided by the following thirteen principles:

- i. Consider the environment in its totality including natural and human-made environment;
- ii. EE and ESD must be a lifelong process. It should begin at pre-school level and continue through all formal and informal educational stages;
- iii. EE and ESD must be inter-, multi- and trans-disciplinary in its approach, drawing on the specific content of each discipline to achieve a holistic and balanced perspective with systems thinking at its core;
- iv. Examine major environmental issues from a local, national, regional and international perspective so that all stakeholders receive insights into environmental conditions in other geographical areas;
- v. Focus on current and future environmental situations, while recognising the historical perspective;
- vi. Promote the value and necessity of local, national, regional and international cooperation in the prevention and solutions to environmental problems;
- vii. Explicitly consider environmental aspects in plans for development;
- viii. Enable all stakeholders to have a role in planning their learning experiences and provide an opportunity for making decisions and accepting their consequences;
- ix. Help stakeholders to discover the symptoms and root causes of environmental problems;
- x. Emphasize the complexity of environmental problems and thus the need to develop environmental literacy, critical thinking and problem-solving skills;
- xi. Use different learning situations and a variety of educational approaches to teaching and learning about, for, in/through the environment, with emphasis on practical activities and first-hand experience;
- xii. Build on and improve on existing resources, methods, practices and guidelines for EE and ESD;
- xiii. Integrate monitoring and evaluation into all EE and ESD initiatives.

**Figure 8:** Guiding principles for Namibia's policy on EE and ESD.

Most of the principles are focusing on environmental issues, but as stated in the first principle, environment is here considered in its totality, including natural and human-made environment. This interpretation of "environment" is worth spending some time on. In the ESD discourse, it is, as already mention a tug of war between the different disciplines on where the emphasis should be. As much as ESD is about a holistic approach, including all three dimensions, it is not always the case when studying implementation in practice. As shown in the case of Botswana, there was an emphasis on the socio-economic dimensions, whereas in the Namibian policy, there is more emphasis on environmental issues. That being said, this could be argued to be a very dichotomic interpretation of the policy papers. To illustrate this point, I will use the example of the dichotomy of the body and the mind and the distinguishing between physical and mental health. As most would argue today, you cannot treat the body without also including the mind, and vis versa. The point of bringing in this example is to open up for an understanding where one may see humans, the social-economic dimension, as inseparable from nature, the environmental dimension in sustainable development. When Namibia chooses to emphasis environmental issues, such as the principle 4-7 and 9. One may understand it in connection with social and economic aspects, that

humans are dependent on natural resources and nature itself, and thus will be positively affected by these efforts through EE and ESD. This understanding could be backed by the principles in number 3, 10 and 11, which brings in the holistic approach, the complexity of environmental issues and methodological approach. It would be interesting to investigate this analysis further, possibly in connection to indigenous knowledge, or “heritage culture” as is referred to several places in Namibia’s policy document on implementation of EE and ESD, but not elaborated upon. The time and space allocated for this thesis does however not allow for a more in-depth analysis on this matter.

Moving on to teacher training, this is elaborated upon in the strategies for implementing EE/ESD in Namibia (MEFT, 2019, p. 11-13). “The vision of the National EE and ESD Policy is for an educated and empowered Namibia with environmentally literate people taking responsibility and action for a sustainable future.” (p. 10). To achieve this, this policy should “reorient, integrate and *upscale* quality EE and ESD in environmental awareness, education and training systems, research and innovation systems, policies, programmes and action for sustainable development.” (ibid, my emphasis). To manage to upscale quality EE and ESD, training and capacity building, together with pedagogical innovation through teacher forums, are listed as two of many strategies, where the training should be carried out in what is called “Centres of Expertise” (p. 12). According to Tshiningayamwe (2017), ESD implementation in Namibia “is taught using approaches based solely on the transmission of knowledge that are not suited for it.” (p. 116). Hence, Tshiningayamwe argues that the major challenge of ESD in Namibia is “to meet the training needs of teachers with the view to effect profound changes in their ways of thinking, attitudes and behaviours for sustainable development.” (ibid).

According to the implementation plan, EE and ESD practitioners should also be involved in curriculum development, and EE and ESD should not be perceived as an add-on subject, but be integrated into existing subjects (MEFT, 2019, p. 3 and p. 12). This approach is in line with the policy that learning should embrace “trans-, multi- and inter-disciplinary educational approaches to address interrelated sustainability issues resulting from interactions between society (culture, politics and economic) and the bio-physical environment.” (p. 4). As much as teachers and trainers are important to reach the goals in Namibia’s policy on implementation of EE and ESD, so are other stakeholders such as NGOs, women groups, traditional authorities, media institutions etc (p. 16). There is reference to “change projects” as part of the training (p.12), as well as means to protect the environment (p. 11). This is interesting, as

Change Projects (CP) is a major part of the ARTP, where the participants design their own CP and follow it up during the project period. It is possible that there has been influence from Namibian ARTP participants on the decision on bringing in CP as a means to promote sustainable development through education.

It is also worth mentioning that the use of local Namibian languages is emphasised in media, but also in terms of learning materials (p. 12). Learning materials should be drawn from global, regional, national, and local contexts, and “Materials should be developed in all local languages, be cognizant of indigenous environmental/ecological knowledge and use local sustainability examples” (ibid). This indicates that Namibia is align with global policies on SDG 4.7, at the same time as emphasising national and local contexts and knowledge, to bring about the changes needed to address sustainable development through education.

Namibia’s policy document on the implementation of EE and ESD shows that Namibia is following up the global commitment of SDG 4.7. At the same time, this document clearly shows how Namibia has contextualised SDG 4.7 to the Southern African region, but even more so the national and local contexts. Namibia very much depends on natural resources and thus sees environmental literacy as a central goal of EE and ESD. Environment, however, is defined as both natural and human-made environment (p. 9), and one may interpret this focus on environmental issues as also addressing social-economic matters. This, however, would require a more in-depth analysis. Namibia has clear strategies on how to reach the goals in this policy paper, including training and capacity building of teachers. What is less clear, is how issues of social and economic inequality will be addressed through EE and ESD, as most of the initiatives addresses natural environmental issues.

#### 6.1.7. Conclusion

In this chapter I have analysed Botswana’s and Namibia’s policy papers on SDG target 4.7, from 2018 and 2019, respectively, as examples of how international plans are interpreted and contextualised nationally. The analysis of these two policy documents shows that Botswana has chosen to focus on GCED and ESD, whereas Namibia’s emphasis is on EE and ESD. To put it simply, Botswana’s contextualisation and interpretation of target 4.7 is on the socio-economic dimensions of sustainable development, whereas Namibia addresses environmental related issues. This, however, is more complex than this narrow distinction, as shown in this chapter. Both countries emphasise a holistic approach to ESD, where all three dimensions are

included, and thus acknowledge the complexity of the issues that target 4.7 addresses. However, as much as both the international UNESCO documents, and national policy documents states the importance of such a holistic approach to ESD, my analysis shows that this is less evident throughout the documents. To give a more in-depth analysis would require further research. The next chapters will shed some light on these issues, where interviews with teacher educators in Botswana, Namibia, and Zimbabwe will be analysed.

## 6.2. Perspectives on how issues of inequality are addressed in ESD by teacher educators in Botswana, Namibia, and Zimbabwe

Educators are powerful change agents who can deliver the educational response needed to achieve the SDGs. Their knowledge and competencies are essential for restructuring educational processes and educational institutions towards sustainability. (UNESCO, 2017, p. 51)

As stated above, educators are powerful change agents and are central in the implementation of ESD in educational institutions. The choice of pedagogics and the educator's level of competencies in the subjects that are taught are decisive. In addition, educators are often seen as role models and thus have power to influence their students regarding values, attitudes, and behaviour. This is not to say that the whole responsibility of implementation of ESD rests solely on educators' shoulders, and a whole-institution approach is often argued to be the strategy of implementation of ESD (UNESCO, 2017, p. 53). However, as the UNESCO's GAP priority action area 3 is "Building capacities of educators", educators are still considered as "key actors in facilitating learners' transition to sustainable ways of life" (UNESCO, 2020b, p. 30). UNESCO's choice of prioritizing building capacities of educators also indicates that more work still needs to be done "to reorient teacher education to approach ESD in its content and its teaching and learning methods." (UNESCO, 2017, p. 51).

The responsibilities of educators are multifaceted. The teaching must be of relevance, as is what SDG 4.7 is perceived to be, the pedagogics and methodology must foster and develop the preferred competencies in the students, and the educator must be aware of the power dynamics at play and create safe learning environments. This chapter dives into some of these issues, and presents, analyses, and discusses the findings from the research data collection, consisting of a digital survey and focus group interviews with teacher educators and TVET educators from Botswana, Namibia, and Zimbabwe, as well as interviews with programme coordinators in the ARTP. This chapter will present, analyse, and discuss how issues of inequality are addressed in ESD in teacher training, as well as which competencies that are emphasised to respond to inequalities (SDG 10). Starting by addressing the three dimensions in sustainable development in the ESD context (6.2.1), secondly, how issues of inequality are addressed in ESD in teacher training (6.2.2). Thirdly, which competencies that are emphasised in ESD in order to respond to inequalities (6.2.3).

### 6.2.1 Including all three dimensions in sustainable development?

As discussed in the previous chapter (6.1) there is a tug of war between which of the three dimensions in sustainable development that get prioritized when implementing ESD. The ideal is to have a holistic approach to sustainable development and include all three dimensions. However, that seems to be easier said than done. This issue was also addressed in the interviews with the coordinators and participants in this case study research. The question was whether they thought that there is an emphasis on the environmental dimension, or if they thought the approach is holistic and balanced between the three dimensions. As much as most of the participants and coordinators emphasised a holistic approach, some thought that there is more emphasis on the environmental dimension. The examples that were given was e.g., that colleagues at their institution considered ESD to belong to natural science and environmental studies etc. and not as a cross-disciplinary subject. Dr Ntha Silo also pointed out that the Change Projects by the participants in ARTP are more inclined to environmental issues. She explained further:

Dr Ntha Silo:           The problem why even you don't seem to get this cooperation or that collaboration when you go back to the institutions with these change projects, is that some teacher educators, or some who are coming from a different background, social studies, languages, they feel it's the preserve of the people who are doing environmental science and so, and I feel that's true. Sustainability issues, as the SDGs reflect, they cut across. Social issues, issues of inequalities, political issues, cultural issues, and so forth (...), it's not only about environmental issues. That's why I say one of the things is just really this system competencies, systems thinking approach (...), where you are able to do all those.

Dr Silo here emphasises the importance of a holistic approach and moves over to competencies and the importance of systems thinking as a competency that foster this kind of approach. Systems thinking is one of the eight competencies in ESD (see chapter 2.1). Competencies in ESD, in order to respond to inequalities, will be discussed in chapter 6.2.3.

The other perspective that Dr Silo points out, about where ESD belongs in the institutions, was also found in the focus group interview with participants from Botswana. In this group interview one is a TVET educator and the other a teacher educator within the field of creative subjects.

Botswana focus group:

TVET educator: I would say it's not well balanced, it's more focused on environmental issues. I don't know, whether it's because of lack of being, lack of (...), how can I put it, lack of awareness, ja. [The teacher educator joins and adds: "I would agree on that". Laughing] Ja, lack of awareness, when you sit down, even myself, I wasn't really aware of these things, you know, because, even when you go into internet, try to google anything to do with ESD, whatever you will come across will be more into environmental issues than economic or societal. So, I don't know how, maybe that is how ESD came about, because even though, when you now look at it in a broader perspective, it covers (...), environmental issues are part and partial of what ESD does. But even here at my institution, when we were being told that I was sent to Rhodes University to do this and this, they were like, why (name of the TVET educator), because we have somebody who is from the environmental club, that was the right person to go.

Teacher educator: I also see it as not balanced, but I think it is because how the whole thing came about. The environmental issues came first, and then they introduced ESD after that. People knew about the environmental issues, and it was like that is the only thing to be done. Whereas now, when we look at ESD, we see ESD incorporating environmental education and other sectors.

The teacher educator also agreed with the TVET educator and said that colleagues were surprised when she was selected to go to the Sustainability Starts with Teachers course at Rhodes University (in 2019), not having a background in environmental studies. However, the teacher educator concluded with the following:

Teacher educator: I believe that as time goes on, now that we have started it, it will take its rightful position, and people will understand that (...), when we talk about environmental issues, they are under the umbrella of ESD.

The idea that ESD does not belong to only one or two specific subjects, but should be implemented through cross-disciplinary approaches, is perhaps a different way of thinking in many educational institutions where institutes and departments often operate more or less in silos. UNESCO advocates for a whole-institution approach in the implementation of ESD, as a means of including everyone and opening up to more cross-disciplinary cooperation: "Such a whole-institution approach aims at mainstreaming sustainability into all aspects of the educational institution. It involves rethinking the curriculum, campus operations, organizational culture, student participation, leadership and management, community relationships and research." (UNESCO, 2017, p. 53). This is a rather big task and involves a

management that prioritizes this kind of transformation within the institution. It also means that the staff must rethink the organizational culture and find new ways to cooperate both within, but also outside of the institutions. Sending teacher educators, who are not in environmental or natural science studies, to the training in ESD, may be a move towards this whole-institutional approach.

Another interesting observation is that all three that were interviewed from Botswana think that there is an emphasis on the environmental dimension, when this is not reflected in the Botswana policy document on SDG 4, including target 4.7, analysed in the previous chapter (6.1). Here the emphasis was on the socio-economic dimension with focus on GCED and ESD. That being said, the explanation given in the interview is that historically the environmental dimension was first emphasised through EE. The explicit holistic approach to sustainable development expressed through ESD is relatively recent and is now a lot more in focus due to SDG 4.7.

Moving to the participants from Zimbabwe, where both participants are experienced teacher educators in subjects of science and/or technology, they also think that there is more emphasis on environmental issues in ESD. However, teacher educator 2 gives an explanation why it is important to focus on environmental issues:

Zimbabwe focus group:

Teacher educator 1: If we talk of ESD, we think of environmental issues, instead of looking at it in a holistic manner. But we have these individuals who needs to be educated holistically. But (...) when we talk of ESD issues, we quickly think of the environment that we live in. Leaving out the social aspect, the economic aspect, even the political aspect, which are affecting us in one way or another. We tend to not include those [interrupted by the phone ringing].

Teacher educator 2: When people mostly talk of ESD, they think of the environment, but while it might be that the environment get greater attention (...), but in my view it's only a focal point. When people are poor, they tend also to destroy the environment in one way or another. So (...), the environment is mostly affected. Even when we develop industries (...). Yes (...), on the economic side we may have some economic boom, but the one that will be suffering again might be the environment (...), the emissions which will be produced while the people are making money. So, when people make money, they might forget the impact on environment. Right (...). When people are poor on the social side, they might also have an impact on the environment, they start destroying the



forest, taking for example (...), making firewood out of that. But (...), because they will be thinking of his or her poverty. But, what will be suffering is the environment. That's my view why we mostly focus on what (...), on the environment as the ultimate sufferer of all the things. Whether we are poor or are developing economically.

The teacher educator is here using an example of the impact on the environment by both economically poor and rich people. By doing so, he illustrates why there is a need to focus on environmental issues. Due to the background in science, it might be that the teacher educator also has more knowledge of, and interest in issues related to the environment. The example shows that an improved economic situation, may not lead to more environmental sustainability, and thus it is important to focus on the environmental dimension. When you look at the environmental issues at a global level, one finds that those who pollute more are the richer people and richer countries, mostly due to living standards, travelling habits etc. (Eriksen, 2016). Many with higher living standards also have higher education, but this does not necessarily mean that people act in line with their knowledge. To be able to understand these processes, and to challenge them, systems thinking competency is relevant. Systems thinking trains the ability “to recognize and understand relationships, analyse complex systems, and to think of how systems are embedded within different domains and different scales” (UNESCO, 2017, p. 10). We will return to this when discussing competencies in ESD, in chapter 6.2.4.

As mentioned earlier, there is a strong holistic approach to sustainable development in the Southern African region. This is for instance expressed by the Environmental Education Association of Southern Africa (EEASA), which thinks of EE in a broad perspective, including socio-ecological, socio-political and socio-economic dimensions (see chapter 6.1.3). Both the national representative/coordinators in Namibia and Zimbabwe argued that as they see it, the approach to ESD and the three dimensions in sustainable development is balanced. However, as Chimbodza, the Zimbabwean national representative said, it is difficult to assess the impact on the students at this stage, since the programme has just started:

Iris Jane-Mary Chimbodza: Here in Zimbabwe, it's balanced. Because you can't talk of environmental development without talking about who is developing that environment. In my teacher educator institution, we definitely address the three legs, the economic, the social and the environmental. But it has just started, so it's difficult to assess the impact at the moment among the students.

Chimbodza is doing her own PhD research on how ESD teacher competencies by pre-service teachers emerge in a geography teacher education programme in Zimbabwe, and has been engaged in ESD for many years. She did not hesitate when answering the question and was clear on the importance of a holistic approach.

Dr Sirkka Tshiningayamwe, the national representative in Namibia, explained that in the Southern African region, they apply four dimensions in ESD: the social dimension, biophysical issues, the economic dimension, and political aspects. This is also what EEASA refers to on their website. Dr Tshiningayamwe argued that what is interesting, is to look at a specific issue and see how all these dimensions play out:

Dr Sirkka Tshiningayamwe: We try to unpack each issue in relation to those four dimensions, because we say they are interconnected. It is the four dimensions working together, bringing up what we see on the ground. And in terms of responses (...), in terms of interventions, you then need to look at these kinds of (...), and I think politically we have also been talking about how we don't have buy-ins from a lot of our politicians when it comes to ESD, and that lack of buy-in is one of the biggest constraints.

As argued by both the national representatives in Zimbabwe and Namibia, there is a strong emphasis on the holistic approach in ESD, arguing for the need to include all the different dimensions when studying specific issues in society. Dr Tshiningayamwe also mentions a fourth dimension, namely the political aspect. This is interesting, as the commonly known (Western?) dimensions of sustainable development are the environmental, social, and economic dimensions. The political aspect may be considered as being already included in the socio-economic dimension globally, however, it is interesting that in the Southern African region, the political aspect is thought of as a fourth dimension. As Dr Tshiningayamwe also points out, the political dimension is crucial in the implementation of ESD.

One of the interviewees explained how the different dimensions are inseparable. The person also gave some input on the politics around this tug of war between the different dimensions in ESD:

Early in those days we could not separate environmental issues from social issues, from political issues and from economic issues. We graduated from

Environmental Education to Education for Sustainable Development, this is when the West now, especially Western countries, saying (...), no, there is complexity. Because of our history of being colonized, we have seen that already, so working in that setting. So, when we moved into ESD, there was nothing new basically for us, because we have been working with that framework of that complexity of social, biophysical, environmental, political, and economic. So, if you read SDG 4 now with quality education that looks into environmental issues, political issues, social justice, and so forth. It was for us to conceptualise, because that's the framework we have been working with for a number of years. We get disturbed (...), let me tell you where we get disturbed (...), mostly on UNESCO level. Where, at headquarters in Paris, they have separated Global Citizenship Education from Education for Sustainable Development. Now, it's coming down here to member states (...). We say, we cannot separate these two things down here, they are inseparable. People are not separated from environment, and the environment is dictated upon by political setup, which dictates economic setup. So when they try now to come and say, in a very apologetic ways, ah, GCED is working on SDG 4, ESD is working on...(…). We see that these are people up there that are trying to protect their empires, but here on ground, the doors (...), things are inseparable.

The analysis here is very interesting and may be related to theories of coloniality. There is a power dimension in his example, where UNESCO Paris is at the top, and not properly in touch with what the practices are in the member states in Southern Africa. As expressed here, ESD is nothing new in the context of Southern Africa, this is what they have been practicing for many decades. In indigenous knowledge systems (IKS) in the region, you also find this interconnectedness, where people and nature are closely connected, like the example of questioning the body-mind dichotomy, applied in the previous chapter (6.1.6) when analysing Namibia's policy on ESD and EE.

In terms of power relations, this example shows how they are not balanced. Although UNESCO is a world organization, it is the headquarter in Paris, in the global North, that produces the publications with policies on the implementation of ESD, GCED, etc. What is expressed above, by the interviewee, may be an example of globalization experienced “from above” (House-Soremekun & Falolam 2011), as discussed in chapter 5.1. Does this contribute to the reproduction of coloniality? One may also ask why we still operate with these different educational disciplines when SDG 4.7 aims at including all dimensions of life? It is difficult to attempt to answer these questions, however, from a decolonial perspective, one may argue that what the interviewee says, shows that the power rests within the global North and the elite. SDG 4.7 aims to challenge the status quo through transformation to more just and

sustainable societies. Issues of power, recognition, and representation (see chapter 4.3) are thus relevant in terms of who is being included in decision-making processes, as well as listened to. If we do not recognize one another as equal, which there are numerous examples of globally that we are far from doing, the *Black Lives Matter* campaign being one example, how then can status quo and coloniality be challenged? Decolonialization is necessary on many levels, including within education. In terms of the second question above, SDG 4.7 emphasises a holistic approach, and it is thus time for this to be reflected in the global educational policies: There is a need to address the tug of war between the educational disciplines which are promoting SDG 4.7 such as EE, ESD, GCED, HRE and attempt to bring in the most relevant elements from these disciplines when implementing SDG 4.7.

As discussed above, there are different ways of interpreting SDG 4.7. This is also the case in terms of the SDGs, in how they are understood across the world. Below follows an interpretation from the Southern African perspective, expressed by Charles Chikunda, the UNESCO coordinator:

Dr Charles Chikunda: We made the SDGs proactive rather than redundant and reactive. For example, we transformed them from the negative perspective that normally the Westerners want to see the world, with the outlook that we want. Instead of 17 we have 20 SDGs [Referring to the SST website]. One that we have added is excessive wealth. It's very common and acceptable in the Western countries. But here, the moment you are becoming excessively rich, it means you are denying other people access to some basics, one way or the other, through capitalism. So, we have adapted the SDGs and added some to suit the African context.

The different interpretations of sustainable development and the SDGs are being expressed here, where also the outlook and approach to the SDGs are perceived differently in the context of Southern Africa than perhaps in the Western world. Another issue that is addressed is that of capitalism. In terms of SDG 10 one may argue, like in the example here, that one should work against excessive wealth in the hands of few people. The challenge is that societies and world economy today are based on capitalism and neoliberalism. The issue of excessive wealth is also an issue not only present in the global North, but also within nations in the global South.

As these examples show, one can argue that there is a need to a) decolonize ESD and the global structures that promote the SDGs and ESD, and b) to address this tug of war between the different dimensions in ESD as well as between ESD, GCED, EE and HRE, in order to steer away from silo thinking and towards holistic approaches in education.

Having presented, analysed, and discussed some of the findings on issues around the different dimensions in ESD, I will now proceed to how issues of inequalities, as referred to in SDG 10, are dealt with in ESD in teacher training, seen from the perspective of those interviewed through this case study research.

### 6.2.2 How are issues of inequalities (SDG 10) addressed in ESD in teacher training?

As discussed, ESD are in some cases associated more with the environmental dimension, then with socio-economic issues. Hence, it is interesting to research how issues of inequality (SDG 10), which involves both the social and economic (and political) dimensions are addressed in ESD in teacher training. Questions on this topic was asked to all those interviewed, as well as in the digital survey. It is important to stress that the opinions expressed here are those of the people interviewed, not their workplace or the ARTP.

Issues of inequality is a very relevant topic for the Southern African region, and the three countries in this case study research. As mentioned in chapter 2, Botswana, Namibia, and Zimbabwe have high levels of inequalities according to the Gini index. Based on numbers from The World Bank (undated), Namibia and Botswana rank within the five countries in the world which are most unequal in terms of income distribution. Dr Shepherd Urenje, one of the programme coordinators, shared some reflections on issues of social and economic inequalities in ESD in the region of Southern Africa:

Dr Shepherd Urenje: ESD has really tried to include a lot of people (...). Because when you look at sustainability issues, the people that are affected most in Southern Africa, one, are the people in the rural area, people in the countryside, and also the people who are poor in urban areas, people who live in the poor areas in the urban areas (...). Now, when we talk about ESD issues, most of the issues are relating to what is happening in the countryside, what is happening in the rural areas etc. In as far as I am concerned, what has not happened yet, on a larger scale, is empowering people in the rural areas to take care of how they can manage their own environmental issues, and education is key. And the main problem that we have there is resources. How can you make it

possible for people in a village (...) to deal with issues of soil erosion, issues of climate change, issues of gender, (...)? How can you make it possible for those people to do it themselves? And that ESD can only facilitate them doing that. That one is a real challenge.

What Dr Urenje addresses here, is *who* are mostly affected by inequalities, namely those in the villages and poor urban areas, and how ESD can contribute positively. These people are not always represented when decisions affecting them are being made, which is an issue of inequality. Dr Urenje explained how e.g., EEASA has an annual conference, which invites representatives from many different works of life in Southern Africa, like NGOs, teachers, researchers, community organisations etc. to discuss ESD. The villagers are here being represented by organisations and are not present in person. As Dr Urenje said, to be represented might not be a bad thing, but it might be even better if they could represent themselves.

The issue of representation is also relevant in this research, where the only ones who have been invited to participate are teacher educators/TVET educators, and e.g., none of their students, who would perhaps share different views on the topic. Both the coordinators and teacher educators are positioned actors in their society, and presumable experience inequalities differently than e.g., less educated people. As discussed in chapter 4.3, to combat inequality we need to address issues of representation, recognition, and redistribution (Fraser, 2009). To recognize one's position, and the power that comes with that position, is important if we want to change the established. In deciding on how to develop educational policies and practices, we need to recognize the value of having diversity among the people who are part of the decision-making – where teacher educators, who are hands on ESD in their institutions, are one of many relevant groups.

Issues of inequality are manifold, including unequal treatment based on economic, political and/or social status, such as ethnicity, skin colour, gender, age, religion, etc. Because there are so many types of inequalities, there are also many issues that can be addressed, and it may be difficult to answer how issues of inequality are addressed in ESD in teacher training. This is also reflected in the answers of those who participated in this research, who brought up many different types of inequalities as examples when talking about this topic. What was interesting, was that over two thirds of those interviewed started to talk about gender inequalities when asked about how inequalities are addressed in ESD in teacher training. One

person also thought that this research was a gender studies research because of the focus on inequalities. In the field of education, you often find that subjects are gendered in terms of student representation, where either of the sexes are over- or underrepresented. This issue was also brought up by several of those interviewed, in addition to gender inequality regarding leadership positions in the educational institutions.

Another issue that was brought up was the issue of language inequality, where lack of proficiency in the language of medium in schools (e.g., English) may hinder quality education for students. Of the three countries, Zimbabwe has the highest number of official languages, at sixteen. There are also many other local languages, some which are the same in the three countries, which borders meet at the Zambezi river. One of the change projects (part of the ARTP) in Zimbabwe focuses on indigenous languages and indigenous knowledge systems (IKS) in early childhood education, where the aim of the project is to produce indigenous language booklets in the context of ESD (UNESCO ROSA, undated). Several other change projects also include IKS, which may be considered as a way of down-scaling ESD to the local context (see Eriksen, 2016). This inclusion of different local languages and IKS may be a way to battle inequalities regarding access to ESD, as well as contextualising topics within ESD to make them more relevant to the students' everyday lives.

Causes of inequalities were also discussed during the interviews and was perhaps a little less of a broad question than the first questions, where different types of inequality were discussed. Why we have inequalities in today's societies is also relevant for teacher students to address in the classroom as trained teachers, and it is thus interesting to learn what the teacher educators talk about in this regard. After discussing issues of inequality in ESD, those interviewed were asked what the causes of inequalities are. This question was often followed up by a question on whether theories of coloniality are relevant when discussing causes. Most of the answers were on issues of culture and politics, as well as inheritance from the past. Here follows some of the thoughts on the issue, starting with the national representative in Zimbabwe's answer to what the teacher students learn about the causes of inequalities in ESD:

Iris Jane Mary Chimbodza: We can't talk about inequalities without mentioning historical colonial dominance. The colonial dominance has left a mark, has left a big mark, in terms of inequalities. So, you find, in our case, as an example in Zimbabwe, this is why the land issue is a

big issue (...). We need our student teachers to understand, why there had to be land reform, because it was a main cause for concern in terms of economic inequality, political inequality, and obviously social inequality in terms of poverty. So, definitely we talk about the impact of colonialism.

Chimbodza further shared how issues of Christianity versus traditional beliefs or practices are being discussed, in terms of how certain traditional practices have been discouraged or demonised in the society. The teacher students are encouraged to discuss which cultural practices that should be retained, and which are not so good, and why we are saying that some are not so good. This is a whole process, which then looks at the systems in the societies at play in terms of issues of inequality.

The two participants from Zimbabwe also shared their view of this question, including some perspectives on the educational system and colonial heritage:

Zimbabwe focus group interview:

Teacher educator 1: In my view it's more of cultural than colonial, that's how I view it. In our cultural context (...), our cultural context might perpetuate inequalities among the members of our society. Whereby if the society is patriarchal, they will view men as of more (...), a higher authority than women. So (...), women themselves, they won't want to be at par with men, because of the cultural connotation, (...) that the traditional view (...), that if a woman is at par with a man, then it feels like something is wrong (...), the society will view that woman as a misfit in the society.

Researcher: [Repeats the question as the teacher educator 2 lost the connection for a little while.]

Teacher educator 2: It might be a factor, because when the education system which we are using has been inherited from the colonial system. It is only now that people have realised that the type of education which are being followed, the colonial type of education, has also been propagating the nature of the output, which the colonizers want. But you'll find that now (...), the government and institutions of higher learning have realised that (...), we need to have our own educational system, which transmit our own values and what we would want to transform in our citizens. But you'll find that (...), but for the past years (...), you'll find that, it is the nature of the educational system which we inherited, it propagated (...), or transmitted, the nature or the type of education continues to yield these inequalities among the citizens.



Teacher educator 1: Something has just come up as (name of teacher educator 2) was sharing (...). I am looking at the private institutions (...), the private learning institutions, that are still perpetuating the colonial mentality in some institutions (...), whereby they will discriminate the other race by maybe (...), through raising their fees, so only a few blacks will afford (...), while those who have adequate resources will send their children there. So, basically that becomes a colonial problem (...). During the colonial times, those schools were viewed as white-only schools, and those people who go through those schools are the best. So, we still have that mind. And (...), that also perpetuate the colonial discrimination of members of the society.

These examples discuss some of the inequalities that are present in Zimbabwe today, both gender issues as well as access to education. Here teacher educator 1 is a woman and teacher educator 2 is a man. Culture is viewed as the cause of gender inequality by teacher educator 1, whereas it is argued that the colonial heritage is still present in the educational system and foster inequalities by both teacher educators. In this example we also see the value of group interview, where one gets spontaneous associations or thoughts based on something the other person said, as shown when teacher educator 1 speaks for the second time.

Dr Ntha Silo also shared an example of income inequality from a gender perspective: During the colonial times, men in Botswana would go to South Africa, to Johannesburg, to work in the mines by colonial companies, leaving the women behind to take care of the children etc. Today, in the more economic, money-driven society, you find community-based organisation made by women. Here, the aim is to empower women to be economically independent, thus trying to decrease the income gap between men and women.

What is interesting with this example, is that the cause of gender inequality is explained by the colonial past, unlike in the first example from Zimbabwe, where cultural causes were used to explain gender inequality. The point here is not to draw any conclusions on the matter, which would also not be possible in terms of standards of research validity. The point is to bring attention to the topic, namely *causes* of inequalities in an ESD context. If the aim of ESD is to transform societies and ultimately the world we live in, one must consider and understand the causes behind all the unsustainable practices that we have today. It is thus important to bring in such questions in research that addresses ESD. One issue in this context, is the individual versus system approach to causes of unsustainability. Is it individuals, or groups that need to change, or is it the structures and systems that are the causes of the problems? In ESD one of the competencies is systems thinking (UNESCO, 2017, p. 10).

However, when discussing solutions for a more sustainable future, many of the options students are taught focus on actions by individuals, such as consumer's choice, sustainable travelling, recycling etc. (Sinnes, 2015). If the causes behind inequalities are structural, such as colonial heritage, politics, and cultural practices, should not also the solutions focus on competencies that can respond to these structural causes? This question will be discussed in the next sub-chapter, where the respondents have shared which competencies in ESD are important to respond to inequalities.

### 6.2.3 Which competencies are emphasised in ESD to respond to inequalities?

Kindergartens, schools and institutions of TVET and higher education should not only offer individual courses, but should ensure that all learners can develop the knowledge, attitudes and competencies needed to respond to sustainability challenges throughout their professional and personal lives. (UNESCO, 2017, p. 50)

The persons participating in this case study research were asked which competencies that they emphasise in ESD in order to respond to inequalities. Before presenting a selection of answers, it is important to point out that everyone who participated had been to a two-week training on ESD, where e.g., the eight competencies in ESD had been discussed, as well as the 21<sup>st</sup> Century Skills (see Lotz-Sisitka, Tshiningayamwe, Chikunda, Mandikonza & Urenje, 2019c, p. 23). Thus, the ESD competencies were well known to the participants of this study and may also be reflected in their answers. Once again, I will also stress that the opinions presented here are of the participants their own, and do not necessarily represented those of their workplace.

In the digital survey in this research one of the questions was: In your opinion, of all the topics related to ESD in teacher training, how important is it to address issues of inequality? (1 means not important, 6 means most important). Two of the respondents answered 5, eight answered 6 and one answered 3. They were also asked if they would address mainly issues of inequality on a local/national level, on a global level, or both. All eleven respondents answered that they would address issues of inequality on both local/national and global levels.

These answers indicate that issues of inequality are viewed as an important topic within ESD, and must be addressed on all levels or scales, from local to global and global to local. On the question: "What do you think your students need to learn about issues of inequality (SDG 10) in order to contribute to sustainable development - on a local, national and global level?", one

of the teacher educators from Zimbabwe answered the following: “That inequalities are cross cutting, e.g. global, national, local, intra- regional within nations, ethnic, racial, gender, economic, political etc. *Inequalities are a barrier to the achievement of each and every SDG. Strategies for SD should take into account issues of inequalities.*” (my emphasis). Here issues of inequality are viewed as relevant for each of the SDGs and needs to be addressed in order to achieve all the 17 goals.

One of the other digital survey participants, also from Zimbabwe, wrote that “Education helps to reduce inequality gaps”. This is also in line with UNESCO’s approach, where education is seen as a key to reach the SDGs. On the other hand, the participants in the focus group interview from Namibia pointed out that education also reinforces economic and class inequalities:

Namibian focus group:

Teacher educator 1: The inequalities comes when you look at the different schools that are within our community. You get schools that are able, parents donate etc, then you go to the poorer side, then we have to use those recycled items to grow plants. You don’t have enough land etc, so you use bottles to grow potatoes or something, because there is no land. Then you get the other kids that are fortunate, who have elite parents or well-off parents, who are able to afford that. That lessens the curriculum as well, because they get to fully exercise that curriculum. And here, it’s limited, because we are limited of the facilities, limited of the resources, now we can’t really practice that. So, it’s not fully integrated into the school curricula, rather than our other sides, they are able to do that.

This example shows how the curriculum will be followed up differently due to the resources available at the different schools, as well as depending on how big the parents’ pockets are. These are the structural inequalities within education. As much as education may battle inequalities, the danger is also that unequal practices within educational institutions, such as gender discrimination, may contribute to increasing inequality gaps within societies. As discussed in chapter 6.1.1 education may contribute “to teach and promote peace and democracy, as well as the opposite; racism and denial of human rights” (Jones, 2007, p. 327).

Moving on to the competencies that are emphasised in ESD in teacher training, the participants in this research listed up many different competencies, such as: creativity, collaboration, critical thinking, system thinking, entrepreneurial skills, anticipatory thinking etc. They were familiar with the eight ESD competencies (see chapter 2.1), and also spoke of

transformative and transgressive learning. UNESCO has listed three pedagogical approaches that are key in ESD (p. 55):

- A learner-centred approach
- Action-oriented learning
- Transformative learning

Regarding inequalities, UNESCO (2017) has also made specific learning objectives for SDG 10, as shown below:

**1.2.10. SDG 10 | Reduced Inequalities | Reduce inequality within and among countries**

**Table 1.2.10: Learning objectives for SDG 10 “Reduced Inequalities”**

<b>Cognitive learning objectives</b>	<ol style="list-style-type: none"> <li>1. The learner knows different dimensions of inequality, their interrelations and applicable statistics.</li> <li>2. The learner knows indicators that measure and describe inequalities and understands their relevance for decision-making.</li> <li>3. The learner understands that inequality is a major driver for societal problems and individual dissatisfaction.</li> <li>4. The learner understands local, national and global processes that both promote and hinder equality (fiscal, wage, and social protection policies, corporate activities, etc. ).</li> <li>5. The learner understands ethical principles concerning equality and is aware of psychological processes that foster discriminative behaviour and decision making.</li> </ol>
<b>Socio-emotional learning objectives</b>	<ol style="list-style-type: none"> <li>1. The learner is able to raise awareness about inequalities.</li> <li>2. The learner is able to feel empathy for and to show solidarity with people who are discriminated against.</li> <li>3. The learner is able to negotiate the rights of different groups based on shared values and ethical principles.</li> <li>4. The learner becomes aware of inequalities in their surroundings as well as in the wider world and is able to recognize the problematic consequences.</li> <li>5. The learner is able to maintain a vision of a just and equal world.</li> </ol>
<b>Behavioural learning objectives</b>	<ol style="list-style-type: none"> <li>1. The learner is able to evaluate inequalities in their local environment in terms of quality (different dimensions, qualitative impact on individuals) and quantity (indicators, quantitative impact on individuals).</li> <li>2. The learner is able to identify or develop an objective indicator to compare different groups, nations, etc. with respect to inequalities.</li> <li>3. The learner is able to identify and analyse different types of causes and reasons for inequalities.</li> <li>4. The learner is able to plan, implement and evaluate strategies to reduce inequalities.</li> <li>5. The learner is able to engage in the development of public policies and corporate activities that reduce inequalities.</li> </ol>

**Figure 9:** Learning objectives for SDG 10: Reduce inequalities (UNESCO, 2017, p. 30)

The learning objectives for SDG 10 addresses both cognitive, socio-emotional, and behavioural learning. Regarding behavioural learning objectives, no. 4 and 5 are particularly interesting as they address ways of responding to inequalities. All the participants in this research are working on their own Change Project, often including principles from whole-institution approach as well as community involvement through a community of practice where those involved are learning from each other. One of the respondents of the digital survey, wrote the following answer to which competencies students need, to respond to inequalities:

Students should be taught entrepreneurial skills so that they contribute to the reduction of poverty in their local communities. They should be taught innovation and problem-solving skills. The teaching of social skills is also important, so the students appreciate living in harmony with the underprivileged members of society.

In terms of community involvement, the term “hybrid knowledge” was used by one of the participants in the Namibian focus group. Teacher educator 1 here referred to a project involving school gardening:

Namibian focus group:

Teacher educator 1: We want to create a hybrid knowledge on how to go forward, not losing what the elder people did. How can we use the old ways, and the current methods? We want ideas that can sustain, to have continuity, and help students beyond the classroom.

The teacher educator further used the example of how this hybrid knowledge in gardening is important for the students to combat inequalities later in life. If students have knowledge and skills in how to e.g., grow vegetables, they may ensure that they can grow their own food if they experience unemployment. They would then utilise the hybrid knowledge learned in school, combining traditional knowledge with contemporary methods and technology. This idea of life-long learning is also addressed by UNESCO (2017), which was the opening quote in this chapter; educational institutions should ensure that “(...) all learners can develop the knowledge, attitudes and competencies needed to respond to sustainability challenges *throughout their professional and personal lives.*” (p. 50, my emphasis).

On the other hand, transformative learning and transgressive learning may suggest that one moves away from the practices that we have today. This is not to imply that one leaves all

current knowledge behind, but find ways to move beyond unsustainable practices. Dr Sirkka Tshiningayamwe, the national representative in Namibia, explained how she sees the challenges connected to achieving transformative and transgressive learning in the context of addressing issues of inequality in ESD:

Dr Sirkka Tshiningayamwe: We talk about transformative learning, and we also talk about transgressive kind of approaches, where we say: “Teach in such a way that you are able to go beyond the boundaries”. Are you bold enough to be able to talk about issues that nobody talks about, because you are trying to cross borders, and go beyond what is known as the norm? So, that transformative and transgressive learning is also what we are trying to encourage and promote in our teacher educators, and say, we need to do things in a not-everyday way. The reason why these things have become so prevalent, and they are so repetitive and on-going, is because we have not crossed the borders yet. They are still talking about the issues in the old-fashioned way. We want that transgression to happen.

The national representative in Zimbabwe also spoke of transformative learning through ESD, and mentioned three competencies or approaches when addressing issues of inequalities in ESD:

Iris Jane Mary Chimbodza: I will mention the three, that I am also researching on: The competency of being able to look at issues or problems in a holistic manner. And then the issue of aiming to achieve transformation at whatever level, and with whomever (...). If you know the issue, and let it be openly discussed, you can move towards a change of mindset, which can lead to the achievement of transformation. Then, the aspect where the teacher is able to connect the past, the present, and envisioning the future. Or learning from the past, to understand the present, in order to make decisions for the future. I think that is very helpful for the student teachers.

Researcher: Transformation on individual or system level?

Iris Jane Mary Chimbodza: I don't see how one can talk of transforming society if you as an individual haven't undergone that process of transformation where you begin to see things differently. When we talk of transformation it is really covering the whole range, from individual to society, politics, and then you talk of the national transformation and all that. You always have to start small, you can't start too big, you start small, then you turn to the higher

levels. And also, that process is not linear, it can't be linear, because there are always changes that one needs to adapt to.

As discussed in earlier chapters (see chapter 3 and 6.1), one challenge in ESD is how sustainable solutions are being presented – on an individual or system level. As Chimbodza says here, there is a need for transformation on all levels, from the individual to the national level. However, the argument is to start small, which may be interpreted as the individual level, and then move towards the system level, which involves structural changes. Chimbodza also points out that the process is not linear, and thus addresses the issue of how development is viewed. Circular economy is for instance popular in the sustainable development discourse, where goods are recycled or upscaled (see Sinnes, 2020). One of the key transformations to sustainable development may be to move away from linear to circular thinking and approaches.

In terms of individual versus system level, Dr Shepherd Urenje also argues that transformation must happen on all levels, but start with the mind - here in terms of decolonialization:

Dr Shepherd Urenje: Issues of coloniality are very important. How do you decolonize? Begin with the mind first. Because in order to decolonize the educational systems, you have to decolonize the minds of the people who are designing our educational programs. So, when it comes to who needs ESD? Is it only the teacher trainers, is it only the teachers? Who needs ESD? In the end results, everybody needs ESD, including people who are in charge of education policies. Because we talk a lot about decolonizing the curriculum, decolonizing the way people learn, etc. etc. But when we try to decolonize, people are afraid of upsetting the status quo, people are afraid of change. There is a lot of discussion on that, because Southern Africa has a legacy of colonial education. That is the problem.

As pointed out here, there is a need to decolonize education, and this might be considered as one of the necessary steps towards transformation or transgression to more sustainable societies. If the goal is that education should play a key role in achieving the 17 SDGs, the educational systems, programs, pedagogics etc. must also be transformed. Thus, the need to address ESD in teacher training programs, as is what the ARTP aims at doing. The ARTP approach will be discussed in the next chapter, with emphasis on how issues of inequalities are addressed.

One challenge that many teachers face, is limited time and resources. This is also a challenge regarding the implementation of ESD, as indicated in the conversation below. Here it is also stressed that developing ESD competencies take time, which is also essential in transformative learning, which may be seen as a process of learning:

Namibia focus group:

Teacher educator 2: If I think of the 21<sup>st</sup> century skills, that are connected to ESD, it's a matter of skill development, to become innovative and creative. And it's not an easy job, like [name of teacher educator 1] said, it's not to study it and I have it now. What I have learned, I have to apply it now (...). And that is also [laughing] where most of the people don't have the time. [Laughing] That's why I asked you, [teacher educator 1], have the school taken over your responsibility of the project now? [Laughing].

Teacher educator 1: No, not yet. Like I told Brita [the researcher], because of Covid, no.

Teacher educator 2 here addresses the importance of skills development, where students must apply what they learn to internalise it. The teacher educator then points out how this requires time, which is not always the case in educational programmes, and starts to laugh a little. This laughter may be interpreted as an indication of how not having enough time is an issue that the two teacher educators find challenging. In terms of ESD projects, and their Change Projects, there is a lot of potential for quality education, but there is the issue of not having sufficient time to carry out the plans. Another issue is also mentioned here, regarding the Covid-19 pandemic, which brought Southern Africa, as most of the countries world-wide, into lock-down in March 2020. The impact of the pandemic on societies is huge, and as already mentioned in chapter 5, inequalities in the world are increasing due to Covid-19 measures. These challenges were also mentioned by several of the people interviewed for this research. One example was how inequalities are increasing in terms of which students have access to digital resources and who does not, when schools had to close during the lock-down. It would be interesting to do more research on these issues, however, the time and space does not allow for that in this thesis.

#### 6.2.4 Conclusion

More work still needs to be done to reorient teacher education to approach ESD in its content and its teaching and learning methods. That is why the GAP's Priority Action Area 3 focuses on building capacities of educators. (UNESCO, 2017, p. 51).



In this chapter, findings from the data collection in this research has been presented, analysed, and discussed. As the quote above states, countries need to prioritize capacity building of educators to implement ESD. The people interviewed in this research are all highly educated, have a high level of knowledge and competencies in ESD, and are working on finding ways to implement ESD in teacher education institutions as well as educational policies in Botswana, Namibia, and Zimbabwe. Thus, they are most likely not representative of an average teacher educator in these countries, as they already have in-depth knowledge of ESD. However, because of that background, it is interesting to study how they address issues of inequalities (SDG 10) in the context of ESD. The focus areas in this chapter have been the approach to sustainable development and its dimensions, which issues of inequalities that are addressed and how, as well as which competencies that are emphasised for the students to respond to inequalities.

As much as many think there is more emphasis on the environmental dimension in ESD, there was a clear communication of the importance of a holistic approach. What is interesting in the context of Southern Africa is that the political dimension is understood as the fourth dimension of sustainable development, in addition to the economic, environmental, and social dimensions. This contextualisation expresses an ownership to ESD and may be vital for the implementation of ESD and the SDGs, e.g., by addressing necessary changes on policy level. Another contextualisation is the advocated inclusion of indigenous knowledge systems (IKS) and local languages, by several of those who participated in this research. Thus, addressing issues of exclusion and inequality based on peoples' background, ethnicity and/or language skills. Addressing IKS and languages in education, also brings in the topic of decolonialization. ESD has the potential to challenge the status quo and existing structures where the powerful dictates the less powerful, both nationally and internationally. On the other hand, ESD may also contribute the continuation within these structures, which is what Pirbhai-Illich & Martin (2019) found when studying some UNESCO publications and websites on ESD (see chapter 3). Hence, competencies such as critical thinking, systems thinking, and anticipatory thinking are central in challenging the status quo. Decolonizing the mind might be a first step, as addressed by one of the people interviewed, as well as decolonizing the educational system.

When addressing issues of sustainable development through education, focusing on issues of inequality (SDG 10), one might argue that there is an incongruence in terms of what is

explained as the causes of inequality and what is suggested as actions to respond to these inequalities. In this case study research, most of the participants explained causes of inequalities being structural (cultural systems, policies, and colonial heritage). However, many of the Change Projects and competencies that were suggested as important to respond to inequality through ESD do not necessarily contribute to address the structural changes that are needed. They might bring about positive change in their community or institution, but not necessarily transform policies and systems. On the other side, that is perhaps one of the strengths of the ARTP, in which the participants in this research are involved. Here the approach to ESD is on multiple levels, including policy and curriculum change, whole-institution approach, and capacity building – driven by different Change Projects. This will be discussed more in the following chapter (6.3).

Addressing issues of inequality (SDG 10) in ESD in teacher training is perceived as important by those participating in this research. However, the data collection in this case study research suggests that SDG 10 is not at the top priority in ESD. Since inequality on different levels is a driving force behind unsustainable practices, one could think that it is a topic that would be emphasised in ESD. There seems to be an awareness around gender inequalities, but perhaps less awareness on other social, economic, and political inequalities, with some exceptions. This research has a small number of participants and it is difficult to generalise or draw conclusions. However, there may be a need to emphasis issues of inequality in ESD in teacher training, and thus strengthen the socio-economic dimension in sustainable development, including the political dimension, as applied in Southern Africa.

## 6.3 Impact of the ARTP on addressing issues of inequalities in ESD in teacher training

“Southern Africa wants change; the whole world wants change!”

This quote is by Dr Sirkka Tshiningayamwe, the Namibian representative, as a response to a question on the desired outcome of the ARTP. The goals of the ARTP are several; capacity building of teacher educators through the Sustainability Starts with Teachers (SST) course, integration of sustainability principles into education and training environments, including curriculum change, as well as strengthening professional networks in the Southern African region, to mention a few (SWEDESD, undated). This chapter is not an evaluation of the impact of the ARTP this far (it runs until 2022), but a brief analysis of how issues of inequalities are addressed in ESD through the programme. Those that participated in this research study were asked to share how these issues have been addressed and what could be done differently going forward. I have also got access to several resources produced for the ARTP; booklets that are addressing the focus areas of the ARTP. In the analysis, I will draw on these, together with some reports made by the ARTP. I will start with a brief introduction to the ARTP model (6.3.1), before presenting the data focusing on the Change Project-model (6.3.2), as well as on transformative pedagogy, system thinking and policy change (6.3.3). Finally, some reflections on the implications of researching an ongoing project (6.3.4).

### 6.3.1 The ARTP model

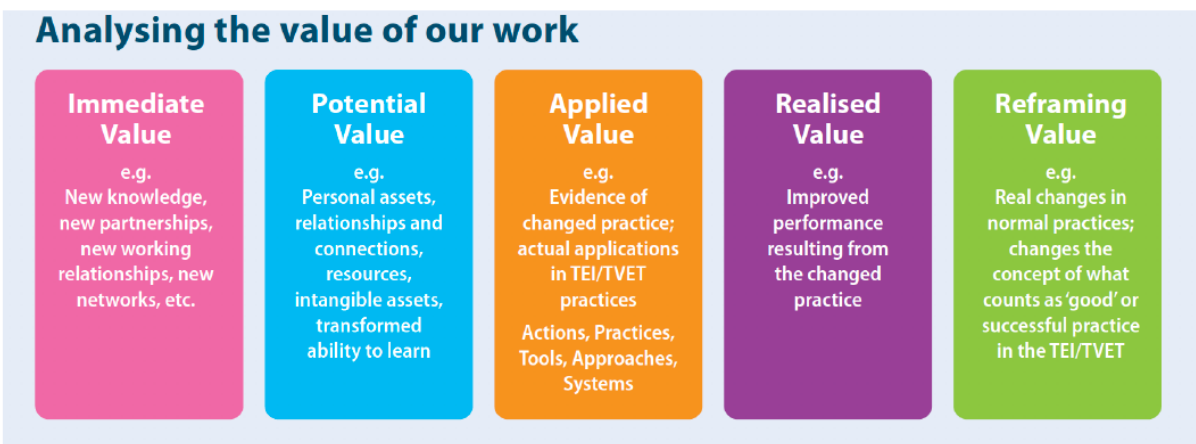
The ARTP uses a 5-steps model for ESD curriculum innovation and whole-institution change (see figure 10). Here the Change Project is at the centre, as a driving force for the five steps. What is interesting with the approach of the ARTP, is that it aims at addressing several levels where change is needed to implement ESD: national policy, curriculum, whole-institution approach, pedagogics, and methodology. Evaluation and assessment of the projects is also an important part of the programme and here they use a value-creation framework, also looking at different levels:



**Figure 10:** Five step action learning framework for the SST course (Lotz-Sisitka et al, 2019a, p. 14).

The evaluation framework that is guiding the SST course evaluation processes is the Wenger, Traynor and De Laat (2011) Value Creation Framework which requires that one develop a value creation narrative for participants over time; it offers a tool for evaluation of social learning processes, and it is an appreciative approach to evaluation, that can also stimulate reflexivity and change. (Lotz-Sisitka, 2019, p. 25).

See the different types of value creation in the box below:



**Figure 11:** Value framework applied in ESD Change Projects (Lotz-Sisitka et al, 2019a, p. 15).

Another concept or tool used to assess the possible further developments of the Change Project is scaling, which we will return to in chapter 6.3.3.

According to UNESCO (2017), there are several learning objectives for teachers to promote ESD (see figure 12). Examples being knowledge, understanding and reflection, as well as action competencies. What they all have in common is building competencies for ESD, where one needs to combine the different learning objectives to achieve transformation for sustainability. Competencies are also something Dr Shepherd Urenje addressed when talking about the strengths of the ARTP:

**Box 2.3.2. Learning objectives for teachers to promote ESD**

- Know about sustainable development, the different SDGs and the related topics and challenges
- Understand the discourse on and the practice of ESD in its local, national and global context
- Develop their own integrative view of the issues and challenges of sustainable development by taking into account the social, ecological, economic and cultural dimensions from the perspective of the principles and values of sustainable development, including that of intergenerational and global justice
- Take disciplinary, interdisciplinary and transdisciplinary<sup>14</sup> perspectives on issues of global change and their local manifestations
- Reflect on the concept of sustainable development, the challenges in achieving the SDGs, the importance of their own field of expertise for achieving the SDGs and their own role in this process
- Reflect on the relationship of formal, non-formal and informal learning for sustainable development, and apply this knowledge in their own professional work
- Understand how cultural diversity, gender equality, social justice, environmental protection and personal development are integral elements of ESD and how to make them a part of educational processes
- Practice an action-oriented transformative pedagogy that engages learners in participative, systemic, creative and innovative thinking and acting processes in the context of local communities and learners' daily lives
- Act as a change agent in a process of organizational learning that advances their school towards sustainable development
- Identify local learning opportunities related to sustainable development and build cooperative relationships
- Evaluate and assess the learners' development of cross-cutting sustainability competencies and specific sustainability-related learning outcomes

**Figure 12:** Learning objectives for teachers (UNESCO, 2017, p. 52)

Dr Shepherd Urenje: The reasons why we would like to work on competencies, is because of three things:

- 1) Environmental and sustainability issues are very complex. They are wicked issues, issues that do not have one solution. Causes of one solution leads to another problem, and it goes on like that. It's complex. By it being complex, we cannot solve them by using simplistic ways of thinking and doing.
- 2) Environmental and sustainability issues are contextual. There are no one-size-fits-all solution. In Norway there are different sustainability challenges compared to South Africa. So, they are contextual.
- 3) They are contested. We don't agree. We have got different interpretations of what has happened. Take climate change for

example. Some people do not agree that climate change is caused by people. They don't agree that by limiting travel, limiting fossil fuels you etc., you stop climate change. So, it is such a contested terrain. So, when you have got complexity, contextuality and contestation, how do you educate a child who is going into the world which is like that?

So, our answer to that is you need to develop competencies, you need to help learners to learn how to think and act in a different way, if the situation that we have is not working. Our problem is we are teaching the same things that are not working.

(...)

My understanding of transformation is that this is an education that will make it possible for the learners to be able to learn to think - to think in a different way than status quo is. Because social transformation requires people to think and act in a different way. Without being prompted.

(...)

It is the way we teach, which is going to be different. It is not *what* we teach. What we teach is important, but *how* we teach it makes a difference. Because we talk about social learning. [Gives examples of social learning]. That in itself is not transformative, but it is one way by which transformation can happen. So how can you make social learning transformative? You make it possible in the context of social learning for your students to be empowered on how to think and act in a different way. And when they acquire these competencies, chances are that they will be able to transform the current situation.

Transformative and transgressive learning are key to the ARTP approach, where competencies are central, as Dr Urenje talks about above. Through the ARTP participants' Change Projects, as well as regional workshops and in-country workshops, the ARTP aims at contributing to ESD being implemented on policy level, including curriculum, institutional level through whole-institution approach, as well as in the classrooms through pedagogics and methods that foster transformative and transgressive learning. ARTP is a well-structured programme, with a holistic approach. What will be discussed in the chapters below, is how issues of inequality (SDG 10) are addressed in ESD through the programme, based on the data available in this research.

### 6.3.2 Addressing issues of inequalities through Change Projects

Dr Ntha Silo expressed that with the SST approach, Change Projects have the opportunity to address some of the sustainability problems related to SDG 10, like poverty.

Dr Ntha Silo: The most desired outcome is that at the end of this programme – how do we strengthen capacity in institutions for teacher educators? That

teacher educators would be capacitated to bring different approaches in their teaching and learning strategies, which are really focused on key problems as they see them, whether it is inequality, like you were saying, goal number 10. How do you come up with teaching strategies? Or through a change project, how do you bring about change? Specifically, in your context, how do you bring it in the learning process, tangible so, such that the learners, the student teachers are aware, and they are able to come out and see where they will address issues of inequalities in their teaching and learning day to day. How do you upscale that in the teaching and learning process?

Also issues of collaboration, cooperation. Whether it is inter-institution, between countries, between colleagues across, between ministries, different stakeholders. And then how do you integrate in terms of teaching and learning? I see this SST course really enhancing the capacity both at national level, policy level and especially at practice level. How does that learning that will address specific issues, inequality, gender inequality, what change projects, for example, can you come up with in the school, that will address inequalities? Be it poverty, economic, how can you come up with a really focused project, where you'll be looking at your expected outcome to address whatever form of inequality that you identify, in the institution, in your community and so forth.”

Dr Charles Chikunda shared that there are several Change Projects that are focusing on reducing inequalities. Examples of such Change Projects from the three countries are pre-school in women prisons for the children of the inmates, and the inclusion of indigenous languages in teaching materials. These projects try to bring about equality and challenge the status quo. As much as there are examples of Change Projects where issues of inequalities are being addressed, these issues might not have been at the top of the list of issues that are addressed through the ARTP, according to Dr Chikunda:

Dr Charles Chikunda: I think I should be honest with you to say that I don't think we have done enough in terms of interrogating, and first of all bringing to bed the inequalities that we face, number one (...), secondly, interrogating and brainstorming on the causes of inequality, then thirdly, to use that to inform our change projects. I don't think we have done enough.  
(...)  
Now that we are coming up with change projects in Zambia, South Africa, and Lesotho. You get what you put in, so it's a good thing to say, hang on, let's talk about structural inequalities. They may not appear (...), we have tried to do that, (...) they may not appear to be there all the time unless you really use a magnifying lens to introspect. So that our change projects have depth.

(..)

If you really come up with a project that demands structural changes, looking at power gradients, then it's going to be a different game all together.

During the second half of the interview with Dr Chikunda, he was very reflective and open, sharing his own thoughts on the issue of inequalities in ESD. These paragraphs illustrate this, where he also brings in thoughts for the way forward, and how these issues might be addressed. The participants in the focus group interviews were also asked how they will address issues of inequality in their Change Projects, going forward. The teacher educator and TVET educator from Botswana mainly brought up issues of gender inequality, as an issue that needs to be addressed; the inclusion of more women into male dominated subjects, and vis versa.

The Namibian focus group spoke of economic and cultural inequality, and how to reduce the gaps. The examples that were given was to not make certain teaching materials compulsory, to reduce the resource gap, as well as to teach the students to share their resources, such as a laptop. In terms of culture, students from different cultures should meet and interact to build respect for one another. Through teaching methods, the teacher educator 2 will try to reduce inequality gaps. Teacher educator 1 used the example of the teacher as a role model in challenging gender stereotypes: How she as a female teacher is doing gardening at school, showing her students that both girls and boys can do physical labour. The teacher must be exemplary and lead.

On this question of going forward, Dr Charles Chikunda also added that the ARTP can contribute to addressing issues of inequality through pedagogy and methods by making sure that they appeal to different classes, sexes, cater for different disabilities etc. In terms of structural inequalities, those who were underprivileged in the past in terms of curriculum development, such as minority groups, should be included. Thus, through the pedagogy and methods that they are advocating for in the ARTP, the valuing of all cultures, the principles of “ubuntu”, the SDGs, ESD – they hope to contribute to fighting inequalities. (For the explanation of the Zulu word “ubuntu”, see chapter 6.1.5 on “botho”, which has the same meaning, just in Tswana).



As already discussed, there are many types of inequality and it is perhaps challenging to address them all through ESD. What the interviews show, is that these are issues that all those who participated are aware of, but it differs how these issues are integrated into the ARTP and the Change Projects. In the following chapter we will look at the input from the Zimbabwean focus group and their response on how issues of inequality are going to be addressed through the Change Projects.

### 6.3.3 Transformative pedagogy, systems thinking and policy change

The focus group participants from Zimbabwe were asked how issues of inequalities could be addressed within their teacher educator institution and in their Change Project, going forward. Issues addressed were transformative methodology, systems thinking and policy change:

Zimbabwe focus group:

Teacher educator 1: In my view I see that we should address the issue of inequality through our methodology. Because if we don't change the way we teach, we will still be perpetuating the traditional methods, which do not broaden the minds of our student teachers. They should view issues in different ways. It is important to use the transformative pedagogy, whereby our student teachers are in the forefront of addressing these issues, they see the value of addressing these issues. At the same time as they impart knowledge, skills, and competencies to their learners, they also apply what we teach them here at the university. What is important is for the learner to have it at the forefront of learning, so that they understand these issues and take it as theirs. Not as what their educators are telling them to do, but that it is part of their lives, part of their work, part of whatever they are doing. Not that they are being told by someone to do it. That's my view.

In terms of the change project, we have focused much on the transformative pedagogy, whereby we want to first of all, before we address other issues, we want to apply modern methods of teaching. But thanks to Covid-19, which has pushed us so much to think in other terms, that we had to change, so that we apply the learner-centred approaches, where the learners are at the forefront, and the various methods will incorporate learners as much as possible, whereby the educator becomes the facilitator of learning, and the learners become the owners of learning. It's an ongoing process, so we are still working on that. We hope the whole university will adopt that.

Teacher educator 2: In my view, we need to change the way we teach, as what (name of teacher educator 1) has said, to have systems thinking approach, whereby we are now focusing on other competencies, which we want the student teachers to have. If we are saying that social justice issues are real issues for our own societies in dealing with inequalities, it

means that our courses also, when we are teaching them in the methods courses, professional development courses, they should also be having content to do with these issues. If they are not evident, it means we are continuing to produce the same teachers, that we have been producing all along. So, if we do not have a particular juncture where we change, it means we are continuing doing the same thing, and no change will be seen.

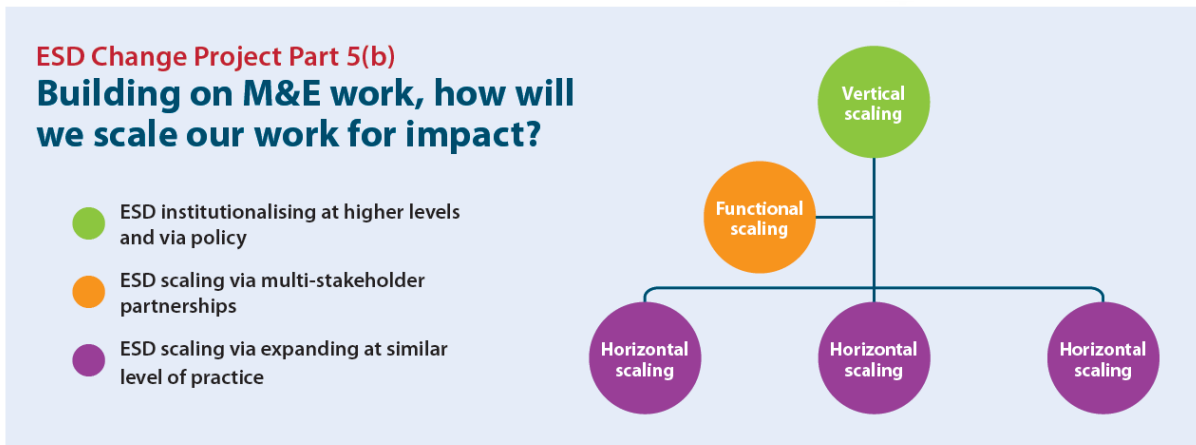
This is exactly what we did in our Change Project. We saw that students, even the learners in the schools, are performing poorly in science, but we are training science teachers. After the African training workshop, we revised the pedagogics course for the diploma and the pre-practicum course that we taught in August 2019. If we continue in the same way, we are not going to have this transformative pedagogy that we have learned. In what ways are the way we are teaching transformative? So, we reviewed the course to include issues of culture, social justice issues, ESD aspects. The concepts of ESD itself was included in that course. It was approved, then we started teaching in the August 2019 semester. Those student teachers are still on teaching practice up until December 2020. By applying also what they have learned in the particular course. If we incorporate this, it means that the competencies, which they will get through the courses, they are going also to apply them to the wider population, who are the learners in the community where they are teaching.

And also, our focus of the change project was the utilisation of indigenous knowledge systems and biosphere reserves in the teaching and learning of science. This also broaden the idea that the biosphere reserves, or the nature itself, why should we take care of nature? Right. We need to conserve it, because we have seen that within the classroom, we have been using it as a level on itself, but we can use it to a full level, without using speculative resources, which we do not have. Thereby also addressing issue of inequality that there are some well-resourced schools with very good labs, but if we preserve our natural resources, we can also use those biosphere reserves equally as labs when we will be teaching science. And also, on the part of our own culture. If incorporating our ways of knowing, what do we know, which is related to science which is in the curriculum? How can we incorporate those issues into the curriculum? Lightning is in the curriculum on the aspect of teaching electricity. But you will find that there are some believes on lighting which are there in the society, which has got the same explanation which are in the science book. So, we try to see where our culture and the science are merging. And then we can learn also from those things, thereby also making our teaching constructivist. So, building knowledge from what students already know from their home community of practice into the school community of practice.

The Zimbabwean focus group participants talk about both transformative pedagogy, systems thinking competencies and policy change in terms of inclusion of indigenous knowledge systems (IKS) in the curriculum. By transgressing the old ways applied in educational institutions, and finding new ways, where e.g., modern science meets IKS, the teacher educator believes that it can contribute to transformation to sustainable development. Placing the learners at the centre and seeing the teacher more as a facilitator than a teacher, is also in line with both Freire's (1999) pedagogical approach as well as theories of transformative learning. Including IKS may be a means to reduce inequality, whereby IKS will be incorporated and thus valued in education. This may build bridges between the home-community and school-community and can be a way to decolonize education. Facilitating a dialogue between these communities, where students experience their life, may also invite issues that the students experience as relevant to the classroom. As discussed in chapter 5.4, dialogue and critical discussions are central in education (Freire, 1999). By concentrating the conversations and discussions on issues that are relevant for the students, it can foster critical thinking, collaboration and understanding which is needed to transform societies.

As addressed in earlier chapters, mass-education has led to an upscaling of education, with global measurements of the quality of education through tests such as PISA. There are many positive sides of having similar educational systems across the world, e.g., allowing more cooperation and student exchange. On the other side, one may lose the contextualisation and inclusion of IKS. That is also why systems thinking competencies are crucial, to be able to see the connections why e.g., educational systems are the way they are today. Decolonizing education also means inclusion of local languages as medium in schools, included in teaching materials, textbooks etc. The language issue was addressed by several of those interviewed and thus appear to be an important topic, also in ESD.

One of the concepts applied through the ARTP is scaling. As mentioned earlier, there are different types and levels of scaling (see figure 13). In the scaling-model applied through the ARTP, the aim is to develop a Change Project and its success factors, by scaling the good practices.



**Figure 13:** Levels and types of scaling (Lotz-Sisitka et al, 2019a, p. 18)

Dr Sirkka Tshiningayamwe expressed that the concept of scaling is one of the strengths of the ARTP. The participants have a seed, which they start to grow and then identifies the best part of that growth and scales it. Dr Tshiningayamwe gave an example of a recycling project on campus. This project may be scaled to go beyond campus, to include more. Another way could be the concept itself: You may start to focus on SDG 1, but as you develop you start to include other SDGs. It could still be one person doing it but scaling it to include more aspects. It is the successful areas that one wants to scale – the good practices. The value creation framework (see chapter 6.3.1) is also relevant here, to evaluate the project and identify the different types of values. If some values are coming out stronger, then these might be the ones that can be scaled. These concepts and frameworks are central in transforming the pedagogical approaches, assessment strategies, and going beyond the classroom situation by also transforming campuses to implement ESD holistically. From here one might upscale ESD to the level of national policies. Dr Tshiningayamwe gave an example of how some TVET participants found that ESD needed to be included into the TVET policies, and decided to advocate for that change.

The concept of scaling, together with systems thinking, is relevant when addressing issues of inequality in ESD. Inequalities are very much ingrained in socio-economic structures, and for ESD to be transformative, both teacher educators and their students must understand the structures of inequalities through systems thinking. The concept of scaling can both be applied to analyse the different levels of inequalities, from the local to the global context and vis versa. It can also be used as a practical tool to reduce inequalities by scaling (vertical or horizontal) projects or practices in ESD that have been identified as successful.

The fact that the ARTP has such an emphasis on systems thinking, policy change, as well as transformative pedagogy, provides a starting point to address issues of inequality through ESD. Both the coordinators and the participants of the ARTP interviewed through this case study research express understanding and knowledge about these approaches to ESD. What is less clear is how well issues of inequality are incorporated on a systematic level through ESD, regarding Change Projects as well as through policy change.

#### 6.3.4 Conclusion

The findings presented here shows that issues of inequality in ESD is a topic that the interviewees say is important to address in teacher training. Issues of inequality in ESD has been clearly addressed in some of the Change Projects, however less evident in others. Issues of inequality, which were brought up through the interviews were mainly gender inequality, economic inequality, and lack of inclusion of IKS and local languages. There is also a focus on systems thinking, transformative pedagogy and scaling, which are all relevant in addressing issues of inequality through ESD.

Being asked about these issues through a survey and/or interviews, contributes to bringing the topic to the forefront. Several of the people interviewed thought it was an interesting angle to focus on how inequality is addressed in ESD in teacher training. Others said that when being asked these questions, they were also reflecting on the matter and how to include this topic more when going forward in the Change Project or in carrying out the ARTP.

The examples given, and the reasonings behind the different arguments by the people who participated in this research, shed light on how ESD is implemented in teacher training institutions. Reducing inequality (SDG 10) is a huge task both within and between countries, and since education is seen as a key to reach the other SDGs it is crucial that this matter is addressed through ESD in teacher training. Decoloniality, systems thinking, policy change, and transformative pedagogy are all relevant when addressing issues of inequality in ESD. The concept of scale may be used both to as an analytical tool understand the processes of inequality on local and international levels, as well as a practical tool to upscale successful projects initiated within the field of education. The ARTP has great potential to develop knowledge, competencies, projects, and networks to contribute to a strong holistic approach to ESD in teacher training, where issues of inequality are addressed.

## 6.4 Scaling up? What can we learn from teacher educators in Botswana, Namibia, and Zimbabwe on the implementation of ESD? From national to international knowledge

Chapter 6 addresses how ESD, an international agenda, has been interpreted nationally in Botswana, Namibia, and Zimbabwe. In this final chapter, I will flip the coin, and bring in the national and regional perspectives collected through this research and discuss how these are relevant and interesting in an international context. What can we learn from the national policy plans, from the teacher educators/TVET educators as well as the ARTP in terms of implementation of ESD? I will start by discussing the interpretations of sustainable development and the SDGs (6.4.1), before looking at how indigenous knowledge systems (IKS) and inclusion of local languages can be a way to address inequalities through ESD (6.4.2). Finally, a brief discussion on the inclusion of issues of inequality in ESD through teacher training (6.4.3).

### 6.4.1 Interpretations of sustainable development and the SDGs

It is a global achievement that we have the 17 SDGs and SDG 4.7, as it is challenging for so many nation states to agree on so many different goals. It is therefore unique that we have SDG 4.7, emphasising that education is not only about reading and writing skills, but also developing competencies for sustainable development. One strength, which may also be a weakness of SDG 4.7 is that it includes such broad topics and issues; sustainable development, global citizenship, gender equality, human rights, promotion of peace, “and appreciation of cultural diversity and of culture’s contribution to sustainable development.” (UNESCO, 2017, p. 8). A strength can be that it includes such a broad understanding and thus a holistic approach to ESD. A weakness might be the same, that it is so broad that it opens to various interpretations, as well as different weighing of the topics addressed in SDG 4.7, as discussed in earlier chapter. One may choose to leave out some and put more weight on others, and thus minimize the inclusion of some areas or some people. The challenge then is who is being listened to, and who is not. On the other hand, that freedom of interpretation and contextualisation might be a success factor on how well ESD is implemented nationally. We do see the world through different lenses, and this diversity in how ESD is implemented and how the SDGs are interpreted might be a strength, and something to learn from in the global context. Dialogue is central in such a process, where the outcome is not predestined (Freire, 1999). For a genuine democratic process based on dialogue, it is also vital that people who are most affected by unsustainability are heard and recognized.

One issue that one wants to steer away from in terms of implementation of ESD, is reproduction of colonial ways and thinking, as discussed in chapter 3 and 5. One must also be mindful of the implications of economic growth (SDG 8), as it might have negative impact on other SDGs, such as SDG 13 to stop climate change. Keeping these perspectives in mind, it is interesting to note that additional SDGs have been added in the context of the ARTP in the Southern African region, one being reducing excessive wealth. With excessive wealth comes more influence and more power. It is therefore interesting that this is raised as an issue through the SDGs. Is it perhaps time to not just focus on reducing poverty, but also reducing excessive wealth? Reducing excessive wealth could contribute to reducing inequalities through different measures. As Dr Charles Chikunda said; “If you are so rich, it means you are denying others wealth”.

Another perspective that was brought in during the interviews, was that of the outlook on the SDGs. By adding more SDGs, the idea was also to have a more positive outlook, instead of a negative approach to the SDGs. If one looks at the SDGs, many are positive, such as SDG 3: Good health, SDG 4: Quality education and SDG 7: Affordable and clean energy. However, others are focusing on what needs to stop, such as SDG 1: No poverty, SDG 2: Zero hunger, and SDG 10: Reduce inequality. The process of writing the SDGs was inclusive and democratic, and almost ten million gave their opinions through a survey (FN-sambandet, undated). Although many were included, the challenge is still that marginalised people are often represented by organisations, as the example by Dr Urenje shows in chapter 6.2.2. Some would argue that the SDGs are spot on and addresses the global issues very well, whereas others may see them through different lenses. One may argue that the SDGs are relatively balanced, between the positive and negative outlooks in the specific goals, addressing both what needs to go and what we need to protect or do more of. On the other side, one may see that there is something missing, which is most likely the issue in most cases, as it is difficult to find goals that everyone would agree with one hundred percent. The SDGs are meant to inspire and motivate all nations and all people, to contribute towards reaching these goals. It is therefore vital that they speak to the people and nations and address the issues that are pressing in the different contexts. Having a positive, proactive approach, is central in Southern Africa, according to what was found in the data collection from this research. This contextualisation may be a success factor for the implementation of the SDGs, and the global

community may learn from Southern Africa in this regard, on the positive impact of regional and national interpretations of the SDGs and ESD.

The philosophy of “botho” or “ubuntu”, as discussed earlier in chapter 6, is also central in Botswana, Namibia, and Zimbabwe. Seeing oneself through other people, the community that you live within, how people are connected, is a philosophy that is valued and respected in the countries. To see oneself connected to others, may be argued to be central in reaching the SDGs – if you only care about yourself, it will be hard to reach the 17 SDGs. The philosophy of botho/ubuntu may be connected to what Klafki (2001) argues to be central to “building” – where the aim is to develop self-determination, co-determination, and solidarity. Where the two philosophies might differ, is which one gets more emphasis: the individual or the community. Respect for culture and indigenous knowledge is also central in botho/ubuntu, and in the next sub-chapter we will discuss what the global community might learn from the views on inclusion of indigenous knowledge systems (IKS) and inclusion of local languages, as expressed by the participants in this case study research.

#### 6.4.2 Indigenous knowledge systems and local languages in ESD

According to UNESCO (undated 4), local and indigenous knowledge systems (IKS) refer to

the understandings, skills and philosophies developed by societies with long histories of interaction with their natural surroundings. (...). This knowledge is integral to a cultural complex that also encompasses language, systems of classification, resource use practices, social interactions, ritual and spirituality. These unique ways of knowing are important facets of the world’s cultural diversity and provide a foundation for locally-appropriate sustainable development.

As stated here, IKS is central to locally appropriate sustainable development, and might be an example of “appreciation of cultural diversity and of culture’s contribution to sustainable development.”, which is found in SDG 4.7 (UNESCO, 2017, p. 8). IKS was addressed by several of the participants in this research in connection to how issues of inequality are, or could be, addressed through ESD in teacher training. One of the participants pointed out that we must not think in linear ways when we talk of sustainable development, because there will be changes and adaptations on the way. In nature, most processes are circular, the seasons being one example. IKS are often developed in societies connected with their natural environments, and thus have adapted circular thinking. Inclusion of IKS in ESD in the curriculum was used as an example of how one can develop hybrid knowledge, merging IKS



with modern knowledge and technology. By challenging current ways of doing things, which are not sustainable, one may transform to sustainable practices through the inclusion of IKS. IKS are found in most nations across the world, and perhaps IKS should be more included in the national implementation processes of ESD?

The issue of local languages was also addressed by several participants in this research. To have inclusive, quality education, one must include more local languages in schools – both as a medium for teaching and in textbooks etc. This is another way of appreciating cultural diversity through ESD and may reduce inequalities as well as bringing in more indigenous knowledge into the classrooms. There is a lot of politics as well as financial implications regarding language use in schools, but according to the participants of this research, it might be an issue that is worth addressing. Perhaps also in a global context?

#### 6.4.3 Inclusion of issues of inequality (SDG 10) in ESD through teacher training

For SDG 10 to be well addressed through ESD in teacher training there needs to be a holistic approach to sustainable development, where all dimensions are included. Perhaps also the political dimension, as advocated by many of the participants in this research. Inequalities are often rooted in structures, and systems thinking is thus an important competency in ESD. This competency was mentioned by several of the participants in this research, together with critical thinking, creative thinking, collaboration, and entrepreneurial skills. As much as many of these competencies may address issues of inequality, there seems to be a potential in bringing SDG 10 more at the forefront through ESD both in the different Change Projects in the ARTP, as well as through the programme itself. What we may learn from this, is that one of the challenges with ESD is that it addresses complex and wicked issues (see Wals, 2016). It is thus necessary to have a holistic approach. However, that is also a challenge as education is more and more narrowed into specific fields as you go to higher levels within the educational systems. Cross-disciplinary as well as whole-institution approaches might be a way to go – where more of the staff members in educational institutions are involved, and together they bring in perspectives from different spheres of life. The ARTP thus have a good approach to ESD in teacher training, and it would be interesting to follow this programme further to see the impact and outcomes.

Seeing how issues of inequality have such negative impact on societies, both nationally and globally (see Oxfam International, 2020, 2021), it would appear to be an important topic within ESD, also in teacher training. What we may learn from this research is that the socio-economic dimensions (and the political dimension) must be prioritized on the same level as the environmental dimension through ESD, to address the wicked sustainable problems.

## 7. Conclusion

This master's thesis was submitted the same time as the UNESCO's World Conference on Education for Sustainable Development was taking place online from Berlin, 17<sup>th</sup> -19<sup>th</sup> of May 2021. Two months later, in July 2021, the UN High-level Political Forum (HLPF) is scheduled, the platform for follow-up and review of the 2030 Agenda for Sustainable Development and the SDGs. Sustainability and ESD has a high priority globally, particularly within the UN system, and climate change, the impact of the Covid-19 pandemic and increasing economic inequality calls for urgency to address sustainability from the local to the global scale. Reducing inequality (SDG 10) is one of the SDGs that will be addressed at the HLPF in July 2021 (UN, undated 2).

Prioritizing and putting the SDGs and ESD on the agenda is step number one in achieving these goals, however, the implementation process is not straight forward, and requires multiple considerations. ESD is not only about learners' competencies, but also about educational politics, and ultimately which competencies future workers should have, as discussed in chapter 6.1.2. As shown in this case study research, there are several issues that needs to be dealt with. One being addressing issues of inequality through ESD. In this final chapter, I will bring up the main findings and discussions in this case study research based on the research questions on how SDG 4.7, an international goal, is followed up in Botswana, Namibia, and Zimbabwe, on policy level and through teacher education. Starting by issues of inequality in ESD (7.1), followed by the need to decolonize education and ESD (7.2). Thirdly, a discussion on the individual versus system approach in ESD (7.3), before bringing in some perspectives on the contextualisation of ESD in the implementation process in terms of issues of inequality (7.4). I will end this chapter with some final remarks (7.5).

### 7.1 The need for more emphasis on issues of inequality in ESD

This research is not based on a large sample of respondents, however, as Flyvbjerg (2006) argues, case study research can also produce valuable knowledge. Through document analysis and interviews, this research finds that overall, there is more emphasis on the environmental dimension of sustainable development than the social and economic dimensions, including issues of inequality. As much as documents, and the people who took part in this research, stress the need for a holistic approach, my analysis indicates that ESD operate within an environmental hegemony (see Klein, 2018). As much as there is a need to address climate

change, if we do not deal with sustainability issues as complex issues, we risk fixing one problem at the same time as creating new ones. Keeping in mind the increasing inequalities, which are emphasised now in the Covid-19 pandemic, structural inequality is an issue that urgently needs to be addressed. Why is it that all the rich countries get the vaccine of their choice, whereas countries in Africa must take whichever type of vaccine they get through the Covax cooperation? (see Stølen, 2021). This example shows the power relations between countries in the world today, where more wealth means more power. It also shows the strong alliances within the global North. This structural inequality, as well as other types of inequality needs to be addressed through ESD.

## 7.2 Decolonizing educational systems, pedagogies and ESD

Doing academic research within the field of international education and development, one cannot turn a blind eye to how coloniality is present in teaching methods, educational structures as well as the curriculum. Many I came across in this research were (positively) surprised to hear that interviewees' identity would be known in the thesis. Being given the opportunity to read through the thesis draft was also well received by the interviewees, but perhaps not so common. Why should the researcher solely "own" the data, when it is a joint knowledge production between the researcher, respondents/interviewees, and the selected literature? We do not own the world and its resources, we borrow and share them with many others, including non-humans. This interconnection is something that we may learn from the African philosophy "botho" / "ubuntu", where the relationship between I/we is emphasised, which is also central in the post-colonial research paradigm (Chilisa, 2012, p. 21). "Botho" is a philosophy that should be adapted into ESD/GCED, as it emphasises our interconnection, within and across communities, and with the environment/nature.

Theories of coloniality address many of these structures from colonial times, which are still present today in different institutions and spheres of life, including education. These structures also contribute to maintaining different types of inequality. Based on the findings in this case study research, I argue that there is a need to a) decolonize ESD and the global structures that promote the SDGs, and b) to address the tug of war between the different dimensions in sustainable development, as well as between ESD, GCED and EE, in order to steer away from silo thinking and towards holistic approaches in education. According to the findings, there is no division between ESD, EE and GCED in the context of Southern Africa,

and it has been like that for several decades. UNESCO, on the other hand, has until recently treated GCED and ESD as two educational disciplines, however, connected. The political dimension, which is the fourth dimension of sustainable development, mentioned by several of the persons interviewed, may be a way to bring GCED and ESD together. It may also be a way to address structural inequality and contribute to decolonialization, which is needed for the transformation to sustainability. The socio-economic and political dimensions of sustainability need to be given the same priority as the environmental dimension.

Finally, we need to decolonize pedagogics and teaching methods. As one of the interviewees said, we cannot continue teaching the same way, just packaging it differently - we need to transform the teaching methods. Freire (1999) and Klafki (2001) argue for dialogue, equality, and relational understanding in the learning environments. For education to be relevant, it must include the student's views and knowledge. In terms of addressing coloniality, we may keep in mind that it is not only those oppressed that need to be liberated, but also those who carry on the system, because we all live within the same power superstructures (Lukes, 2004).

### 7.3 From individual to systems approach in ESD in teacher training

Teachers play a major role in education, however, the emphasis on teachers as individual catalysts in ESD, may also be passed on to the students as agents of change. According to the learning objectives of ESD, students should both have knowledge, skills, attitudes, and actions towards sustainability (UNESCO, 2017). The pitfall might be that the system approach is overshadowed by the individual perspective. If transformation to a more just and sustainable world is to happen, there also has to be structural changes.

The interviewees in this case study research explained that the causes behind different types of inequality are structural, using examples of colonial heritage, politics, as well as cultural systems. To change structural inequalities, students need competencies in how to transform these structures, hence systems thinking competency. This competency was mentioned by several of the interviewees. Systems thinking is also relevant for participation in democratic societies, and for understanding interdependency.

The findings also shows that teachers, who have good knowledge about, understanding of, and experience in practicing sustainability, tend to have a holistic approach to ESD. This is

valuable information, as it shows that capacity building and programmes on ESD, such as the ARTP, has a good effect. Not only in terms of teaching methods, such as the Change Projects, but also in terms of whole-institutional approach and policy change.

#### 7.4 From international to national plans through contextualisation

The document analysis of Botswana and Namibia's plans on implementation of SDG 4.7, found that both countries contextualise ESD. Botswana emphasises ESD and GCED, whereas Namibia focuses on EE and ESD. Contextualisation of SDG 4.7 reduces the risk of having clashing scales, ensuring that global processes are made relevant in national and local contexts.

One interesting finding from the interviews is the concept “hybrid knowledge”, where indigenous knowledge systems (IKS) are mixed with modern ways and technology. Applying hybrid knowledge appears to have a positive impact on reducing inequalities within the classroom, both in terms of accessibility regarding language usage, as well as acknowledging that IKS are valuable in contemporary education. Hybrid knowledge may also contribute to decolonizing education, where one steers away from dichotomous thinking, and instead grasps that the sustainability issues that are dealt with through ESD are wicked (Wals, 2016) and need hybrid solutions. IKS can also contribute to a critical lens on linear thinking and bring in circular understanding. How can we have (linear) economic growth (SDG 8) and at the same time stop climate change (SDG 13)?

#### 7.5 Final remarks

ESD/GCED is perhaps the most important focus in education today, and has the potential to transform both educational systems, curricula, as well as teaching approaches and the competencies that are emphasised. It has been very interesting to learn about the unique ARTP approach to ESD, with its holistic approach to the implementation process. The highly competent people participating in this research have also shared valuable insights on ESD in teacher training in Botswana, Namibia, and Zimbabwe, and how issues of inequality is or may be addressed. It will be interesting to follow the ARTP further and see the impact that it has in Southern Africa, as it has the potential to contribute to transformation within teacher training. The global community may also learn a lot from this programme, as well as how SDG 4.7 is contextualised in Southern Africa.

Further research is needed. However, based on the findings in this case study research I argue that there is a need to bring the socio-economic and political dimensions in sustainable development to the forefront, to address issues of inequality, at the same time as emphasising a holistic approach in ESD. There is also a need to decolonize the systems and structures within education, present today, and emphasis the interconnection of ESD and GCED through SDG 4.7. Systems thinking and critical thinking are thus central competencies within ESD and may contribute to the transformation that we hope to see in the coming years.

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