What is missing in the interdisciplinary approach to sustainable development in Norwegian education?

Hva mangler i den tverrfaglige tilnærmingen til bærekraftig utvikling i norsk skole?

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Abstract

Sustainable development is presented as one of three interdisciplinary topics to be prioritized in the current renewal process of Norwegian education. As an important, 30 year old and highly relevant topic of our time, sustainable development entails a growing number of dimensions, discourses, views, interests and values. When incorporating this topic into Norwegian education as one of three interdisciplinary topic, it is of interest to see what dimensions, discourses, views, interests and values are reflected in the description of the concept in relevant renewal documents. The research questions are as follows:

    1. What is Education for Sustainable Development said to entail according to the Norwegian ESD strategies?

    2. Which views of Sustainable Development can be uncovered in documents of the renewal process, and how do they compare to the content of the strategies?

    3. What are the potential implications of the present views on;

        the concept of Sustainable Development

        an Education for Sustainable Development?

These research questions are assessed through the use of a post-political theory framework and with departure in critical realism. The analytical tool is based on the discursive work of Espen Kummeneje (2016) from which terms and concepts are used as indicators to reveal which views are present and how. Interviews have been conducted to both understand the Norwegian context of SD and ESD, to better explain the indicators, what they reveal of the views, and how the present views can be explained. As some if the informants are key actors in the Norwegian SD "landscape", they voluntarily participate under full name.

The first research questions finds that the Norwegian ESD strategies describes an education which entails a local and global perspective where challenges are analysed from an environmental, social and economic dimension perspective. This also includes a multiplicity of methods that encourages critical thinking addressing conflicts of interests and promotes active citizens in democratic processes. The latter strategy also emphasise a focus on the development dimension of sustainable development.

The second research questions reveals that views representing all of the dimensions are present, though the environmental dimension appears to define the main problem, and technology appears to be the main solution. The development and social dimension

indicators appears under-communicated, and indicators reflecting concepts of the economic dimension is either only briefly mentioned or not mentioned at all.

The third research questions about implications reveal that the present views neglect the importance of focusing on structures and conflicts of interests. Combined with the lack of focus on economic knowledge and understanding, the concept of SD, as presented in the renewal documents, stands at risk of losing ability to provide the necessary knowledge and options of choice to promote the critical and analytical thinking needed to understand how to create a sustainable development.

Sammendrag

Bærekraftig utvikling presenteres som ett av tre tverrfaglige temaer som skal prioriteres i den nåværende fornyingsprosessen av norsk utdanning. Som et viktig, 30 år gammelt og svært relevant tema i vår tid, innebærer bærekraftig utvikling et økende antall dimensjoner, diskurser, synspunkter, interesser og verdier. Når man tar dette emnet inn i norsk utdanning som ett av tre tverrfaglige emner, er det interessant å se hvilke dimensjoner, diskurser, synspunkter, interesser og verdier som reflekteres i beskrivelsen av konseptet i relevante fornyelsesdokumenter. Forskningsspørsmålene er som følger:

1. Hva betyr utdanning for bærekraftig utvikling (UBU) ifølge de norske UBU - strategiene?
2. Hvilke synspunkter på bærekraftig utvikling kan avdekkes i dokumenter av fornyelsesprosessen, og hvordan sammenligner de med innholdet i strategiene?
3. Hva er de potensielle konsekvensene av de nåværende synspunkter på:
   a. konseptet om bærekraftig utvikling
   b. en utdanning for bærekraftig utvikling?

Disse forskningsspørsmålene blir vurdert ved bruk av et post-politisk teoretisk rammeverk og med utgangspunkt i kritisk realisme. Det analytiske verktøyet er basert på det diskursive arbeidet til Espen Kummeneje (2016), hvor begreper brukes som indikatorer for å avdekke hvilke synspunkter som er til stede og hvordan. Intervjuer har blitt gjennomført for å forstå både den norske konteksten av bærekraftig utvikling og UBU, for bedre å forklare indikatorene, hva de avslører, og hvordan dagens synspunkter kan forklares. Siden flere av informantene er nøkkelaktører i det norske UBU-"landskapet", deltar de frivillig under fullt navn.

I det første forskningsspørsmålet finner jeg at de norske UBU-strategiene beskriver en utdanning som innebærer et lokalt og globalt perspektiv hvor utfordringer analyseres ut fra et miljømessig, sosialt og økonomisk dimensjonsperspektiv. Dette inkluderer også en rekke metoder som oppfordrer til kritisk tenkning i analysen av interessekonflikter, og som fremmer aktive borgere i demokratiske prosesser. Den siste strategien vektlegger også et fokus på utviklingsdimensjonen for bærekraftig utvikling.

Det andre spørsmålet viser at synspunkter fra alle dimensjonene er tilstede, selv om miljødimensjonen ser ut til å definere hovedproblemet, og teknologien ser ut til å være hovedløsningen. Utviklings- og sosialdimensjonsindikatorene ser ut til å være underkommunisert, og indikatorer som reflekterer elementer av den økonomiske dimensjonen er enten bare kort nevnt eller ikke nevnt i det hele tatt.

Det tredje spørsmålet om implikasjoner viser at dagens synspunkter forsømmer viktigheten av å fokusere på strukturer og interessekonflikter. Kombinert med manglende på fokus på økonomisk kunnskap og forståelse står begrepet bærekraftig utvikling slik det fremgår i fornyelsesdokumentene, i fare for å miste muligheten til å gi den nødvendige kunnskapen og valgmulighetene for å fremme den kritiske og analytiske tenkningen som trengs for å forstå hvordan å skape en bærekraftig utvikling.

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CONTENT

TABLES:

FIGURES:

ABBREVIATIONS:

SD Sustainable Development
ESD Education for Sustainable Development
NCSE – the Norwegian Centre for Science Education - Naturfagssenteret
NDET – the Norwegian Directorate of Education and Training – Utdanningsdirektoratet
NDLA – Norwegian Digital Learning Arena
NIR – National Implementation Report
NPB – the Natural BackPack – Den Naturlige Skolesekken
UN – the United Nations
UNECE – United Nations Economic Commission for Europe

1. Introduction

Current development is considered unsustainable. Many consider it unsustainable because nature is pushed beyond its capacity. Many consider it unsustainable because nature's resources are distributed unequally. And many consider current development unsustainable because nature's inability to replenish can hinder economic growth. These different views of what makes development unsustainable have led to various approaches towards different goals, and different narratives of "the problem" taking form in competing discourses.

The UN has through its Education for Sustainable Development (ESD) initiative, for the last 25 years promoted a holistic approach that intends to connect the environmental, the social and the economic dimensions. We can identify three broad narratives that represent these three dimensions. The UN-initiative acknowledges conflicts of interests between these narratives and encourages a broad, participatory, critical debate to create awareness and ownership of the 'sustainable development' concept. Unfortunately, research would indicate that few countries have managed to adequately implement such an approach to call it an Education for Sustainable Development in their education sector (Jucker & Mathar, 2016). Although Norwegian authorities have made two strategies for an Education for Sustainable Development, the implementation is considered inadequate (Andresen, Høgmo, & Sandås, 2015).

During spring and summer of 2017, the "general core" of the Norwegian curricula for primary and secondary education from 1993 is being renewed. In the next two to three years each subject syllabus will also be updated. The former centre-left government (Labour Party, Socialist Left Party and Center Party) initiated this renewal process with the intent of evaluating whether or not: "we have the right subjects and if the subjects have a relevant content" to "the fundamental changes that have happened in the past 20 to 30 years" (Kunnskapsdepartementet, 2013). What these fundamental changes constitute is not specified. Research conducted by a commission called the Ludvigsen-commission was the first step of the renewal process. The introduction of the report state that the individual and society face challenges on both local and global scales, one of which is how to achieve sustainable development, thus setting the stage for the concept in the renewal process (Ludvigsen et al., 2015, p. 7). In the White Paper nr. 28 *Subject – Exploration – Understanding*, building on the

work of the Ludvigsen-commission, "sustainable development" is presented as one of three interdisciplinary topics together with "democracy and citizenry", and "health and life mastering". It is the aim of this thesis to look into what views of sustainable development is present in the renewal process, to discuss what implications the prominent views have for the implementation of SD as a concept and if the renewal process can be said to encourage an Education for Sustainable Development.

The unsustainable development

Development – in its broad sense – has led to increasing living standards entailing lower child mortality and longer life expectancy. These developments have happened through, amongst other things, improved knowledge and technology that have contributed to better access to education and health services. In less than 100 years the global population has increased from 2 billion in 1930 to the current 7,49 billion people (Sachs, 2015; Worldometers, 2017). This development takes the shape of a "hockey-stick" where population growth before the Industrial Revolution was very slow and then increased exponentially. Population growth has been more or less proportional to economic growth, as well as levels of CO2 in the atmosphere and global temperatures (IPCC, 2014; Rahmstorf, 2013; Sachs, 2015). The development has been dependent on exploitation of resources and last year the Earth Overshoot Day was calculated to be on the 8th of August. The Earth Overshoot Day is the estimated time in a year when we begin to "use more from nature than our planet can renew in the whole year" (Global Footprint Network, 2017). Although already expanding on the Earth' yearly carrying capacity, the development of an increased living standard has not been equally dispersed. In the Global Wealth Report of 2016 presented by Credit Suisse, they state that the ten richest percent of the world owns 89 percent of the world's wealth (Kersley, 2016).

'Sustainable development' (SD) has been a promoted and disputed concept since its inauguration in 1987 through the World Commission on Environment and Development's report *Our Common Future*, also referred to as the Brundtland-report (Mitcham, 1995; Redclift, 2005). The Brundtland-report established a focus on poverty alleviation through economic growth, redistribution of wealth and equitable sharing of resources, and facing environmental challenges through changes in values and consumption patterns (World Commission on Environment and Development, 1987). Through the Agenda 21 Plan of Action initiated during the Earth Summit in Rio de Janeiro in 1992, education was highlighted as an essential tool for the promotion of sustainable development, and in 2002 it was decided

to initiate a Decade of Education for Sustainable Development (DESD), lasting from 2005 to 2015. In Norway this resulted in two strategies made for ESD, one in 2006 and one in 2012 (Kunnskapsdepartementet, 2012; Utdanningsdirektoratet, 2006)

Critique of ESD

In 2015 Huckle and Wals analysed literature supporting DESD and found that "the Decade was essentially reformist acknowledging mounting global problems and suggesting that shifts in values, lifestyles and policy within prevailing forms of society will be sufficient to put global society on a sustainable path" (p. 491). Huckle and Wals do however claim that there is "too little attention to power, politics and citizenship" (p. 492). Their view resonates with the view of post-politics, which posits that the sources of our challenges; neo-capitalism and neo-liberalism, are "naturalised to the extent that debate and criticism is restricted to the management and distribution of its consequences" (Van Puymbroeck & Oosterlynck, 2014, p. 89). In a Norwegian context Ingerid Straume has pointed to a trend of de-politicisation of environmental politics where the focus is on the responsibility of the individual (Straume, 2002). De-politicisation is a concept describing the process where political issues become questions of technical fixes instead of debates about values, with the ultimate consequence of challenging democracy. This process is considered connected to the economic system and dimension, where neo-capitalism and neo-liberalism currently dominates. The theoretical framework of post-politics will be utilized as a backdrop to shed light on the implications of current views of sustainable development.

The analysis will build on the work of Espen Kummeneje (2016) who in his thesis presented three discourses, each reflecting one of the three dimensions; the environmental, the social and the economic. These discourses present different views and values with regards to what constitutes current and future challenges, and how to solve them. Within these discourses there are terms that will be used as indicators to reveal what views are present. The purpose of including these discourses in the thesis is that they provide tools to unfold the views and interests in the three dimensions. Accordingly, they can assist to uncover views about SD and ESD present in the official documents of relevance in the renewal process. Interviews have been conducted with key actors selected on basis of a literature review and targeted sampling, though the sampling is not exhaustive. These actors provide information useful to understand the different views that are present, and their potential implications.

The views of SD presented in the renewal process of Norwegian education's core curriculum and subject syllabuses will influence how SD is perceived, prioritized and implemented as an interdisciplinary topic. Therefore the present views also offer points of departure for a discussion regarding what implications they have for both the implementation of the concept of sustainable development and for an Education for Sustainable Development. To be able to do this, the following three questions will be assessed to be able to further elaborate on the potential implications.

Research questions:

1. What is Education for Sustainable Development said to entail according to the Norwegian strategies?

2. Which views of Sustainable Development can be uncovered in documents of the renewal process, and how do they compare to the content of the strategies?

3. What are the potential implications of the present views on;

> *the concept of Sustainable Development*
>
> *an Education for Sustainable Development?*

The first question is primarily a descriptive research question where ESD and SD is described in a Norwegian context. The second question analyses what views are present through the use of an indicator table of terms reflecting each dimension and discourse. The findings can reveal both coherence and incoherence within the views and provide foundation for the last research question. The third question uses knowledge gained from interviews with the key actors to help understand and explain the views and to address what implications they might have for the concept of Sustainable Development.

2. Background chapter: Competing views

The concept that sparked the theme and problem statement was 'sustainable development'. Throughout my earlier studies within development- and environmental issues this concept has been omnipresent as the ultimate goal of more or less everything. The concept achieved a solid footing within the international development discourse through the report "*Our Common Future*" presented by the World Committee on Environment and Development (World Commission on Environment and Development, 1987). In the years preceding the report there had been growing environmental concern and in 1982 when the terms of reference for the Commission were deliberated some voiced that the report should "be limited to "environmental issues" only." (World Commission on Environment and Development, 1987, p. intro). However, in order to address concerns voiced by developing countries in "the South", the report presented a focus on poverty alleviation through economic growth, redistribution of wealth and equitable sharing of resources, and facing environmental challenges through changes in values and consumption patterns (World Commission on Environment and Development, 1987). The report presented an integrated definition of sustainable development:

> **"Development that meets the needs of the present without compromising the**
> **ability of future generations to meet their own needs"**
> **(World Commission on Environment and Development, 1987)**

This is an often cited and well-used definition. The definition and the report have been subjects of a long-standing debate about the 'real' content of a sustainable development. As presented in the introduction, there are different views on what is the most essential challenge to address, and different approaches to how to solve the different challenges. In other words; there are different views concerning what the concept of 'sustainable development' is supposed to address:

> "The international literature reflects the 'stakes in the ground' of specific groups
> interested in defining what the concept shall mean (Tisdell, 1988): economics,
> ecology, environmental management, environmental philosophy, the claims and
> contestations of academic disciplines, views from the South and political and
> corporate positions all reveal the political, ideological, epistemological,

discipline-based and philosophical approaches that compete for legitimacy."

(Springett, 2013, p. 74)

Understanding the different views is central to comprehend what is promoted when the concept is presented as one of three interdisciplinary topics in primary and secondary education. This chapter describes some of the dominant views of the SD concept and explains how the three dimensions become reflections of different discourses.

2.1. The views

The report focuses on basic needs such as food, shelter, clothing, and state that living standards that cover more than basic needs "are sustainable only if consumption standards everywhere have regard for long-term sustainability" (World Commission on Environment and Development, 1987, p. 42). These "perceived" needs are socially and culturally determined. Therefore, sustainable development is said to require "the promotion of values that encourage consumption standards that are within the bounds of the ecological possible and which all can reasonably aspire." (p. 42).

In "*Sustainable Development (1987 – 2005) – An oxymoron comes of age*" Michael R. Redclift (2005) argues that the discourse of 'needs' is ambiguous as development itself alters needs. He also points to how needs are culturally defined and emphasises the potential conflicts that can occur from the ambiguous definition of need. He exemplifies with what is essential for one culture, such as clean air and water, might come at the expense of the need for transportation in another culture. The consequences of peoples' way of defining their needs mean that they "effectively exclude others from meetings theirs, and in the process can increase the long-term risks for the sustainability of other peoples' livelihoods" (Redclift, 2005, p. 70). He points to how this process is problematic as we as individuals cannot see how the consequences of our choices affect others, and that seeing and understanding this is necessary to behave sustainably. Redclift presents this as a trade-off between needs, and asks the question: "how do we establish which course of action is *more* sustainable?" (Redclift, 2005, p. 68). The example of defining 'needs' presents how different cultures shape different values and how it can be difficult to create a universally understood concept that involves socially constructed and culturally defined elements.

2.1.1. Ecocentric view

Since the 60s and the arrival of Rachel Carson's book *Silent Spring* (Carson, 1962), a growing environmental concern resulting from the observed consequences of pesticides and pollution,

was one of the main drivers of establishing the World Commission on the Environment and Development. In the article by Michael Redclift, *"The Oxymoron of Sustainable Development",* he presents how 'sustainable' and 'development' becomes opposites when 'development' is viewed as equalling economic growth. *"Our Common Future"* (1987) presents economic growth as a necessary part of sustainable development to alleviate poverty. In her article; *"Critical Perspectives on Sustainable Development"* Delyse Springett points to the "purists" within the sustainable development discourse who consider economic growth as a "dangerous liaison" and as diametrically opposed to sustainability as economic growth is the cause of 'unsustainability' (Springett, 2013, p. 74). The view of what Springett calls the "purists" is common for those of an ecocentric or the *deep ecology* view developed by Arne Næss. Within this view, nature is considered to have its own inherent value and is more than a resource or commodity for humans to use. The ecocentric view of 'development', as opposed to sustainability, reflects the environmental dimension in this thesis.

2.1.2. Poverty

Due to poverty "the new era of growth" is needed (World Commission on Environment and Development, 1987). The focus on poverty reflects the development perspective, which has a vast academic discipline contributing with research, and a global civil society movement promoting it. Still, this focus on "poverty" is by Vandemoortele stated to be in line with the "patronising" North-South view by rich countries (2015). In *"Sustainable Development"* Kjell Harvold (2003) refers to how the 'sustainable development' discourse is criticized for being a "humane version of cultural imperialism" (p. 406) in the sense that interests of the North steer the course of development. His view supports the view of Huckle and Wals by stating that fundamental cause-and-effect-relationships are omitted from the report. As such the term 'sustainable development' becomes apolitical with a "faith in the right solutions documented by science and knowledge" (Harvold, 2003, p. 408). An apolitical approach is stated to make it harder to create the necessary political will and momentum to encourage change as the solutions lie in technocratic knowledge provided by experts rather than in democratic activity (ibid.). Harvold do not refer to post-politics, though his view supports its content.

2.1.3. Inequality

The examples of the difficulties of defining "needs" and the inherent oxymoron of the sustainable development concept, display the challenge of representing and speaking to a globalized audience. In *"A Review of Utopian Themes in Sustainable Development*

Discourse" Harlow, Golub and Alleby (2013) points to how the 'sustainable development' discourse has adopted the tension between economic growth in capitalism and social justice. This tension goes back to the theories of Adam Smith's and his view of the "invisible hand" and the positive effects of the market forces, opposed to Karl Marx supporting a more social system with a stronger focus on the workers. Building on Smith's theories the dominance of neoclassic economics since the Second World War and the Marshall Plan, have led to make market incentives the favourable choice of many industrialized countries of the North, to solve the "externalities" created by the economic system. An example of "externalities" in this context is environmental pollution from production (Vatn, 2005, p. 89).

According to Marx's theory poverty is inherent to the capitalist system. Combined with his "focus on power, class relations, political consciousness and social change" (Harlow et al., 2013, p. 272), his theory has had an important impact on the development discourse, especially in developing countries. The Brundtland-report tries to address the challenge of the opposing roles of the North and the South:

> "Yet at the same time these developing countries must operate in a world in which the resource gap between most developing and industrial nations is widening, in which the industrial world dominates in the rule-making of some key international bodies and in which the industrial world has already used much of the planet's ecological capital. This inequality is the planet's main 'environmental' problem; it is also its main 'development' problem." (Brundtland, 1987, p. 14).

In this statement, the authors point to how the power-imbalance between the industrialized countries and the developing countries is the major challenge, and the authors underline the need for changes in policies to curb the consumption of the industrial world. This is not only for the environment and development, but also because it is "part of our moral obligation to other living beings and future generations." (Brundtland, 1987, p. 52). The authors point to both structural challenges and to "our" moral obligation to meet these challenges. At the same time they speak little of what this means for developed countries and combined with the promotion of continued economic growth, a kind of compromise is sought to entice all countries to partake. The result could perhaps explain the aforementioned comment from Harvold (2003) about the lack of a clear cause-and-effect relationship.

2.1.4. Corporate interests

The compromise reached in the report is a result of trying to include competing interests. In the article *"Editorial: Critical Perspectives on Sustainable Development"* Delyse Springett points to the influence of corporate agendas, also reflecting the North's agenda. This influence is stated to turn the focus away from institutional change, and in the direction of more power to the North in terms of defining the "construct of sustainable development while appearing to be seeking 'solutions'." (Springett, 2013, p. 75). In order to influence the discourse, corporate forces have early on worked at the institutional level, "through powerful administrative coalitions between business organizations themselves and between business and government." (p. 75). The International Chamber of Commerce (ICC) established the World Industry Council on the Environment (WICE) to work as an advocate for commercial interests and analysing how environmental legislation would affect 'corporate interests'. Through this council, corporate interest managed to avoid a Code of Conduct on Transnational Corporation put forward by the UN. This council has since been joined together with the Business Council for Sustainable Development, a council that has enjoyed a privileged role at UN Conference on Environment and Development (UNCED). The joint council was named World Business Council on Sustainable Development and its mission was to "promote the attainment of eco-efficiency, defined as "the ratio of resource inputs and waste outputs to final product" (Springett, 2013, p. 76). The term eco-efficiency has since been part of the advancement of technology as the solution to how continued growth is possible without harming the environment, and without having to change the standard of living.

2.1.5. Voices of the South

Voices of the South have also been present. Parallel to Agenda 21 from 1992 The Alternative Treaties was created by various NGOs. It "exposed key 'silences' and 'non-decision-making' that characterised the formal agenda" (Springett, 2013, p. 79) and, among other things, it focused on debt forgiveness and redistribution of wealth, which Agenda 21 did not.

As the report also states, voices of developing countries have had an increasing focus on the problem of inequality as the cause to many of the challenges to sustainable development (Vandemoortele, 2015). They are focusing on the need for democratization of those primarily global and Northern institutions that have had the most influence on the 'sustainable development' discourse (Springett, 2013, p. 79). These views address what Vandermoortele calls the patronizing views of the North-South divide and is also a reflection on the

complexity of the developmental discourse of the social dimension.

2.2. A concept continuously changing

Since the report was launched in 1987 debates about sustainable development has continued in the many UN meetings held in the interest of development and environment, such as the Earth Summit in Rio in 1992, the World Summit on Sustainable Development in Johannesburg, the Rio +20 in 2012, and during the Sustainable Development Goals (SDGs) meeting in New York in 2015. These meetings have been instrumental for the development of the discourse and the definition from *"Our Common Future"* is still often referred to, though used differently by the many stakeholders. The many stakeholders in a sense represent the different interest groups, which have different concerns; either environmental concerns, development and social concerns, or economic concerns. There are also stakeholders representing several of these concerns, of which the UN and the development of the SDGs is a good example. In the process of developing the SDGs, anyone who wanted could contribute with inputs, and the result is 17 goals that represent an international, political compromise between competing interests.

This presentation of different perspectives, views, and interests serve as an introduction and explanatory backdrop to the main views that will be analysed in the Norwegian context relevant to this thesis. The views of environmental concern, poverty, inequality, democracy, economic growth and corporate interests, and voices of the South do not represent an exhaustive list of all relevant views. More views exist within each view, and other dimensions have been added to the constantly changing concept of SD. Examples are a cultural dimension (Birkeland, 2014), a political dimension, technical and legal dimensions (Pawłowski, 2008), and place, permanence, and persons as dimensions (Seghezzo, 2009). Within the Norwegian education context, it is the social, environmental and economic dimensions that are primarily spoken of, and will, therefore, be of focus in this thesis. The complexity of the concept, and how it is addressed in the renewal documents, is of interest.

2.3. An Education for Sustainable Development

During the Earth Summit in Rio in 1992 'education' was presented in an own chapter as an central tool for sustainability awareness through the Agenda 21 action plan. This was however not the first time that education was promoted by the UN as a tool for raising awareness and spreading knowledge about the challenges of environmental degradation. Already in 1975 the

UN had launched the International Environmental Education Programme, to raise awareness and create competence in environmental education (EE) within nations and amongst their teachers (Unesco-UNEP, 1985). The role of education in the promotion of sustainable development was to build on the experiences and competency generated from Environmental Education. Although this time it was with a greater emphasis on knowledge about development: "While basic education provides the underpinning for any environmental and developmental education, the latter needs to be incorporated as an essential part of learning." (UNCED, 1992, under 36.3).

During the 2002 UN Development and Environment meeting in Johannesburg, the Decade of an Education for Sustainable Development was presented to start in 2005 and last throughout 2014 (UNESCO, 2005, p. 26). An "International Implementation Scheme" launched by UNESCO in 2005 presented the following overall goal, vision and primary goal of the DESD:

> "The **overall goal** of the DESD is to integrate the principles, values, and practices of sustainable development into all aspects of education and learning. This educational effort will encourage changes in behaviour that will create a more sustainable future in terms of environmental integrity, economic viability, and a just society for present and future generations.
>
> The **basic vision** of the DESD is a world where everyone has the opportunity to benefit from education and learn the values, behaviour and lifestyles required for a sustainable future and for positive societal transformation.
>
> The **primary goal** for the DESD is laid out in the United Nations General Assembly resolutions 59/237 in which the General Assembly "encourages Governments to consider the inclusion ... of measures to implement the Decade in their respective education systems and strategies and, where appropriate, national development plans". Furthermore, the General Assembly "invites Governments to promote public awareness of and wider participation in the Decade, *inter alia*, through cooperation with and initiatives engaging civil society and other relevant stakeholders, especially at the beginning of the Decade"." (UNESCO, 2005, p. 6)

2.4. ESD's description according to the International Implementation Scheme

In the International Implementation Scheme made by UNESCO in 2005 an education for sustainable development is presented as based on the:

> "ideals and principles that underlie sustainability, such as intergenerational equity, gender equity, social tolerance, poverty alleviation, environmental preservation and restoration, natural resource conservation, and just and peaceable societies" (UNESCO, 2005, p. 27).

Accordingly, the implementation scheme also presents the importance of each nation to adjust their plans according to their national context, so that they are "locally relevant and culturally appropriate" (p. 28), which implies that ESD will take many forms. A consequence will be the evolving concept of sustainable development. The scheme encourages "locally relevant" content and the acknowledgment of SD as an evolving concept. At the same time, the scheme also presents the importance of promoting global citizenship through ESD (p. 27).

Regarding content the scheme highlights a focus towards more principles, perspectives and values, and more skills and knowledge, all to be relevant to the three dimensions of society (including culture), environment and economy of which sustainability comprise (p. 27). In order to properly address the dimensions of sustainable development an interdisciplinary approach is necessary: "No one discipline can claim ESD for its own, but all disciplines can contribute to ESD." (p. 31). The scheme presents abilities such as critical thinking, problem-solving- and higher-order thinking skills, and the development of action competency is to be achieved through the used of a variety of pedagogical techniques.

2.5. Public participation

An central focus within Environmental Education and ESD is on generating public awareness of sustainability. The International Implementation Scheme highlights how the public needs to be included and involved, and given the ability to contribute through participatory means such as debates and discussions, to the understanding and achievement of sustainable development. The responsibility is placed on national, regional and local authorities to create networks and forums for such debates and discussions.

The International Implementation Scheme for DESD links DESD to other international educational initiatives such as the Millennium Development Goals. These goals are now

replaced, aptly enough, with the Sustainable Development Goals. ESD is now integrated into the SDGs under goal 4: *Quality Education* where point 7 states:

> "By 2030, ensure that all learners acquire the 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" (United Nations, 2017, author's emphasis).

In accordance with goal 4 of the SDGs member countries will be measured on how "national education strategies, curricula, teacher education and student assessments integrate" (IAEG-SDGs, 2017, p. 7) Education for Sustainable Development.

2.6. Norwegian ESD strategies

Norway made its first ESD strategy in 2006, which was renewed in 2012. Through the UN, Norwegian authorities has chosen to partake in and various regional arrangements where Norway is obligated to adhere to various other strategies as well (Utdanningsdirektoratet, 2006). The strategies are elaborated on in the first research question about what ESD is considered to entail in the Norwegian context. It will be of interest to see how the many views are reflected in the ESD strategies and how the ESD strategies have been used in the renewal process, as 'sustainable development' is to be one of the three interdisciplinary topics.

2.7. The Renewal Process

The purpose of the process is to renew the general core curriculum and all the subject syllabuses. According to a representative from the Norwegian Directorate of Education and Training (NDET), which is responsible for the practical arrangements of the renewal process, it is an aim to spend the necessary time to ensure a broad process that allows for all involved stakeholders to be able to contribute. In this process, the three interdisciplinary subjects are to be integrated at the "premises of the subjects" (Interview).

As mentioned, the process started with the establishment of the commission now known as the Ludvigsen-commission. The commission made two reports, and the latter of the two: *"The School of the Future"*, will be used in the analysis. The Ludvigsen reports (LR) are Norwegian Public Reviews (NPR, in Norwegian: NOU) where the commission was given the mandate to evaluate whether current education is:

- In accordance with future requirements in terms of what is considered necessary knowledge and skills.

- What changes is needed for education to be in accordance with this.

- If the current subjects structure should be maintained.

- If the "Purpose Paragraph" is adequately reflected in the subjects.

(Ludvigsen et al., 2015, p. 8). White Paper nr. 28: "Subject – Exploration – Understanding" (own translation) is a political document founded on findings of the report according to the political views of the current ruling parties Right and the Progress Party. The White Paper functions as a knowledge foundation for the further process of renewal of the education.

The renewal of the general core curriculum has just finished, and a new version has arrived. This version has been through a hearing process where everyone who wished could contribute with inputs. About 310 inputs were provided. On June 6th this year was the deadline for submitting persons to participate in the groups responsible for each subject syllabus. Their work has just begun. The whole process is described in the figure below.
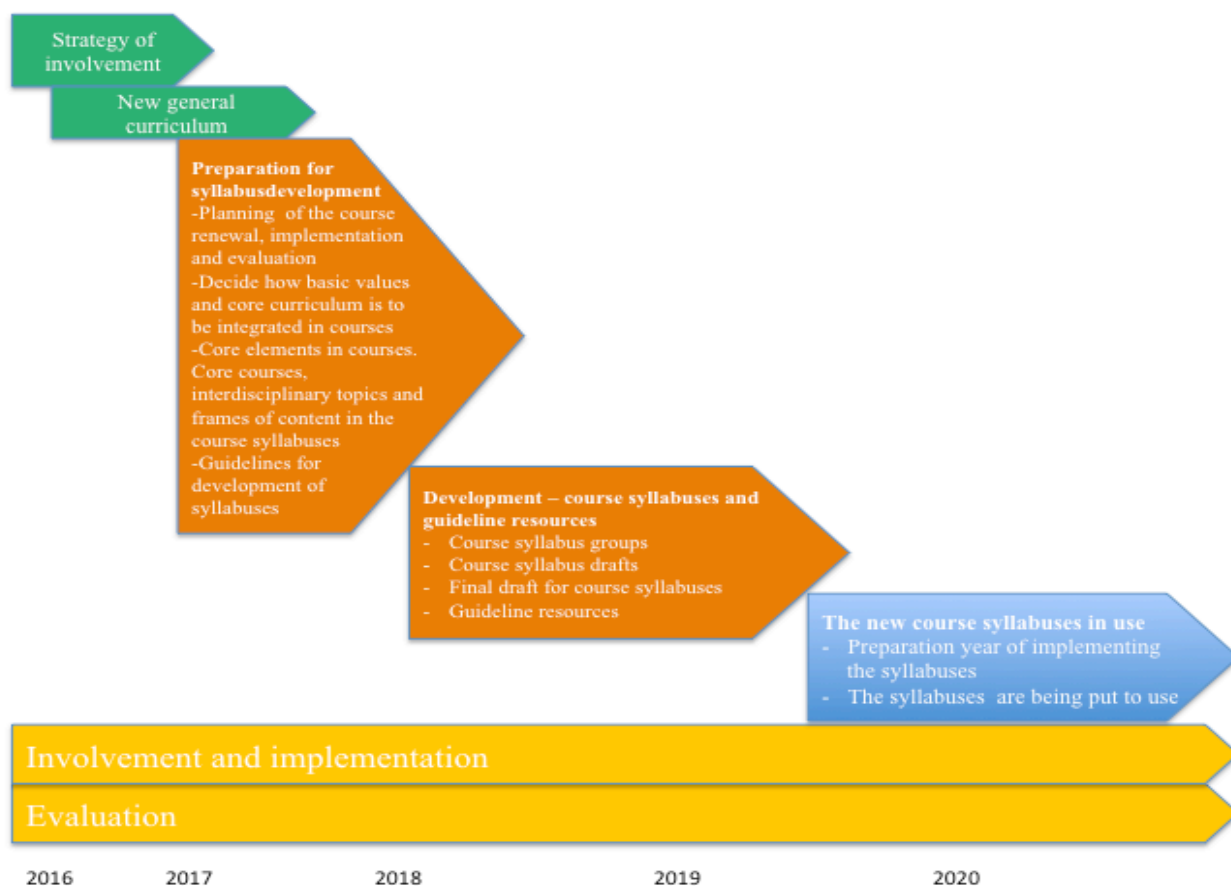
Figure 1: Translated version of figure presented in interview with representatives of the Directorate for Education and Training

The figure shows the timeframe of the renewal process and what is to happen when. It is an aim that the process is broad so that those stakeholders that want can contribute and create ownership to the plans to smooth transition and implementation.

Relevant documents for the analysis

The two ESD strategies, the Ludvigsen report (LR), the White Paper (WP), the three versions of the general core curriculum and the subject syllabuses of the natural- and social science subjects constitutes relevant documents and is analysed in research question 2 in order to assess what views of SD are present.

3. Theoretical framework

In order to recognize some of the prevalent views on the concept of 'sustainable development', the thesis will build on the work of Kummeneje who concluded with the presence of three discourses coinciding with the three dimensions of environment, society, and economy. The background chapter presented some key arguments and views, which were placed within these three dimensions. Kummeneje's work is based on the analysis of four social science textbooks and selected chapters from the natural science textbooks from the first year of high school. He has established the three discourses based on topics considered relevant to sustainable development with departure in the UN definition. The discourses are useful to analyse the different views of SD and ESD in the documents relevant to the renewal process in Norway. Uncovering dominant views reveals what kind of knowledge, skills, and competency is promoted. Combined the views and the promoted concept of competency can work as a foundation for a discussion about what kind of sustainable development is encouraged. Such a discussion can point to advantages and deficits or discrepancies.

Different scientific disciplines influence the three dimensions and its discourses with different views of reality and knowledge. This thesis takes departure in critical realism, which aims to combine the approach of various disciplines. The theory chapter will explain the theoretical framework of critical theory and post-politics.

3.1. Critical theory

With the departure of wanting to combine the natural and social sciences critical realism are inspired by tenets of Critical Theory (Poutanen & Kovalainen, 2009). Critical Theory is a social science theory that in its initial days had the aim of combining the philosophical, normative reasoning of the time with empirical research guided by several disciplines within the social sciences (Giddens & Turner, 1987). The work of this thesis takes inspiration from such an approach where interviews, literature review and analysis of documents are used as the empirical research, and analysis according to the theoretical framework is used to reach some normative reflections and recommendations.

Critical Theory refers to the theory formation of its early intellectual thinkers such as Horkheimer, Adorno, and Marcuse in the 1930s, which came to be known as the Frankfurt School of thought. Critical Theory diverged from contemporary social theories in the aim of

an interdisciplinary approach combined with a normative goal of emancipation by creating actors of change (Ibid). Critical Theory reflected the contemporary theories and was "born" in a period when the philosophy of history, which was the realm of Critical Theory, were experienced to develop away from its connection to reality. According to Giddens and Turner (1987) philosophy of history were the only social science discipline at the time that allowed "a transcending critique" and where relations "of a society against a transcending idea of reason" (p. 350) were tried measured. Max Horkheimer's goal as director of the Institute of Social Research, therefore, became to overcome the divide between metaphysics and positivism and to do so by "emphasising contextual empirical social research and normative truth claims, morality, and justice simultaneously" (Poutanen & Kovalainen, 2009, p. 2). The aim was also to go further than traditional theory, which was primarily concerned with understanding and explanation of societal phenomena. The Critical Theory was also to provide "a deliberating dimension by pointing at elements that ought to be changed" (Benjaminsen & Svarstad, 2010, p. 51), making it *critical*. So Critical Theory had a descriptive and explanatory aim and a normative aim.

Horkheimer was inspired by Marx who aimed to make philosophy "practical" in order to institute change of practices so that society could reach its ideals (Bohman, 2016). At the same time, Horkheimer wanted to be able to continue the foundation in philosophy to hold on to the ethical and moral questioning and aim of research. The normative aim was based on a philosophical ideal of equality and sought "human emancipation from slavery" (Bohman, 2016). The ideals were considered metaphysical; to transcend context and time and the ultimate ideal of "human emancipation from slavery" took form in "real democracy", an idealized, rational state achievable by providing individuals with "conscious control" of societal process (Giddens & Turner, 1987).

Critical Theory became influential from the 1930s and onwards, but has also met with its share of criticism and has evolved over time. In a time of Fascism and Stalinism the early intellectuals of the Frankfurt School analysed an increasingly authoritarian state with closer and closer relations with the market as "state capitalism", an opposite ideal to that of "real democracy" due to its oppression of political opinion (Bohman, 2016). Combined with increased reification they perceived these developments to be "systemic steering processes" (Giddens & Turner, 1987, p. 357) in a "totally administered world" (p. 371) where rationality were governed by instrumentality. Horkheimer explained this with a pessimistic philosophy

of history where his focus was rather on the "destructive potential for human reason instead of looking at emancipatory possibilities" (p. 358). Quite depressingly both Horkheimer and Adorno considered Fascism to be the end stage due to this reasoning of man:

> "the entire civilization process of humanity is determined by a logic of gradual reification which is set in motion by the first act of mastery of nature and is brought to its consequential completion in Fascism." (Giddens & Turner, 1987, p. 360)

Considering the systemic brutality of the Holocaust, it might not be strange Horkheimer and Adorno ended up viewing human rationality like this.

Benjamin Walter, also of the Frankfurt School, was the first to provide an alternative to this 'functionalist reductionism' of Horkheimer and Adorno. Walter looked at "the cultural mass" and how individuals in a society were able to perceive differently. He considered this an example of how there was more to the "the internal dynamic of the formation of human consciousness" than the "systemic steering process" (p. 358). In the 60s Habermas continued the challenging of Horkheimer and Adorno by looking at how language is part of shaping societal action:

> "The life-form of human beings distinguishes itself by an intersubjectivity anchored in the structures of language; therefore, for the reproduction of social life, the reaching of understanding in language between subjects represents a fundamental indeed the most basic, presupposition." (p. 372)

With this introduction of language, Habermas added a communications-theoretic foundation with a two-level concept of society into Critical Theory, and criticized "the tendency toward a gradual reduction of all political-practical matters to questions of technically appropriate decisions" (p. 372). Habermas thus critiqued Marx's presupposition of labour as the only mode of action and introduced 'interaction' as another mode. In his concept of society, Habermas divides society into a "purposive-rationally organized action-system" on the one side, and a "sphere of communicative everyday practice" on the other (p. 374). And in the latter sphere communication contributes to the understanding of values and meaning significant of the time and culture. The analysis of structural relationships and its mediation through language is one of the elements of Critical Theory that has survived scrutiny over the

years (Bohman, 2016) and is an inspiration for analysis in this thesis. Through the view of interaction Habermas's view of society provides a more optimistic perspective of individuals and groups as actors of change.

The pendulum might be perceived to be swinging backward though, because Horkheimer and the Frankfurter school's claim of oppressed opinions and systemic steering processes can somehow appear to have re-surfaced in the post-politics' view of neoliberalism's oppression of "the political".

3.2. On de-politicisation and post politics

"It is easier to imagine the end of the world than to imagine the end of capitalism."
(Jameson, 2003)

The quote is meant to capture the situation of post-politics where capitalism has become an unquestioned framework in which politics is reduced to a debate about technologies of management through seemingly participatory procedures, which "forestalls the articulation of divergent, conflicting and alternative trajectories of future environmental possibilities" (Swyngedouw, 2011). Post-politics and 'the post-political' are concepts within the social sciences that have been constructed to describe what is perceived as the processes of de-politicisation brought on by a transition towards techno-managerialism and a "reduction of the political to the economic" (Swyngedouw, 2014, p. 8). The post-political theory is relevant for this thesis because it provides a framework of analysis that can help uncover trends of development that point to a weakening of democratic participation.

Swyngedouw (2014) explains post-politics through the concepts of "the political" and "politics" where 'the political' constitutes the "space of contestation and agonistics engagement" (p. 6) and "politics" are the practices that institutes society and creates social order. The post-political state is reached when "the political" is colonised by "politics" (p. 6) presented as the expert administration of "consensual procedures that operate within an unquestioned framework of representative democracy, free market economics and cosmopolitan liberalism." (p. 6).

The following figure is meant to depict the process of de-politicisation towards post-politics and a post-democratic society:
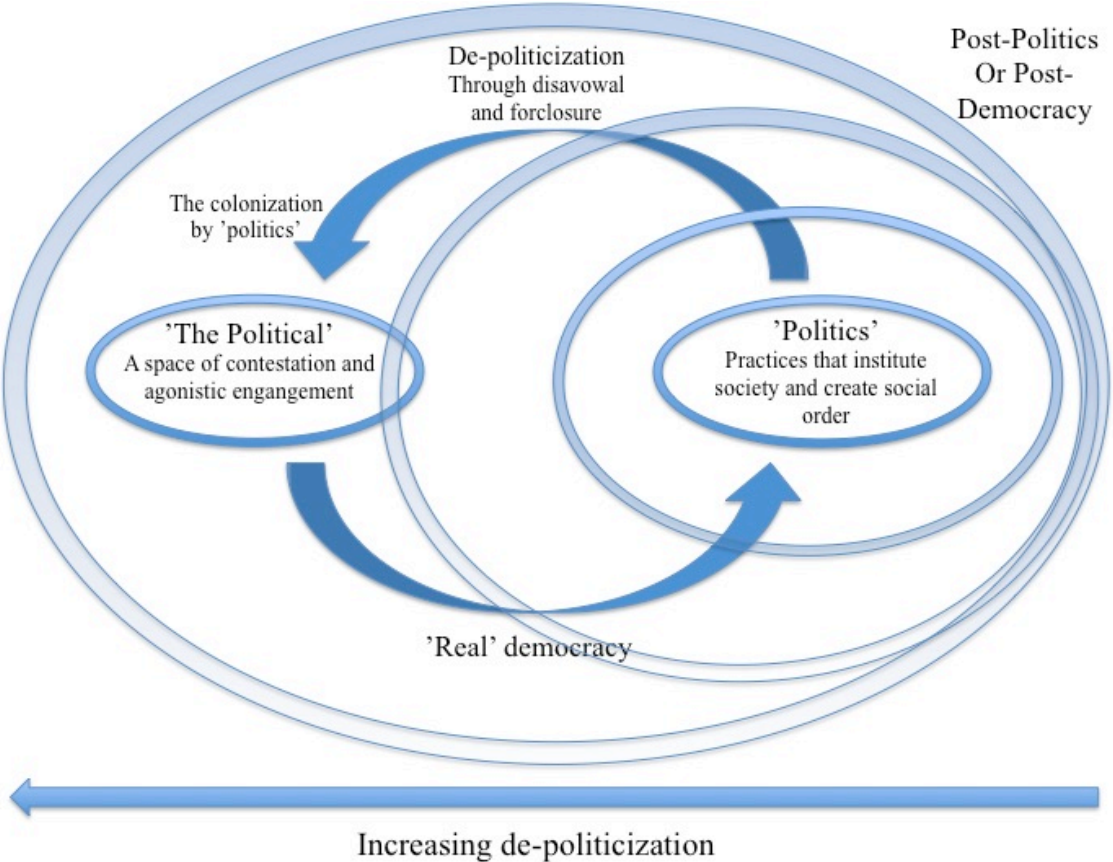
Figure 2: Visual representation of the process of de-politicisation made through the interpretation of the work of Swyngedouw et al. (2014). The increasing circle of "Politics" is meant to symbolize the process of de-politicisation where "Politics" engulfs "The Political".

The two smaller circles are thought to represent the two spheres of 'the political' and 'politics', which influence each other through 'real' democracy and de-politicisation. The spheres of 'the political' serve the functions of providing space for voicing disagreement, and the 'politics' provide settlement for the "practices that institute society" (Van Puymbroeck & Oosterlynck, 2014). The de-politicisation occur when the sphere of 'politics' disavows or forecloses the space of 'the political', as the growing circles are meant to represent, until the point in which 'the political' boils down to disagreements of fixes within a set framework. In the theoretical framework of post-politics, the de-politicisation process occurs through foreclosure of actual disagreement by the presentation of capitalism and neoliberalism as the only 'real' political option (Swyngedouw, 2014). Disagreement is narrowed down to be about

technical fixes to problems within the existing system with the ultimate consequence being the elimination of real democracy.

In his book *Post-politics and its discontents: spaces of depoliticization, spectres of radical politics* used in this thesis to understand the theoretical framework of de-politicisation and post-politics, Erik Swyngedouw has invited several academics to "explore the contours of post-politicization" (2014). The academics are primarily from the social scientific field of political theory, sociology and geography and their theoretical foundation build upon the works of amongst others; Chantal Mouffe, Jacques Ranciere, Alain Badiou and Slavoj Zizek, known for their radical leftist critique (Swyngedouw & Wilson, 2014).

In his book Erik Swyngedouw refers to Fukayama's proclamation of "the end of history" to describe, in ideological terms, how the era of post-politics began:

> "(T)he fall of the Berlin wall marked the conclusion of the long historical struggle between competing ideologies. Liberal democracy and the market economy had proved themselves to be the best possible basis for social organisation, and all that remained was for the backward parts of the world to catch up with the West." (Swyngedouw & Wilson, 2014)

In this regard, the end of history equalled the end of ideology and the end of politics. What then remains is the neo-liberalist view, and even in the wake of the financial crises of 2008, it is still persisted that there is "no alternative" (p. 8). Swyngedouw continues by referring to the Economist, which in 2008 stated that the following massive, tax-payed bailouts of banks were "pragmatic, not ideological" (p. 8). By referring to the Economist, Swyngedouw explains how "post-politics is defined by the reduction of the political to the economic" (p 8). The view of the Economist is that the bailout happened out of necessity, a process described as "socialism for the rich and austerity for the poor" (p. 8) and which according to Swyngedouw very much is a political issue. For further elaboration on the process of de-politicisation he refers to Rancière's who claims that "the supposedly reigning liberalism borrows the theme of objective necessity, identified with the constraints and caprices of the world market." (p. 9). This "objective" necessity is needed to maintain the social order considered to be the ideal. But according to post-politics such social orders "are profoundly contingent and structured to conceal their own absent ground" (p. 10), revealing the theory's ontological position of social constructivism. Different "systems" have a foundation on which they build. Just like religions or other ideologies, neo-capitalism presents a socially constructed view of reality. Post-

politics asserts that there is no "one" real foundation on which we all will agree and therefore it is impossible ever to be truly rid of "the political". Neoliberalism has its foundation in the positivist stance of the currently mainstream neoclassic economic theory. This theory has an approach where describing and explaining an objective "reality" is considered possible. The objective approach is combined with in an affinity for mathematical language and model making, trying not only to describe and explain, but also to predict human behaviour through mathematical functions (Næss & Price, 2016; Torsvik, 2003). This requires taking departure in the individual as the unit of analysis, and establishing "laws" of behaviour to fit into the function model. To do so the theory has developed the behavioural theory of rational choice where the individual seeks to maximize own utility, has fixed preferences and perfect information (Vatn, 2005). The rational choice theory is used in models to predict behaviour in the market.

The neoliberal definition of individualization is used in post-political theory as an indicator of the de-politicisation process. In a Norwegian context, Ingerid Straume refers to a "structural individualization" where the individual is considered the "agent responsible for altering the system" (2005, p. 1) to explain the process of de-politicisation. She continues:

> "With the spotlight on individual matters, finally, individuals – not the established social structure – can be held responsible if, and when, results fail to materialize. The overall effect is that social and political processes become obscured in a way that makes it difficult to criticize conventional policy measures." (p. 3).

The ultimate consequence is the weakening of democracy. Encouraging democracy is an essential feature of the societal mandate given to Norwegian education. The ESD Implementation Scheme of the UN emphasise the importance of a participatory and democratic approach, and democracy is presented as part of SD in the Norwegian ESD strategies. Huckle and Wals, as mentioned in the introduction, point to the lack of focus on power, politics, and citizenship within the ESD discourse. Given the role of democracy within Norwegian education and its importance to the understanding and implementation of the SD concept, it will be of interest to see how relevant actors and renewal documents speak of democracy and SD.

Combing post-politics with an analytical toolbox the aim is to be able to uncover: what views are present; how they are presented; what views are not present; and what the potential

implications are of the views dominating and missing within the presentation of the SD concept.

3.3. An analytical toolbox

The theoretical framework of critical theory provides a frame for looking at power dynamics represented through discourse. Combined with post-politics, the theoretical framework offers an angle of interpretation to the discourses of the 'sustainable development' concept in a Norwegian context. By pointing towards certain development characteristics such as political questions increasingly becoming questions of techno-managerialism, increased individual responsibility and ultimately; less democratic societies, the theory provides a frame of analysis that can point to development trends within the ESD discourse worth discussing. To help uncover such trends and others, the thesis builds on the discursive work of Espen Kummeneje. In his thesis, Kummeneje did a discourse analysis of social- and natural sciences textbooks with the aim of finding what "discourses of relevance to sustainable development can be identified?" (p. 2). He found that there are three discourses each fitting one of the three dimensions of the SD concept; the ecocentric discourse fitting the environmental dimension, the development-oriented discourse fitting the societal dimension, and the economic discourse fitting the economic dimension. Each of these discourses and dimensions can be interpreted to have their own academic disciplines contributing to the understanding and existence of the discourses, and in turn retrieving their objects of analysis and knowledge generation from their respective dimension. The informants selected for this thesis to an extent confirm this interpretation, though they also exemplify the interconnections between the disciplines.[1]

Table 1: Dimensions, discourses and scientific disciplines

Dimension	Environmental	Societal	Economic
Scientific Discipline	Natural sciences	Social sciences	Econometrics[2]
Discourse	Ecocentric	Development	Economic
Main problem	Environmental degradation	Poverty and inequality	Poverty and environmental degradation
Main solution	Recycling, change lifestyles	Democracy	Economic growth and technology

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[1] More on this in the methods chapter

[2] Econometrics is also a social science, but will for the sake of simplification in this thesis be treated as a separate discipline.

Within these three discourses, Kummeneje argues that SD gets "systematically different content" (p. 36) in the sense that the "problem" and "solutions" differ. This point of departure of the discourses entails a Norwegian understanding of the three dimensions, which have included many of the concepts of the discourses of the international debate as described in chapter 2. The content of the three discourses can be used to uncover views on sustainable development, and Kummeneje presents concepts that can be used as a set of indicators. He presents concepts that get different roles depending on their "importance" within a specific discourse. These concepts and their meaning will be presented, and then a table of how the concepts are viewed within the discourses shows how the concepts can be used as indicators in the analysis.

3.4. Indicators

Some of the indicators are words that represent content or a topic within a discourse. The indicators within the development discourse are 'poverty', 'democracy' and 'international agreements'. 'Nature', 'environment' and 'climate' are of importance in the ecocentric discourse. 'Economic growth', 'consumption' and 'technology' are reflect the economic discourse. The indicators do not decidedly belong to only one discourse, and in the analysis, the context of the indicator will be presented. In the following section, these indicators will be described explaining also some words that work as sub-indicators or *elements* within the indicator.

Democracy

The democracy indicator primarily reflects the development discourse and the social dimension. The UN implementation scheme and the SDGs encourage broad democratic participation to ensure that a wide spectrum of values, opinions and interests have been represented and respected, and to create ownership to the development that has been agreed upon. Broad democratic participation is also to ensure that the ability to enact change is felt. Participation and ability to reflect about dilemmas and conflicts of interests are essential elements within the democracy indicator.

Poverty

In *Our Common Future,* the World Commission presented poverty as one of the main sustainable development challenges, and the focus on poverty shaped how SD was defined. A sustainable development is about covering everyone's needs, today and in the future. This has

been considered the 'development' aspects of the concept, which has, according to Straume and Sinnes, been abandoned by researchers within ESD due to its relation to economic growth (KILDE!). This was presented through the view of sustainable development as an oxymoron in chapter 2. This indicator reflects both the social and the economic dimension, but is of primary concern in the development discourse of the social dimension.

Inequality

As the background chapter present inequality is the planet's main 'environmental' problem and its main 'development' problem. This indicator reflects the social dimensions and development discourse, but to due to an increased focus on inequality by large economic institutions such as the World Bank, it can be said also to reflect the economic dimension and discourse.

International agreements

International agreements represent both a global and structural responsibility and view. They are also considered important in the economic discourse. This indicator reflects primarily the social, but also to an extent the economic dimension.

Nature, *environment,* and *climate*

Climate change has become a buzzword in the last ten years or so and represents a significant part of the content of the environmental dimension, and therefore represents a central element. Other elements are pollution, land degradation and overconsumption of natural resources. This indicator, and its representative elements reflects the environmental dimension.

Economic growth

Economic growth was presented in the background chapter as part of the 'development' part of the SD concept. This is not be confused with the main aim of the 'development' discourse, which is democracy, though also the 'development' discourse considers economic growth to be of importance. The economy discourse, however, considers economic growth to be of primary concern and in this context economic growth reflects the economic discourse. Trade would be another element of this indicator.

Consumption

This indicator reflects both the economic and to an extent the social dimension, depending on context. A focus that encourages consumption, present consumption as part of individual's identity or generally focus on individual consumption can be considered reflecting the economic dimension. A focus on the influence and power of a joint consumer effort could be considered a social dimension indicator.

Technology

Technology can be considered the problem and the solution; the ecocentric discourse considers it as both, and the economic discourse considers it primarily as a solution.

A part from these concrete terms there are also indicators that contain dualistic elements:

Individual versus structure

The 'individual vs. structure' indicator point to who the focus is on regarding the responsibility to enact change. Is it the responsibility of individuals through the everyday choices that we make that is emphasised? Or is it a focus on the structures that shape individual choice and is shaped by a common movement for change? A focus on the individual reflects the economic and environmental dimension, and a focus on structure reflects the social, and to an extent, the economic dimension.[3]

The harmony versus conflict

The 'harmony vs. conflict' indicator reveals whether or not structural dynamics are problematized or if topics are presented without addressing differences of interest or elements of conflict. Harmony reflects the economic dimension and conflict reflects the social and environmental dimension. This indicator also relates to the concept of action competency; are students taught attitudes and values to encourage certain behaviour or are they provided options where actions come first, through which attitudes and values develop? Kummeneje does not discuss action competency, but it is an issue mentioned by some of the informants and there are different views about how to encourage certain behaviours. Providing options for actions within the concept of SD can include understanding conflicts of interest, which in turn can be about political issues and political action. Should schools encourage this? Or is

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[3] See table for explanation

that problematic? A harmony perspective considers it problematic, while a conflict-perspective considers it necessary.

Global focus

The 'global focus' indicator reveals in this context whether or not an international sense of responsibility is present and reflects the social dimension.

The following table presents a summary of how the discourses compare according to the indicators. The indicators are based on terms and concepts described in Kummeneje work, and also reflect some of the terms presented in the background chapter.

Table 2: Indicator-table

Discourse	"Ecocentric"	"Development"	"Economic"
Dimension	Environmental	Societal	Economic
Harmony vs conflict	Conflict	Conflict	Harmony
Actor/Structure	Actor	Structure	Actor perspective to solve issues of climate change, and structure perspective to solve the issue of poverty
View of democracy	Do not consider it	Considered the most important aim	Important, but after economic growth
View of nature/environment	The most important factor in this. Both as resource and as inherently valuable. Nature and environment as systems	Culturally dependent, influenced by the hegemony of economic discourse where it is considered as a resource	Nature as goods/resources
View of technology	Can solve some problems. Is also part of the problem due to its connection to economic growth	Not of primary concern. Over emphasis on technology moves focus away from the real problem	Will solve the environmental challenges
View of economic growth	Problem	Important, though currently unfair due to unfair distribution	Solution

View of poverty	Less important than saving the environment	Poverty alleviation as top priority and is to happen through encouragement of democracy	Its alleviation is important and is to happen through economic growth
Inequality	Does not consider it	Important	Becoming important
View of international agreements	Important, action is still focused on the individual	The UN and its agreements are important	Important tool
Global focus	Both local and global	Important	Global focus through international agreements
Main solution	Recycling and reuse, and generally use less. Respect nature.	First democracy and then economic growth	Economic growth and technology

The discourses are not three clearly demarcated entities. This presentation is meant to highlight certain characterizations of each discourse, and each discourse brings important views into the concept of SD. Combined they will reflect a complex SD concept with competing interests. By referring to the indicators and how they are spoken of, it is possible to distinguish between different views of sustainable development and which of these dominates. Such findings can reveal how SD and ESD are viewed and understood, and how this understanding can affect the content of SD and the implementation of ESD.

4. Methods

4.1. Ontological and epistemological considerations

The three dimensions of sustainable development include different scientific disciplines. Part of the challenge of understanding and implementing a concept such as SD is that the different disciplines have different ontological and epistemological views. In Bryman's book "Social research methods" he divides ontology into the objectivist and the constructivist view (Bryman, 2008, pp. 18-19). In broad terms, the objectivist considers the external world as independent and open for objective knowledge, while the constructivist considers social phenomena to "continually being accomplished by social actors" (Bryman, 2008, p. 19) and therefore in a constant state of revision. The environmental and economic dimension would resemble the objectivist stance, and the social dimension resembles the constructivist stance. Epistemologically the objectivists are often positivists who view only phenomena that can be sensed as knowledge and who are concerned with the **explanation** of phenomena. Positivistic research uses deductive reasoning where theories are used to create and test hypothesis from which explanations of laws are assessed, and this process of science "must be conducted in a way that is value free" (Bryman, 2008, p. 13). In contrast to the positivistic economists who focus on explaining social phenomena and believe society should be researched in a value free way, you can find interpretivists who are concerned with the **understanding** of social phenomena. They believe that the subject of social sciences is of a different character than that of the natural sciences and therefore that social sciences requires a different logic of approach. Bryman refers to Alfred Schutz to try and explain this:

> "By a series of common-sense constructs they (the subject of research) have pre-selected and pre-interpreted this world which they experience as the reality of their daily lives. It is these thought objects of theirs, which determine their behaviour by motivating it. The thought objects constructed by the social scientist, in order to grasp this social reality, have to be founded upon the thought objects constructed by the common-sense thinking of men (and women!), living their daily life within the social world." (Bryman, 2008, p. 16, quote in quote; Schutz 1962: 59)

In contrast to natural sciences who's object of study usually are entities that are not aware of being researched and do not communicate with the researcher, social sciences in some way or

another, interact with their subject of study and depend on their 'thought objects' if the aim is to not only explain, but also to understand. Where the natural science researcher can be an observer, the social scientist is a participant (Torsvik, 2003). As such the object of research and the research itself differs between the different disciplines.

4.2. Ontological and epistemological influence on choice of methods

For the choice of methods ontological and epistemological considerations are what decides the methods a researcher will deem 'correct' in order to find answers to the problem statement and/or the research questions. The 'domain' in which the researcher finds him-/herself defines the topic and angle of research. Where the natural sciences take departure in objectivism and an 'absolute' reality with 'natural laws' distinct from humans and how we perceive it, the social sciences focus on how humans also create "reality" by making concepts, ideas and categories to understand it. The natural sciences believe in value-free quantitative research where use of experiments and surveys are common. The social sciences emphasise subjectivity and the details of the phenomena of research and often use qualitative methods such as interviews, participatory observation and discourse analysis (Bryman, 2008). The divide between the natural and social sciences caused by different ontological and epistemological consideration has caused many scientists to adhere to one category often with limited understanding or knowledge of the other. The different scientific disciplines have grown apart, a development that has challenged the interdisciplinary approach needed, amongst others, in an education for sustainable development. Although there is a change towards interdisciplinarity and use of triangulation and mixed methods, a focus on the ontological and epistemological divide could reveal some of the challenges of implementing topics that require an interdisciplinary approach.

As presented in the theory chapter this thesis departures from a critical realism position and an interdisciplinary approach. Critical realism tries to find common ground between the positivist stance and the interpretivist stance. Like positivism critical realism support the belief that natural science methods can be used on the social sciences. At the same time critical realism argue that "the scientist's conceptualisation is simply a way of knowing that reality" (Bryman, p. 14) and that there is a difference between the object of study and the terms used to describe, explain and understand it (p.15). Critical realism embraces both an external reality and a constructed reality. This approach has certain practical values as it opens of for multiple perspectives when analysing an object or a phenomenon. The aim of the

approach is to gain the best possible description of what *is*, and in a best possible way try to both understand and explain the issue at hand. In the end the hope is to be able to provide a normative statement of what *should* be done.

4.3. The process

By writing a shadow document, it has been possible to follow the thought process and see how the focus of the thesis has changed in nature according to where new knowledge opened new doors. As mentioned the concept of sustainable development has been omnipresent as the ultimate goal of everything in my earlier studies. Therefore I have a "pre-understanding" of the concept and being aware of this is according to Grønmo part of the hermeneutic analysis (2004, p. 393). A central part of the hermeneutic analysis is to understand the context in which actors are part of (p. 394). The literature review provided insights into the Norwegian context of SD and how the education academics have viewed SD and ESD over time. Being part of the teacher-training environment provides useful insights into the many issues of focus, of which SD and ESD are to "compete" for attention.

Finding the analytical tools provided by Kummeneje's work made a more discursive approach to the analysis possible. This discursive approach constitutes a framework where the views are placed within dimensions of the SD context. The information from the informants could be interpreted to correspond to certain dimensions. The information also improved on the understanding of the three dimensions and the indicators in terms of explaining how the views have developed. Insights of the informants also helped understand the structures shaping the different scientific disciplines. Finding Kummeneje's work later in the process can be interpreted as both negative and positive. Negative in the sense that by obtaining these tools earlier I could have better used them in the interviews as well. But learning of his work after conducting the interviews also made it possible to analyse the interviews according to the discourses, instead of having the interviews already guided by them. As a consequence of discovering his work later in the process the discursive work to an extent provides a triangulation effect by confirming how views often are shaped by the dimension to which they most belong.

4.3.1. Review process

As Bryman (2008, pp. 82-111) points out there are several ways to understand a literature review process. I have perceived it to be a combination of a search for relevant information, which investigates past and present writing, and at the same time as a process that provides a

context and eventually an overview that also reveals gaps. This literature review started off with international literature to get an understanding of 'sustainable development' as a concept and ended up with primarily Norwegian literature on education for sustainable development.

My approach compares to that of the first stage of action research where an understanding of what constitutes the problem is researched and negotiated by involved actors. Action research is a perpetual process where a problem is defined together with stakeholders; an action to solve the problem is defined and executed (stage two); and then the action is evaluated (stage three), which in turn leads to the development of new actions to be tried out and evaluated (Howe et al., 2005, p. 153). The research in this thesis aims, in cooperation with selected stakeholders, to establish an understanding of the current situation and suggest further actions to be made in the context of ESD. The suggested actions could potentially take place in the current process of curriculum/syllabus renewal and catalyse further studies.

According to Howe et al. (2005, p. 155) a literature review in action research will both "define the starting-point, provide a contextual frame of the topic and a picture of the current status quo" and help "formulate and operationalize the research questions and define analytical categories for treatment of data". A literature review is therefore useful in multiple ways. The topic of an education for sustainable development is expansive and a lot of time was spent on reviewing literature before the interviews commenced, as new challenges, questions and elements were constantly uncovered. These questions were raised in "unofficial conversations" with informants, which became part of the preparation for the interviews.

4.3.2. Key informants

I have four key informants who have contributed with valuable information to the research process and analysis. Advantages of using key informants are that they provide useful insights into the field of research and that they can give tips about other sources of information. Such information was what I received from my four informants selected based on tips and because of their particular expertise. Judith Klein from RORG and Ingerid Straume, pedagogue from UiO, provided valuable insights into different aspects of ESD. I had both informal conversations and interviews with Jonas Christophersen from the Western University of Applied Sciences and Astrid T. Sinnes from the Norwegian University of Life Sciences. These conversations proved useful in terms of narrowing down the scope of the thesis. A disadvantage of using informants is that certain views can colour the researcher. As the aim of

the thesis is about uncovering such views, requiring me also to be aware of my own, colouration was not a problem, but rather an advantage. In addition to these key informants I also had interviews with other informants.

4.3.3. Interviews

Interview guides were initially made for different categories of interviewees, but for interviewees with specific kinds of expertise I ended up preparing individual interview guides. These were sent in advance to some of the informants. The interviews were semi-structured with open-ended questions. The advantage of this form is that it opens up for specific topics and questions for the interviews and at the same time give the informants the "leeway in how to reply" (Bryman, 2008, p. 438). Semi-structured interviews also provide flexibility so that some topics can be elaborated and new topics are uncovered. In this type of interview setting the emphasis is on what frames of understanding the interviewee uses to explain their views, and it can prove useful as the interviewees can elaborate on already existing information and perspectives (Bryman, 2008). Information that was revealed through interviews helped nuance the "picture". It also revealed that the informants have different views of SD and it also helped place the concept in connection and relation to other topics that are considered important in education.

4.3.4. Selection of informants

Selection of informants followed a strategic selection, which according to Grønmo, is based on "systematic evaluation of which units that from theoretical and analytical purposes are most relevant and interesting." (2004, p. 104) The selection of informants started off with researchers found in the literature and tips from the supervisor, and from there followed recommendations from interviewees and people found in the ongoing process of the literature review. A focus on the interdisciplinary approach of SD was always present. It was however not the initial intent to interview actors that could represent each dimension, as this angling of the theses' problem statement was decided during the research process. Through the description of the dimensions' discourses, provided by Kummeneje's work, it has however been possible to somehow interpret the transcribed interviews according to these discourses. Another advantage is that information from some of the key actors helped to understand and explain both views and indicators representing the different discourses.

In the end, the number of informants also became dependent on the amount of time, the need to narrow down the scope of the thesis and relevance according to this. All the informants

have contributed with essential knowledge, and many of them hold, by their occupation and work, positions in the SD "landscape". Stating them by name has value because it reveals who, specifically, works with the topic and how. It reveals the different angles of approach, and it reveals who are involved actors who will, and can be, involved in future work with SD. They were all offered to respond anonymously, of which a few did, but most of the informants wanted to be stated with their full name. Some are anonymous as they are better suited to be presented as representatives. An ethical dilemma occurs when informants are not anonymous in research, because there is always the chance that they feel used or misunderstood, a feeling that is worse when connected to statements they do not recognize. To prevent this, the informants who were not anonymous were given the chance to give feedback on how the information they provided was used in the text.

Selected informants:

Judith Klein/RORG Samarbeidet

Have provided a historical background of the development of the SD concept and of ESD in a Norwegian context. She is currently part of the interdisciplinary group working on sustainable development.

Ingerid Straume; Associate Professor and Pedagogue at UiO. Through conversation and literature she offered insights into the post-political dimension. She also pointed to the problem of focusing primarily on the individual and was the one to provide tip about the RE network.

Per Jarle Sætre (18th of November 2016)

Human geographer/Professor at the Institute of Social Sciences – Western Norway University of Applied Sciences. Contributed with views on Environment Education, on SD in the geography subject, and on conflict and structures.

Teacher at lower secondary school in Bergen (20th of January 2017)

Secondary school teacher with masters in social science didactics. Provided insights into interdisciplinary projects about sustainable development and the teacher's background offered a common reference point.

Astrid T. Sinnes (24th of January 2017)

Associate Professor of Science Education at the Norwegian University of Life Sciences. She has written the book "Education for Sustainable Development – What, Why, How" (Sinnes, 2015). She provided insights as to how such a significant concept of our time can be neglected, how to practically do ESD, the importance of an interdisciplinary approach and the importance of action; that it is important to introduce students to options where they can act and thus a change in attitude can follow.

Eldri Scheie (25th of January 2017)

Associate Professor of Science Education - Represents the Natural BackPack, a central initiative towards SD, and the Norwegian Centre for Science Education located at the University of Oslo. Explained the existing and primary initiative of NBP. Emphasised that the initiative encouraged an interdisciplinary approach, but realized that some of the social and economic aspects got lost on the way to the students. Also emphasised how the centre tries to reach out to the social sciences. It has been a slow process, but social scientists at the ILS at UiO now have started to respond and become engaged.

Elin Sæther (25th of January 2017)

Associate Professor of human geography at the Department of Teacher Education and School research at UiO. Argues that it is a problem that ESD so far has been primarily about the environmental dimension and worries that the view of the concept of SD as "naturally" belonging to the natural sciences complicates further interdisciplinarity and a broader perspective.

Representatives of the Norwegian Directorate of Education and Training (NDET) - (February 1 2017) Primarily spoke of the renewal process, but also agreed that a discussion about what SD is to entail is important in this process.

Kai Grieg – FN-Sambandet (6th of March 2017)

Addressed the need to talk about skills for sustainable development and presented a few of the interdisciplinary and action-oriented programmes developed by FN-Sambandet to be used in the classroom.

Jonas Christophersen (16th of May 2017)

Social sciences and economics/Docent emeritus at Western Norway University of Applied Sciences. Provided inputs on the topic of economics in primary-, secondary- and highschool level, also on some of the challenges of not including the topic, and on NSM.

Representatives of the Rethinking Economics network in Norway/Bergen (6th of June)

Provided inputs on the shortcomings of neoclassic economic theory as it is presented and taught in higher education of public economics.

The informants were initially chosen due to their position and relation to SD or ESD. They also represent the different dimensions identified, and as the interview process proceeded, it became an aim that they should do so. This is to an extent visible in the topics of the interviews and the views they represent. It is challenging to ascertain which actors have the most influence, and though the selection of informants was strategic, it is possible the representatives do not constitute the most representative picture of the work on ESD. This is especially a concern for the selection of informants representing the economic dimension. It was problematic to find literature that included an economic perspective and which addressed SD and ESD in a school context. Combined with time constraint it became difficult to interview more potentially relevant actors. I do, however, believe that the informants have been well-suited representatives of their respective fields of expertise. Their roles as representatives of specific dimensions and discourses are, however, more ambiguous.

As mentioned, most of the interviews were conducted before the discovery of Kummeneje's work on the discourses. His work has however been used to interpret the transcribed interviews, and the views, information, and knowledge of the informants have been used to better understand the content of the indicators.

4.3.5. Role as interviewer

As part of a hermeneutic analysis I let my pre-understanding of SD shine through in the early informal conversations and first interviews. Transcribing made the extent of it visible to me, and becoming more aware of it made me see I had to take less "space" in the interview setting. There are ongoing debates about the roles of the interviewee and the interviewer and the focus has often been on how the interviewer is the one with most power (Mullings, 1999). In the interviews conducted for this research, it has not been easy to characterize a clear

power-relation. Mostly the informants were familiar with the situation, and some of them have also conducted interviews themselves. Some of the informants had a clearer idea of the message they wanted to convey, while others were more open as to where the interview might take them. All of the informants can be characterised as forthcoming and positive to the interview setting. Conducting interviews for this thesis was intriguing to the point of great fun. It could appear as though the role of a master student was advantageous. Almost all the people I wanted to interview were pleased to contribute and were positive to the choice of topic as they considered more research necessary. Another advantage is that the role of a master student might signal a more neutral agenda or simply an aura of a novice.

'Sustainable development' is a topic that can be considered normative and political, which was important to keep in mind during the interviews. The various informants represented different stakeholders and the aim was to capture the diversity of perspectives. As Mullings refer to, it has been argued that "researchers need to incorporate methodologies that recognize the existence of multiple viewpoints and the partiality of their own assessments" (1999, p. 337). I have tried to the extent possible to conduct interviews with stakeholders of different viewpoints and to consider the presentation of myself and keep my viewpoints to a minimum. At the same time I have been honest about not feeling like I belong to any discipline, but having knowledge of several, and that having such a position might both a strength and weakness. It can be a strength because it might make it possible for me to see how the "language" and views of the different disciplines correspond and where they divide. It can be a weakness because I don't truly "speak" the language of each discipline myself. Being aware of own strengths and weaknesses has been part of the process, and as I explained about the hermeneutic cycle that this process has been; a great deal has been learnt on the way.

4.4. Analysis through tables and colour coding

I used the table presented in the theoretical framework to analyse the relevant renewal documents. The table is a post-coding tool as the coding happens after the data is collected (Bryman, 2008) The table displays which terms I used in order to extract, categorize and analyse the language of the renewal documents. Colour coding is another post-coding tool that has also been used to highlight parts of text according to the dimensions and discourses. Colour coding is a tool that enabled me to categorize statements and responses according to the three discourses with one colour for each discourse. The categorizations are based on the indicators that reflect the dimensions and discourses. As not all of the indicators are exclusive

to one discourse, additional colours were used to reflect both overlaps and that the text incorporates all three discourses. This gave a visualization of which discourses were most dominant and whether all were present or not.

The following documents were analysed:

- The two Norwegian strategies for an education for sustainable development
- The final Ludvigsen report (LR) (Ludvigsen et al., 2015)
- The White Paper nr. 28: *"Subject - Exploration – Understanding"* (WP, own translation) (Kunnskapsdepartementet, 2016a)
- The natural- and social science subject syllabuses
- The general core curriculum
- The draft and final version of the "over-arching part", which replace the general core curriculum.

The paragraphs in which 'sustainable development' were mentioned were colour-coded, and relevant terms and contexts were addressed in the indicator table. In this way, it was easier to compare the presence and context in which SD was mentioned and which discourse was present. This approach is a combined approach of quantitative and qualitative content analysis (Bryman, 2008, p. 276).

4.5. Trustworthiness of findings

This research about education for sustainable development is of a qualitative nature, and as the researcher it is my view that I cannot present an absolute "truth" or "reality" about the socially constructed concept that SD and ESD is. What I can do is to conduct research in a transparent way, which reveals different perspectives and possibilities of interpretation, and to do this in a way that encourages trustworthiness. Bryman (2008, p. 377) presents four criteria to trustworthiness: credibility, transferability, dependability and confirmability. By submitting the findings to the informants and receive validation I can increase credibility. Though ESD is supposed to be country-specific, it might be that some of the findings are transferable to other countries and their context. By writing a shadow document and by keeping transcripts of interviews I adopt an "auditing approach" and can increase dependability. By stating my point of departure and through the vow we make as master students I hope to show that I have acted in good faith and thereby increase confirmability.

5. Findings according to the research questions

5.1. What is ESD said to entail in Norway?

Since the launch of the Decade of Education for Sustainable Development (DESD) in 2005, Norwegian authorities have established two strategies on the implementation of an Education for Sustainable Development in Norwegian education. These strategies provide structural frames and also point to some topics that are considered central in ESD. This chapter will be based on the content of the two strategies as they present how Norwegian authorities view ESD.

5.1.1. The first strategy - 2006

The first strategy for Education for Sustainable Development in Norway was launched in 2006 inspired by the Decade of Education for Sustainable Development (Utdanningsdirektoratet, 2006). The preface of the strategy presents how ESD is relevant to already existing efforts such as the "natural science" strategy, the work with questions of values, to the effort of creating a "good" learning environment, and to the entrepreneurship strategy. It continues by stating that ESD is about "insight into democratic processes, and it will contribute to the development of the democratic understanding" (p. 2), and through the use of digital tools when teaching about SD, ESD also contributes to the strategy for Information and Communications Technology.

The strategy is stated to "build on the international recommendation" and combines the UN definition of sustainable development with the definition presented in the Norwegian national strategy from 2004:

> *"A sustainable development demands that we must see our actions in a*
> *generational perspective and be precise when we make decisions that put*
> *lasting traces and affects our descendants' freedom to act and the possibility to*
> *cover their needs, even to survive. A basic principle is therefore that we must*
> *respect nature's limits and base politics on the precautionary-principle."*
> (p. 4)

The first strategy also refers to § 110b in the Constitution, which states:

> *Everyone has the right to an environment that secure health and to a nature*
> *which's production ability and diversity is maintained. The resources of nature*
> *should be utilized according to a long-term and versatile perspective that*

safeguards this right also for posterity. To safeguard their right according to previous statement, the citizens are entitled to knowledge about the state of nature and about the effects of planned and initiated encroachment/intervention/processes in nature. The state authority provides more detailed decisions to implement these basic principles.

(p. 4, own translation)

The combined effect of these two statements encourages a long-term perspective of everyone's rights to an environment that secures health, of knowledge about to the environment's ability to do so, and the use of the precautionary principle when making decisions in case of uncertainty. So far the strategy appear to support a primarily ecocentric view focussing on the environmental dimension.

Education for Sustainable Development

It is first when presenting what an Education for Sustainable Development is that the other dimensions become present. When presenting ESD, the strategy refers to the UN definition of how the social, environmental and economic dimensions need to be seen in connection.

Through the following objectives of ESD it also "highlights the need for a high-quality learning" (p. 5):

- ESD is to permeate all subjects, not just one
- ESD is to contribute to the establishment of values and principles inherent to SD
- ESD is to stimulate critical thinking and problem-solving
- ESD is to comprise a plurality of methods and should allow students to participate in selecting them
- ESD should include both local and global topics

How ESD is practically to "permeate" all subjects is not elaborated.

In addition, the strategy presents the United Nations Economic Commission for Europe's (UNECE) strategy, which specifies the definition to accommodate the European context. It clarifies how member countries should implement ESD, and creates a vision for the European work on ESD. The overall objective of the UNECE strategy is

"to equip people with knowledge of and skills in sustainable development,

making them more competent and confident while at the same time

increasing their opportunities for leading healthy and productive lifestyles

in harmony with nature and with concern for social values, gender equity,

and cultural diversity."

(UNECE, 2016, p. 1)

Referring to this strategy it is stated that Europe is a "region characterised by sustainable development, including a healthy economy, justice, togetherness, environmental protection and sustainable management of resources in order to meet the needs of the present generation without ruining the opportunity of coming generations to have the chance to cover their needs." (p. 5). The UNECE strategy presents six objectives:

- To secure that politics, laws and frameworks, support ESD
- To promote sustainable development through formal, non-formal and informal learning
- To equip educators with the competency to include sustainable development in their teaching
- To ensure the accessibility of adequate tools and materials for ESD
- To promote research and development of ESD
- To strengthen the cooperation on ESD on all levels within the UNECE region

In addition, the Norwegian strategy also refers to Baltic 21E - the Baltic-Nordic strategy - where it is stated that "all students shall have the competency, attitudes, and skills in order to be active, democratic and responsible citizens" and "in this way they can make own decisions and participate in the work to create a sustainable society."
(Utdanningsdirektoratet, 2006, p. 6).

The Norwegian strategy further mentions how ESD "includes the development of abilities and will to see phenomena in connection and analyse problems in an interdisciplinary perspective" (p. 6). It emphasises how such an approach requires knowledge from various disciplines, which can cause conflicts of interest. In order to solve the issue of complexity in various topics in relation to sustainable development, ESD need to "promote the ability of critical thinking and problem-solving." (p. 6).

To learn from past experiences, the strategy document includes evaluations of earlier projects of environment and development. Some findings presented through these evaluations are:

- Confusions as to what the content of such education should be
- How individual schools are organized can promote or hinder environmental education
- Will and ability to work across subjects appears to be lacking
- It is perceived as easy to achieve good projects with support and guidance, but as soon as the project ends, the schools and teachers go back to the way it was before the project
- To get a breakthrough, it was necessary to highlight connections between the environmental education and other areas of priorities.

The authors appear to have learned from the last finding because the strategy mentions several other areas of priority that ESD supports such as the natural science strategy, the work on questions of values, and the work on entrepreneurship, amongst others.

The strategy continues to present international partners and projects. Some lessons from the "Environment and School Initiative" (ENSI) that has existed since 1986 include:

- Cooperation between schools and external actors is inspiring to the students
- Interdisciplinary work between teachers and network collaboration between schools inspired teachers and was considered rewarding by the teachers
- The students were good at collecting information, draw conclusions and communicate their findings to local decision makers and the press

The strategy presents how the existing framework of Norwegian education includes elements of sustainable development. The "Learning Placard" emphasises the personal development of ethical, social and cultural competency and democratic understanding and participation. The general curriculum, which is currently under revision, has its own chapter on the 'environmentally conscious human'. Though not mentioned in the strategy, the "Law of Education" (Opplæringsloven) also states that "Students and the apprentices shall learn to think critically and act ethically and environmentally conscious." (Kunnskapsdepartementet, 2016b)

The strategy also includes five principles central in ESD:

- Working methods that activate the students and challenges the students' imagination and creational abilities
- Cross-subject/interdisciplinary knowledge
- Using the local community as a teaching arena
- Ethical challenges are to be emphasised
- Evaluation methods that consider an expanded concept of knowledge are to be used

It then summarizes challenges based on earlier experiences and knowledge, and presents the following preconditions to achieve the aims of ESD according to the UN, UNECE and Nordic strategies:

- ESD needs to be integrated into the education to ensure that it is part of the schools' day to day activities/agenda
- A sense of responsibility and solidarity with the world's poor and future generations have to be developed
- Understanding of barriers created by society that hinders participation and democracy is essential

The strategy concludes with a fairly detailed overview of efforts, responsible parties, and status in the effort of implementing the education for sustainable development. Technology is mentioned once in the document, on page 12, where it is stated: "the interaction between economy, ecology, and technology presents our time with particular knowledge- and moral challenges to ensure a sustainable development."

The purpose of this detailed presentation of the strategy from 2006 is to point to the focus and knowledge that has existed on ESD for more than a decade in Norway. As stated above the initial focus appears to be on the environmental dimension. However, by focusing on an interdisciplinary approach that addresses conflicts of interests, issues of social values, gender equity, cultural diversity, solidarity with the world's poor, and local and global topics, elements of the development discourse of the social dimension is included. Democracy and democratic abilities are clearly linked to the ability to create sustainable development, an indicator of the social dimension's development discourse. The economic dimension can also be considered present through poverty, though issues such as economic growth or inequality are not mentioned, leaving a scarce impression of the presence of the economic dimension.

"Knowledge for a Common Future" - **The revised strategy - 2012**

The revised strategy presented by the Ministry of Education and Research to a great extent builds on the first strategy, but with some differences in structure and content (Kunnskapsdepartementet, 2012). Instead of starting off with the intent of the document, such as the first strategy, the 2nd strategy commences with a statement about what SD is, why it is essential and what students will need in terms of skills and knowledge to contribute to a sustainable development. The first two paragraphs include present and future perspectives, about taking care of needs both today and in the future and responsibility towards future generations. It focuses on the knowledge, skills and attitudes students require to make "reflected choices and partake in the democratic debate about which efforts that are right and important for a sustainable development for all" (p. 2).

In the preface, it is stated that due to a primary focus on the environmental dimension in Norway and other European countries, the global dimension has to a lesser extent been integrated. "It is, therefore, an aim to renew the efforts for an education for sustainable development. The aim is that the new strategy shall be a support for the implementation of sustainable development in the education." (p. 2).

Expanding the concept of SD

The 2nd strategy starts off its description of SD by stating:

"Sustainable development is put on the agenda the last 20 years because the world has seen persistent poverty in many developing countries alongside an increasing pressure on the Earth's ecosystems." (p. 7). The first strategy did not mention poverty as part of the SD concept until a sub-chapter on page 8 describing the topic of "Consumption, resources, and distribution". When the 2nd strategy then mentions it in the first sentence of what the concept is about poverty receives a significantly more prominent role within the concept.

Where the 1st strategy refers to the UN and the European- and other strategies when describing ESD, the 2nd strategy has to a greater extent adopted and moderated the language into its own. Also, where the 1st strategy talks of how ESD "**can** affect people's way of thinking" (Utdanningsdirektoratet, 2006, p. 5), the 2nd strategy speaks of how the aim of the education is:

> "to affect people's way of thinking and make them able to make the world more
> just and sustainable, contribute to critical reflection and increased consciousness

and provide the necessary knowledge for new methods and tools to be developed." (Kunnskapsdepartementet, 2012, p. 8).

The 2nd strategy introduces a stronger international perspective, displaying a stronger focus on the global dimension.

Like the first strategy, this strategy also mentions conflicts. It does, however, take it one step further by stating:

> "Sustainable development entails important political questions, which affect
>
> interest- and value-conflicts locally, nationally and globally. It is
>
> recommended that ESD to an increasing extent accommodates good
>
> knowledge about such conflicts and insights into different political answers,
>
> as contribution to develop active, democratic citizens." (p. 15).

The "increasing extent" point to a current lack of such knowledge. The statement reaffirms the importance of addressing interest, values and political questions, and it clearly connects SD to democracy. As such the conflict- and democracy indicators are present.

5.1.3. Other differences

Unlike the former strategy, which mentions only the natural sciences subjects specifically, this strategy also refers to the social science subjects. However, it transitions from ESD to "permeate **all** subjects" to "permeate **all relevant** subjects" without specifying what is relevant subjects (Kunnskapsdepartementet, 2012).

The revised strategy divides responsibility between the national, municipal and school levels. The national level is responsible for accommodation of initiatives, integration of ESD in national curricula, of making national initiatives accessible, and to stimulate offers of development of competency. The communal level is responsible for leading the work on the implementation of ESD, develop plans for involved parties in the municipality, guide kindergartens and schools, ensure the development of competency, cooperate with other actors and implement measures. Leaders, teachers and pre-school teachers are responsible for the follow-up of the work on sustainable development, support and encourage employees to enforce ESD, work towards making the kindergarten and the school a sustainable unit.

Early childhood education is included in this strategy, and to emphasise the education of early childhood educators and primary- and secondary school educators, the strategy has added paragraphs about the frameworks of both, and how they are to focus more on sustainable development. The revised strategy also includes new development such as the Bonn-declaration signed by the UN member countries to signal the importance of action in order to reach the aims of the DESD.

5.1.4. Introducing the Natural BackPack

The Natural BackPack (NBP) was launched in 2008-2009 as key initiative. NBP is a collaborative initiative between the Ministry of Education and Research and the Ministry of Climate and Environment. The Norwegian Directorate of Education and Training (NDET) and the Directorate of Natural Management are project managers, while the Norwegian Centre for Science Education, located at University of Oslo, is the secretariat and has the day-to-day administration responsibility. This initiative is considered one of the main efforts towards an education for sustainable development. Other initiatives are sustain.no, Globe, Rainmakers (Regnmakerne) and the Energy Network (Energinettverket). These are all projects inspired by the natural sciences.

Content

Both strategies present the following as topics the schools can use as points of departure within SD: "climate", "energy", "consumption, resources and distribution", "conflicts of interest", "participation and democracy", "biological diversity", "natural habitats", "water resources", "health", "waste and recycling" and "outdoors and nature recreation". These topics cover aspects of the environmental, societal and economic dimension of the SD concept. Technology is mentioned in the same sentence as in the first strategy, maintaining a small role. The new strategy has omitted the topic of "cultural memories", a topic that in the first strategy is stated to aim to teach students about the wisdom of predecessors. Since the past is part of shaping the future, the use and maintenance of cultural memories are important to strengthen the perspective of sustainable development.

Both strategies have to a great extent incorporated the content of the International Implementation Scheme on ESD, and the 2nd strategy, more than the first, incorporates a broad perspective of SD that includes the development perspective. This strategy also asserts

that if schools employ the whole educational framework, there are great opportunities of integrating ESD. Though the period for the revised strategy ended in 2015 no new strategy has been presented. In the interview with Eldri Scheie she stated that the strategies are good points of departure for an ESD. However, it is a problem that the strategy lacks an action plan (Interview: Scheie, The Norwegian Centre of Science Education, NCSE). Although the revised strategy was implemented in 2012, an action plan is still missing.

In the following table the two strategies will be presented according to how they speak of the indicators.

Table 3: ESD strategies according to indicator-table

Strategy View of:	ESD strategy 2006	ESD strategy 2012
Democracy	State that ESD is about "insight into democratic processes, and it will contribute to the development of the democratic understanding" (p. 2). In both the UNECE strategy and the Baltic 21E strategy they refer to promotion of democratic skills. "Participation and democracy" is an own topic. Democracy is also mentioned under the heading of "Challenges" where "understanding for the socially create barriers that inhibit participation and democracy" is presented as a precondition to reach the goals of ESD (p. 14).	Is mentioned in the preface through how ESD is about providing knowledge, skills and attitudes required to take care of the planet, "to take reflected choices and to participate in the democratic debate about which efforts are right and important for a sustainable development for all". Mentioned three times when describing what an ESD is. Also mentioned when referring to other strategies. Democracy is also mentioned in the above-cited quote where it is considered important in connection to conflicts and political answers to these. It is also presented as an own topic.
Nature/environment	It is the environment that appears to be of main concern.	The strategy reflects on how the former strategy was primarily about the environment and that the development perspective was neglected.
Technology	Mentioned once under sub-title 3.2 "Teacher plans": "The interconnection between economy, ecology and technology presents our time with particular knowledge- and moral challenges to ensure a sustainable development." (p. 12).	Same as the first strategy.

Poverty	Mentioned once under the topic of "Consumption, resources and distribution": "Shortage of central natural resources and unequal distribution of resources globally contributes to poverty and is a serious threat towards a sustainable development." (p. 7).	Mentioned twice. First under the heading of "What is sustainable development" in the first line: "Sustainable development is put on the agenda the last 20 years because the world has seen persistent poverty in many developing countries, at the same time as the pressure on the planet's ecosystems has increased." (p. 7). The second time is the same as in the first strategy.
Inequality	Inequality is not mentioned. Fair distribution is mentioned 3 times.	Inequality is not mentioned. Fair distribution is mentioned 4 times.
Economic growth	Not mentioned. Do however focus on how ESD needs to be included also in "economic subjects" (p. 13)	Not mentioned.
Consumption	"Consumption patterns" is mentioned as one of the topics to be included, and "consumption" is mentioned as a topic together with resources and distribution. Within this topic there is a focus on raising awareness of consumption. Mentioned as part of projects.	Mentioned as the same topic: "Consumption, resources and distribution" (p. 18) and mentioned as part of the topic "Waste and recycling" as how "increased consumption cause increased waste." (p. 18) The description of this topic has changed compared to the former strategy
International agreements	Refers to the international UN initiative that ESD is and refers to the regional strategies of UNECE and Baltic 21E.	Refers to the international U. initiative that ESD is and refers to the regional strategies of UNECE and Baltic 21E.
Harmony vs conflict	'Conflicts of interests' is one of 12 topics.	Specifically mentions that SD comprises "interest- and value-conflicts" and recommend that ESD accommodates knowledge about such conflicts and different political answers to them, and connect this to democratic ability. 'Conflicts of interests' is also one of 11 topics
Actor/Structure	Addresses both individual contribution and contribution through democratic participation, debates and discussion. Combined with a focus on conflicts and challenges the focus is directed towards both actor and structure.	Same as the first strategy, but to a greater extent focus on the development dimension and thereby to a greater extent emphasise issues of poverty and inequality.

	Lack a critical element towards structures though.	
Global focus	Is mentioned 11 times. Focus on both local and global topics. A global focus is presented in several of the presented topics. Several of the projects that are presented as relevant have a global focus. "To put the local challenges in a national and global perspective, and to be capable of concretizing global challenges" is mentioned as one of the challenges at the school level. (p. 14)	Is mentioned 17 times, including many of the same as in 1st strategy. Is mentioned in connection to how "Norway shall have an education system that contributes to sustainable development both locally and globally" (p. 5) Includes local and global topics and global perspectives. Mentions how teacher candidates are to "have good understanding of global questions and sustainable development" (p. 12).
Main solution	Stimulate critical thinking and democratic participation that include a focus on values and principles integral to SD and that address local as well as global topics. Focus on multiplicity of methods.	Stimulate critical thinking and democratic participation that include a focus on values and principles integral to SD and that address local as well as global topics. Focus on multiplicity of methods. Greater focus on the developmental dimension of SD.
Dimension	Both the environmental and the social dimensions are present, but the environmental dimension dominates. The economic dimension is briefly present through focus on topics such as consumption, distribution, and through the economic discourse's shared interest in poverty and inequality.	The development dimension becomes more pronounced compared to the former strategy. The environmental dimension is still very present, while the economic dimension remains only briefly present.

The second strategy goes further to include the development perspective and to a greater extent the democracy-, conflict-, and global focus indicators. The strategies do however lack presence of the inequality indicator, and the economic growth indicator.

5.2. What views of Sustainable Development can be uncovered in documents for the renewal process and amongst key actors?

In order to understand SD and ESD in the Norwegian context, the chapter will start with a brief presentation of findings from earlier research and some key findings from the Norwegian National Implementation Report delivered to UNECE by Norwegian authorities as part of UNECE's ESD strategy.

5.2.1. Earlier research

After the Decade of Education for Sustainable Development was launched in 2005, the Norwegian Directorate of Education and Training presented the abovementioned strategy "Education for Sustainable Development". In the same year the Ministry of Education and Research presented The Knowledge Promotion Reform – K06 *(Kunnskapsløftet)*, a reform that changed the subject syllabuses from being about specific knowledge to be about having the competency to use knowledge (NDET representative – Interview). In an article from 2007 Camilla Schreiner, a natural science didactitian, claimed that K06 showed "fundamental and permeating lack of political will to educate for sustainable development" (p. 12). Amongst other things, she exemplified by pointing to the lack of focus on development of "awareness and responsibility towards sustainable development". The lack of focus is exemplified by the removal of both 'environment' in the former subject 'nature and environment', and the removal of the interdisciplinary subject 'Nature, Society and Environment' (NSM) taught at teacher training schools. The removal of NSM caused reactions and no clear reason was given (Sætre, 2002). In the same year Kari Laumann analysed public school documents and schoolbooks, and conducted interviews and focus groups in order to conclude that sustainable development was present in the core curriculum, but was missing a narrative in the subject syllabuses, textbooks and teaching (Laumann, 2007).

In 2009 the Norwegian Centre of Science Education (Naturfagsenteret) was requested to start The Natural BackPack (NBP). The NBP is a project that offers guidance and economic support to do interdisciplinary projects related to sustainable development in primary, lower-secondary school, and first year of high school. To date the project has been involved with about 570 schools (E. Scheie intw: 25.01.17). The NBP is the primary effort made by the authorities to encourage ESD. It has been problematized by different actors/stakeholder that the centre takes departure in the natural sciences and lacks the social science dimension in

their work, though according to an evaluation from 2014 it was stated to be within the "acceptable frames" (Sjaastad, Carlsten, Opheim, & Jensen, 2014, p. 8). However, this was something also Raabs problematized in her 2010 thesis where she interviewed teachers and found that ESD were perceived as "mainly belonging" (p.93) to the natural sciences and she therefore highlighted the need for a more interdisciplinary approach. Though the Centre for Science Education are aware of this critique and try to accommodate accordingly, they feel alone in their ESD effort (E. Scheie intw: 25.01.17).

In 2014 Espedal, a student of pedagogic, analysed text books in the Food and Health subject taught in secondary school, and supported Laumanns seven years old finding that the concept of sustainable development is vague and needs clarification in the subject syllabus (Espedal, 2014). A year after Astrid T. Sinnes, a natural science didactician, published her book "Education for Sustainable Development – What, Why, How" (2015). This book presents what an ESD should entail, point to challenges of current education and provide several tips to both methods and content teachers can use when teaching about SD. Her book is first of its kind and has contributed to raising awareness about ESD in the Norwegian context.

In the same year, Andresen, Høgmo and Sandås from the Norwegian Centre for Science Education at UiO, assessed the ESD effort and concluded that "the overall framework for education in Norway is supportive of ESD", but that the supportive parts, such as the general curriculum, is not used in teaching (Andresen et al., 2015, p. 242). They state that teachers also feel "increased pressure to prepare pupils for national testing and exams" (p. 252) and also support the finding that it is challenging to accommodate interdisciplinary collaboration. Much was published in 2015. The same year Irene Wolla, a student of natural science didactics, found that between 2002 and 2015 secondary school students now had less faith in the future, less belief that they could change anything, but greater belief in the topic of SD as important. She also found that there were positive correlations between the students' attitudes towards climate and the environment, and their experiences in nature, indicating that outdoor activities can be positive for awareness and engagement (also supported by Raabs). Amongst the teachers she found that they experienced little guidance from the syllabus and that the topic of SD had little to no support among the colleagues, and consequently the topic didn't receive sufficient focus. Sundstrøm, who conducted research in 2016 amongst 51 natural science teachers teaching first-years in high school, supported some of these findings. According to the teachers ESD had medium to low prioritization in school, though 60 per cent

of the teachers regarded it as the one of the most important parts of the natural science subject. Some teachers also found it "strange" that it is taught in the natural science subject, as it was considered so distant from where the natural sciences develop (p. 40). Sundstrøm also underscored the lack of tradition for interdisciplinary cooperation and presented differences in personality and ways of thinking together with lack of time as primary challenges. There was however great interest among the teachers to work interdisciplinary as they considered the method as giving significant educational value. Espen Kummeneje's thesis, on which the indicator table build, came in 2016. His master thesis was within social science didactics and he did a discourse analysis on the content of sustainable development in textbooks of the social- and natural science subjects. From the research mentioned above, it is primarily Laumann and Kummeneje who point to the lack of a coherent perspective on SD.

5.2.2. Norwegian National Implementation Report

Norway's commitment to the UNECE strategy on ESD, mentioned in the previous chapter, requires member countries to evaluate their own efforts. In 2015 the Ministry of Education and Research submitted their National Implementation Report to the UNECE about the state of ESD in Norway (Ministry of Education and Research, 2015). In this report member countries are to evaluate phase III of the ESD implementation effort according to 18 indicators and 497 sub-indicators. The Norwegian Ministry mentions the national ESD strategy in the report. This reporting concerns structural accommodation of the implementation, but is not about the content of SD. In the report the Norwegian authorities present the Natural BackPack as the primary initiative. When comparing Norway to Sweden, Denmark, Finland, Iceland and Ireland, according to the 18 indicators, Norway scores 2nd lowest, only better than Denmark.[4] The report summarises the challenges:

> "Lack of research into ESD issues, lack of competencies in teacher education
> and interdisciplinary cooperation and obstacles related to the implementation
> of ESD in Norway" (p. 20).

It concludes with the need for a continued support for the Natural Backpack.

5.2.3. Current syllabuses

The renewal process has not yet started with the subject syllabuses, so they are not considered as part of the renewal process. Current syllabuses are based on the Knowledge Promotion Reform of 2006, K06, many of which were revised in 2013. Both natural- and social sciences

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[4] See appendix 1

subject syllabuses were revised. All the syllabuses contain competency goals after 2nd, 4th, 7th, 10th, 11th and 13th grade. The analysis focuses on the competency goals of all the abovementioned grades, except the 13th grade because not all students have the same subjects after 11th grade. Each syllabus starts with the presentation of a "purpose" and "main thematic areas". Syllabuses chosen for the analysis are the syllabuses that mention 'sustainable development', which are the natural- and social sciences subjects. 'Sustainable' is also mentioned in the "Food and Health" subject syllabus, but only once and does not contain the whole concept. The analysis of the content departs from how SD is described in RQ1 about what an ESD entails according to the two Norwegian strategies.

Natural science syllabus

Within 146 competency goals 'sustainable development' or 'sustainability' is mentioned 7 times. In this syllabus sustainable development is mentioned in the "purpose" through "Knowledge of, understanding of and experiences in nature can promote the will to protect natural resources, conserve biological diversity and contribute to sustainable development" (Utdanningsdirektoratet, 2013a, p. 2). In the introduction to the topic of technology and design, it is stated that the "interaction between the social sciences, technology and sustainable development is central" and a competency goal after the 10th grade under this topic is to "assess the products function, ease-of-use and life-cycle in relation to sustainable development." (p. 10).

In 11th grade, SD is an independent topic with four competency goals. The first state: "explain the concept of sustainable development" (p. 12). The second requests the student to "explain factors that affect the size of a population", while the third focuses on the "mapping of own consumption choices and argument scientifically and ethically for own consumption choices that can contribute to a sustainable consumption pattern". The fourth requests the student to "research a global conflict of interest connected to environmental questions and assess the quality of arguments and conclusion in a debate article" (p. 12). The four competency goals manages to cover different areas within SD though the connection between the 2nd and 3rd / 4th is not necessarily evident. The third competency goal's focus on individual consumption presents an "actor" focus, which coincide with the ecocentric and economic discourse. The fourth competency goal's focus on a global conflict reflects a presence of the harmony vs conflict indicator, which represent both the ecocentric and social discourse, but as the focus is primarily on "environmental questions" it leans towards the former. In other competency

goals the students are asked to assess if the use of certain plants and animals is 'sustainable' (p. 8) and to describe the life cycle of a product to assess if it is 'sustainable' (p. 8), using the term in its natural science orientation.

Although not specifically mentioning SD there are other competency goals that are relevant. Amongst these there is focus on recycling, on considerate conduct in nature and on energy and climate. One competency goal asks the students to "observe how human activity has affected a natural area, research how different interest groups consider the effects and suggest measures that can protect nature for future generations" (p. 9). The last part can connect the three dimensions together, though the primary problem is still environmental degradation.

The focus on SD in the natural science subject is on the environmental consequences (social and economic consequences are not mentioned) and maintains a primary focus on the individual as actor of change combined with an element of conflict, which follows the ecocentric discourse. There is also an element of the economic discourse's positivity towards technology's ability to solve environmental challenges.

Social sciences

In the social science syllabus SD is mentioned 6 times, 4 times under "purpose" and "main topics", and 2 times within the 139 competency goals. Similar to the natural science syllabus, SD is also mentioned in the "purpose" of the subject in the context of the "necessity to understand the relation between nature and the man-made surroundings." It states that the "social sciences shall stimulate increased awareness concerning relations between production and consumption, and consequences that resource-use and living can have on nature, climate and a sustainable development." (Utdanningsdirektoratet, 2013b, p. 2). The issue of consumption is a social-, environmental-, and economic dimension issue.

SD is further mentioned as a part of geography: "Mapping and discussion about processes of change is central, together with reflection on sustainable development" (p. 3) and international relations: "This topic include international cooperation, terrorism, conflicts, conflict resolution and peace-building. It is also about globalization, distribution of resources, sustainable development and Norway's role as an international actor." (p. 4). It is then mentioned in two competency goals, one in geography in the context of resource consumption and technology where the premises of SD is to be discussed, and one underneath politics and

democracy in the context of "discussing economic growth, living standard, life quality, sustainable development and the relation between them." (p. 12). The social science subject covers some of the aspects that are missing in the natural sciences subject, contributing to a more holistic approach. The relationship between humans and nature is established as central. By encouraging discussion about SD in relation to distribution of resources, globalization, economic growth and both living standards and life quality the syllabus can be used to present current development in a critical light. With this competency goal the syllabus to a greater extent reflect the content of the ESD strategy. Although both syllbuses were revised in 2013, neither refers to an Education for Sustainable Development. Combined the two syllabuses have elements of all three discourses and many of the characteristics that ESD entails according to the strategies.

In both subjects and in other subjects such as Food and Health and Christianity, Religion, Life views and Ethics, there are other topics relevant to SD as it is described in the strategies. Whether or not these topics will be mentioned in relation to SD will depend on the view and prioritization of the teacher as there according to earlier research is no systematic approach as to how to view and implement SD in all, relevant subjects. In the social- and natural science subjects 'sustainable development' or 'sustainability' is mentioned 13 times within 285 competency goals. Neither of the syllabuses mentions the ESD strategy, but that is as expected as the strategies are over-arching the syllabuses.

5.2.4. How is ESD perceived?

Although SD is present in the syllabuses and strategies have been made, earlier research reveals weak implementation. How SD is perceived will determine its role in the renewal process and decide whether or not the renewal will lead towards an education for sustainable development. By uncovering which views of SD are present, it will be possible to discuss what kind of implications the present views have for ESD and what content the concept of SD ends up having. The general core curriculum is under revision, which includes a hearing that provides ample possibilities to learn more about what stakeholders consider important to include in this document, and how they consider sustainable development as a concept.

The two first documents to be analysed is the Ludvigsen-report *"The school of the Future"* from 2015 and White Paper nr. 28 *"Subject – Exploration – Understanding"* of 2016

(Kunnskapsdepartementet, 2016a; Ludvigsen et al., 2015). Then the general core curriculum will be analysed together with the first- and the final draft of the new "over-arching plan".

5.2.5. Analysis of Ludvigsen report and White Paper

The following section will present the two documents according to indicators from the table presented in the theory chapter. The Ludvigsen report of 2015 (from now on called the LR) was the last of two NOU reports conducted to review what kind of competency students need for the future. The White Paper nr. 28 *"Subject – Exploration – Understanding"* (from now on called the WP) builds on the work of the commission, and it constitutes the foundation of the renewal process and shapes how the role of the SD concept is to be understood and viewed.

Table 4: Comparison of the LR and the WP

Indicators View of:	The Ludvigsen-report (LR)	White Paper nr. 28 (WP) *Subject – Exploration - Understanding*
Democracy	One of the three interdisciplinary topics. Important, but not mentioned in connection with SD.	One of the three interdisciplinary topics. Important, but not mentioned in connection with SD.
Nature/ Environment	Under the heading *"Climate, environment and sustainable development"* the report states: "There is a growing recognition that the school has to address issues about the Earth's existence, to a larger extent than today." (p. 49), which reveals an ecocentric view of the problem.	Refers to the "Education Law" which states that the students "need to learn to think critically and act ethically and environmentally conscious." (p. 39) Refers to how the UN considers "improving social conditions, environmental problems and economic inequality to be important contributions to SD." (p. 39). This reveals a more broad approach to the "problem".
Technology	Development of technological skill (digital competency) as important due to: changes in use of media technology, important for Norwegian businesses' ability to compete, etc. Mentions replacement of jobs by technology. Technology mentioned in connection to subjects such as mathematics and natural science. Technology as both cause and solution of challenges, but not mentioned in the section about sustainable development.	Development of technological skill (digital competency) as important. Spoken of as changing work-life by: changing production methods, by requiring abilities to exploit technology developed abroad, etc. Technology as both cause and solution of challenges. Mentioned in connection to SD where it is stated: "New technology and technological development shall, in addition to ethical reflection and judgment in relation to technology development, be central within the interdisciplinary topic of sustainable development." (p. 39)
Poverty	Mentioned as a potential topic within the economic dimension.	Not mentioned
Inequality	Does not mention inequality, but mentions justice and fair distribution.	Does not mention inequality, justice or fair distribution.
Economic Growth	Not mentioned. "Economic security" is mentioned as a potential topic of the economic dimension together with "market economics".	Not mentioned

Consumption	Primarily mentions consumption in relation to physical and mental health, lifestyles and economy (p. 25, 50 and 53) and once as "sustainable consumption" when presenting a project.	Mentions consumption in relation to knowledge and preparation for life mastering: "That the students get knowledge on important topics such as health, economy and consumption, and that they develop a positive self-image, is important so that each and everyone shall be better equipped to manage different aspects of life." (p. 13). And in relation to personal economy in the sense that "knowledge about personal economy and consumption is important aspects of mastering one's life." (p. 39)
International Agreements	Refers to how SD "is put on the agenda in all levels of education through international commitments by initiative from the UN-system".	Refers to the UN's definition when defining SD, but does not refer to international agreements.

This table presents 7 of 10 indicators; the last three will be presented later. As presented in the theoretical framework these indicators are helpful in discerning the dimensions present, and to identify dominant dimensions. The table refers to how these indicators are present in the documents. 'Democracy', 'nature/environment' and 'technology' are elements that are present. Democracy is one of the three interdisciplinary goals and receives a prominent role, which it has had for a long time in Norwegian education. Democracy is not presented as an element of SD in these texts, or in relation to SD, and SD therefore loses essential parts of its content as described in the strategies. 'Nature/environment' is the dominating aim of SD in the LR. The WP has to a greater extent adopted the UN terminology. The LR does not speak of technology in relation to SD, but the WP place technology as an central tool to solve the challenges. Technology therefore serves to represent both the environmental and the economic dimensions in this case. 'Poverty', 'economic growth' and 'consumption' are topics scarcely mentioned in either document. The LR presents poverty as a topic within the economic dimensions, and consumption is not mentioned in either document in relation to SD. The reference to 'sustainable consumption' was due to a description of a project that worked with this, amongst other things, but the context of describing the project was in relation to interdisciplinarity as a method, not SD as a concept. The lack of focus on poverty, economic growth and consumption reflects on the indicators in the following table.

Table 5: The harmony vs conflict- and actor vs structure- indicators of LR and WP

Indicators View of:	Ludvigsen-report	White Paper
Harmony vs conflict Conflict Disagreement (Competing) interests Opposition Tensions	A focus on conflicts is present, not presented in relation to SD, but to issues such as cultural complexity and as communal challenges. It also speaks of how the "general level of conflict in the world and economic hardship in many countries affect society both globally, regionally and locally." (p. 25). It also considers the students' ability to solve conflicts as part of interaction and democratic competency.	The word 'conflict' is not mentioned. 'Disagreement' is mentioned once in relation to how it needs to be accepted in a democratic community. Any element of conflict is not mentioned in the paragraphs specifically speaking about SD.
Actor vs Structure Individual Vs We/us/common Structures Frames	There is focus on both the individual and the community regarding being actors of change, and in combination with democracy the element of changing structure can be considered present. There is however little focus specifically on the structures that enable and complicate change.	Can be interpreted in the same way as the LR. Both have a balance between a focus on the individual, and "we" and the community.

These indicators are slightly problematic to analyse, as they are not necessarily easily identified in the text. The "harmony vs conflict" indicator was easiest to identify by searching for words relating to 'conflict' as the absence of such words could reflect a harmony perspective. The LR appears to include the element of conflict more than the WP do. Per Jarle Sætre has argued that a lack of perspective on conflicts was a problem also with the predecessor of SD, Environmental Education (Sætre, Kristensen, & Christensen, 2002). In the interview, he reiterated his concern that the lack of a conflict-perspective, and rather focus on consumer behaviour, could shift the focus away from the structural problems of capitalism and economic growth (Interview). At present, the debate about capitalism and economic growth is almost non-existent in the Norwegian context, which could be considered a "symptom" of a post-political state. Sætre points to a connection between the conflict-perspective and structures, and though both documents present a focus on both the individual and the communal responsibilities, neither presents a critical view of structures that are part of causing the challenges. When presenting topics that can be relevant within the different dimensions of SD the LR mentions living standards, equality, worker rights, justice, fair distribution, national and global market economy, which are all topics that incorporate structural dimensions, if intended. But no intention of focusing on structural dimensions is emphasised. The WP does not adopt the presentation of the topics and therefore has even less

presence of a focus on structures. Another indicator of a structural focus is the "global focus indicator", which is presented in the following table.

Table 6: the global focus indicator of LR and WP

| Global focus

Global
Globalization
International | Speaks of: local and global challenges; about "a productive society that can contribute in a global world"; increasing globalization and an international work-life; international research; how Norway is part of the "international migration-picture" (p. 19); national and international societal challenges; and a more "integrated international world" (p. 25). 'Global' is not mentioned in relation to SD. | Mentions "global" once: "Knowledge about democracy as form of rule and support of democratic values have great significance in an internationalized society where diversity increases locally and **globally.**" (p. 13)
Apart from that it refers to the Educational Law about knowing our common international culture tradition; it refers to international research; and to quality in Norwegian education in an international perspective. 'Global' is not mentioned in relation to SD. |

The 'global' focus is perhaps where the two documents differ most. Where the LR speaks of the global challenges, of globalization, of a more integrated and international world, and generally appears outward looking, the WP appears more inward looking. The WP speaks of knowledge as vital to Norwegian democracy due to increased diversity locally and globally, and refers to international research and how it can be used in a Norwegian quality education context. There is no focus on global citizenship and about how students should learn about global challenges, connections between them, and about the responsibility of being part of solving the challenges. Such knowledge is central in the concept of SD, and it is left wanting. It strengthens the impression of a lacking structural focus.

The final table for the analysis of the LR and the WP addresses main views presented and reflections on discourse.

Table 7: Main views of SD and discourse

Concluding remarks:	Ludvigsen-report	White Paper
Main views within the concept of SD	Refers to the acknowledgment of how topics about the Earth's existence need to be better included in education. Then includes how SD is about thinking locally, nationally and globally and the three dimensions, of which it presents possible topics. With these topics the social and economic discourses become more visible. After this the paragraphs about SD primarily refers to climate- and environmental challenges, today and in the future.	Teaching students to think critically and act ethically and environmentally conscious in a local and global perspective. Refers to how the UN considers "improving social conditions, environmental problems and economic inequality" as "important contributions to a sustainable development." (p. 39) Refers to the three dimensions and how different subjects can contribute to an understanding of the connections between them. "New technology and technological development shall, in addition to ethical reflections and judgment with regards to the technology development, be central within the

		interdisciplinary topic of sustainable development." (p. 39)
Discourse	Has elements of all discourses, but primarily the ecocentric. The importance of the SD concept itself is down-played by putting it next to other topics that are considered part of the concept in the strategies, and the report therefore can not be said to encourage an ESD.	Also has elements of all discourses, but perhaps with an even more narrow ecocentric and economically technology-optimistic view. Cannot be said to promote an ESD either.

The documents bear witness to the general tendency of SD in the Norwegian education context in that the concept is present on paper, but is not discussed leading to a number of conceptions of SD being presented without the real challenges being assessed. Even though elements of all dimensions are present, the view of environmental degradation and climate change as main problems reveals an ecocentric discourse view, and the view of technology as the solution reveals the technocratic view of the economic dimension.

According to the International Implementation Scheme, an ESD is supposed to be developed through a broad participatory approach, adjusted to each nation's needs. The strategies were made without such a wide approach, which might also explain their lack of impact. Although the documents refer to several documents providing research or strategies for certain elements of education, neither of the documents mention the national ESD strategies.

Neither do the documents encourage deliberations, reflections, discussion and/or debates about the content of SD. SD is not linked to the two other interdisciplinary topics of democracy and health and life mastering, and therefore loses parts of its content. Although the strategies were developed without wide participatory discussions and debate, they incorporate a more holistic view of SD. The way SD is presented in the LR and WP far from resembles the holistic ESD as presented in the strategies.

5.2.6. Comparing the current core curriculum and the new "over-arching part"

The purpose of the current general core curriculum is to state the overall purpose of Norwegian education, to be a value-document that provides direction, and to be a bridge between this purpose and the content of the school. The first sentence read: "The purpose of the education is to prepare children, young and adults to meet the tasks of life and master challenges together with others." (Kirke- utdannings og forskningsdepartementet, 1993, p. 2). The reason for revision is both the worry that the document has become out-dated as it is 24

years old, and that it does not fulfil its bridging-function between the purpose and the content in school. In the following section, the current curriculum and the draft of the new will be compared using the indicators. This comparison only has temporary relevance, as the current curriculum is compared to a draft of the new, a draft that can be significantly altered. The advantage of including the first draft is that several hearing documents can be included in the analysis, including more views. It can also reveal a sense of progress. The final draft is included in an own table.

Table 8: Current general core curriculum and draft of new

Indicator View of:	Current general core curriculum	Draft of new core curriculum "Overarching part – values and principles"
Democracy	Important. Not mentioned in relation to SD.	One of the three interdisciplinary topics. Important. Not mentioned as part of SD.
Nature/ Environment	Primary focus within the SD concept. A common good to be shared equally and taken care of by everybody.	Primary focus within the SD concept. A common good to be shared equally and taken care of by everybody.
Technology	Technology as both cause and solution of challenges. Offers some reflections on this.	Technology primarily as solution and briefly mentioned as "can cause new problems".
Poverty	Mentioned in relation to SD. Also speaks of solidarity with the world's poor as a main principle.	Mentions how SD can lead to less poverty
Inequality	Mentions how differences in competence can transition into "undemocratic manipulation and in social inequalities." Also states: "Knowledge and research has improved human health, improved their living conditions and improved their welfare in large parts of the world – but has also enforced inequalities in the global society and threats towards nature." (p. 20)	Mentions how "Management of the natural environment is connected with social and economic conditions, and a sustainable development therefore predicates that the resources in society are distributed and managed in a fair manner." (p. 14).
Economic growth	Mentioned as cause of destruction of nature.	Not mentioned
Consumption	Is mentioned as a cause of pollution in other countries and is mentioned in relation to SD.	Is not mentioned in relation to SD. Mentions consumption once in relation to "challenges that affect us all". The other challenges in the sentence are health, sexuality, narcotics, medias and personal economy.
International agreements	Mentions international consciousness, which is in context of a "communal life-environment".	Refers to international perspective and cooperation, but not specifically about agreements. Not in relation to SD.

The current core curriculum has approximately 2/3 more text than the new version, which perhaps explains why it manages to cover more topics. It does however also present more linkages between these indicators and therefore present a more holistic perspective than the new draft. The lack of connection between SD and the two other interdisciplinary topics of democracy and health and life mastery empties SD of meaning, a view supported by the Faculty of Educational Science in their hearing input (Det Utdanningsvitenskapelige Fakultet, 2017). In the draft SD is primarily about environmental issues, and the focus is to a greater extent on technology as positive. It reiterates the view of the WP on how technology and technology development is to be a central topic of SD, thus incorporating a technocratic view of the economic dimension.

In terms of connecting other indicators, the draft has phrased two sentences such: "A sustainable development provides society with the possibility to improve living conditions and social relations for all humans. That leads to less poverty and fewer conflicts, improved health, equality, and education." (p. 14). These sentences are where the text about SD to greatest extent incorporates the social dimension, and the affirmative voice of **"That leads"** gives the impression of a perspective of SD that includes more than protecting and conserving the environment. However, the next sentence about how technology can solve such problems, and cause new ones, forecloses a broader approach to understanding the challenges and finding ways of solving them. The same paragraph does however also present how the topic of SD is about knowledge of dilemmas in the societal development, opening up for other perspectives. Not providing any examples of sub-topics, such as economic growth or consumption, leaves the text more narrow than the current curriculum.

The next table address how the indicators of harmony vs conflict, actor vs structure, and a global focus are presented in the two documents.

Table 9: Harmony vs conflict- , actor vs structure and global focus indicator

Indicator View of:	Current core curriculum	Draft of new core curriculum "Overarching part – values and principles"
Harmony/ conflict Words: Conflict Disagreement Competing interests Opposition Tensions	Specifically speaks of "conflicts of interests" with regards to environment. Also mentions conflict in relation to ethics, technology, and as a part of life and history.	Conflict, tensions and opposition are mentioned in relation to democracy, and conflict is mentioned in relation to how SD leads to fewer conflicts.

| Actor/Structure
Words:
Individual
Student
Vs
We/us/
common
Structures
Frames | Speaks of the World Commission's emphasis on "interweaved crises" and uses "in improved health and increased population; in modern technology with overconsumption of resources and damage to life; in economic growth that pollutes and destroys nature; in poverty and impoverishment" (p. 22) as examples. Focuses on the interaction between economy, ecology and technology, which presents our time with challenges in terms of knowledge and morality with regards to sustainable development. | Also focuses on how the interaction between "technology development, environmental challenges and ethical consciousness is central" to SD, but does not elaborate on connections or challenges. |
| Global focus
Words:
Global
Globalization
International | Talks of "international consciousness" and has a chapter about "Internationalization and traditional knowledge" where it presents some reflections on interconnections between nations. In the paragraph about SD it states: "The education must awaken their belief that action of solidarity and communal effort can solve the big global problems." (p. 21). | As mentioned above it speaks of international perspective and cooperation. It also speaks of how "Insights in local-, national- and international cultural heritage is of significance for the students' Bildung and identity development."(p. 5) |

The new draft bear witness to being a "descendant" of the WP by having marginal focus on addressing conflicts and challenges in relation to SD, at least compared to the current curriculum. The Faculty of Educational Sciences at the University of Oslo criticises the draft for having a consensus-perspective that disregards "value- and interest-conflict where the positions are not harmonious" (Det Utdanningsvitenskapelige Fakultet, 2017). RORG-Samarbeidet supports this view by arguing that the draft promotes a harmony-model (2017a). Also when it comes to the actor/structure indicator the current plan offers more reflection on challenges than the new draft does. In terms of global focus the current plan, like the LR, has greater outward focus than the new draft. The lack of a global focus in the draft is also a criticism raised in several of the hearing inputs focusing on SD. (Aust-Agder fylkeskommune, 2017; Det Utdanningsvitenskapelige Fakultet, 2017; FN-Sambandet, 2017; RORG-Samarbeidet, 2017aetc)[5]

The next table concludes on main solution and reflects on discourse.

Table 10: Main views and dominant discourse within the current core curriculum and draft of new

	Current core curriculum	Draft of new core curriculum "Overarching part – values and principles"
Main views (within SD)	The structure of the document follows the many sides of the human and offers reflections on complexity, incoherencies, knowledge, deliberations, consciousness and more. On SD the document encourages taking departure in	The three paragraphs that describe SD are concise and contain elements of all discourses. The primary problem is environmental degradation, but an emphasis is put on how SD "provides society with the

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[5] For more see appendix nr …

	the limits the environment, resources, technological level and societal conditions presents and let this guide policy so that development "is steered towards a trajectory that is compatible with the biosphere's ability to handle the effects of humankind's enterprises. And in a sustainable development the ethical nurturing of human compassion and solidarity with the world's should poor be a foundamental principle." (p. 21)	opportunity to improve living conditions and social relations for all people. That leads to less poverty and fewer conflicts, improved health, equality and education." This sentence requires a view of SD that is more than taking care of the environment, but it does not explain how SD leads to these benefits and it does not question the inherent conflicts of interests and challenges of agreeing on how SD is to be achieved. Technology development is presented as a possible solution, but can also create new ones.
Discourse	The concept of SD is presented under the "environmentally conscious human". Despite of this the presentation includes elements of all the dimensions and offer reflections about interconnections and challenges. The equality of presentation of these sides makes SD an equally important topic as anything else, it does however not put it on top and therefore does not orient education towards SD.	Has a few sentences where all discourses appear present, but what dominates is the ecocentric focus on the environment with a view of technology that can reflect both the environmental and economic discourse. What is also missing more than in the current core curriculum is reflections on interconnections, structures, power and challenges.

The comparison of these two documents provides insight into the perspectives that dominated in 1993 and what dominates today. The harmony vs conflict indicator reveals a main difference in that the general core curriculum offers reflections on challenges and conflicts of interests. This is left out in the draft of the new "over-arching" part of the curriculum.

In the hearing process several inputs were about how the draft of the new plan presented SD. The following section will present some reflections, combined with some of these inputs, according to the structure of the draft document.

Content of the draft

The first sentence of the sub-sub-chapter 2.6.3. Sustainable Development reads: "Mankind's way of living affects the natural environment and has implications for the whole planet." What is positive about this sentence is how the focus on the cause of the problem is on 'mankind'. What is less positive is that the problem is primarily perceived to be about how the cause; mankind, create problems for the natural environment, which in turn has implications for everyone. This is less positive because the primary focus is then on the implications of environmental degradation, and not on how mankind's way of living causes other implications worldwide than environmental. Although climate change and overconsumption of resources will, and is likely to already have, caused natural disasters

(floods, droughts, wildfires and other extreme weather events) and conflicts, there are other consequences of how mankind lives that are equally problematic, such as poverty and inequality. And when the concept of SD was presented in *"Our Common Future"* these structural challenges were represented through the 'development' part of the concept, an aspect that the second strategy of ESD emphasised. As mentioned, Straume and Sinnes state that researchers central within ESD moved away from the 'development' aspect of the SD concept (Sinnes & Straume, 2017). This was because development was connected to economic growth, and economic growth was incompatible with the ecocentric focus. They confirm the presence of the "purists"/deep-ecology view presented in the background chapter. This could perhaps explain why there is less focus on economic growth in the WP and the draft of the new over-arching plan.

The second paragraph continues the focus on the environmental dimension by focusing on "the connections between technology development, environmental challenges and ethical consciousness" which are considered "central" in this topic (p. 14). It is positive that ethical considerations are present. This presentation does, however, give the impression that ethical consciousness is to be primarily related to technology and environmental challenges. If so, it underlines the impression of an ecocentric discourse, though also with a tendency of the economic discourse's affinity towards technocratic solutions. Discussion and reflection is then emphasised as important, as is in accordance with the ESD strategies. A suggestion made by the Norwegian Centre of Science Education and the Natural BackPack (NBP)[6] was to include critical thinking and creativity at this point in the text, as it is not mentioned (Den naturlige skolesekken Naturfagsenteret, 2017). This would add aspects considered central in the ESD strategies. The second paragraph continues the environmental focus: "Management of the natural environment is interlinked with social and economic conditions, and a sustainable development therefore predicates that the resources in society are shared and managed in a fair manner." (p. 14). The social and economic dimensions are thus included, but with the vantage point in the environmental dimension.

The third paragraph opens up for a wider understanding with the above-mentioned sentences: "A sustainable development provides society with the possibility of improving living conditions and social conditions for all humans. That will lead to less poverty and fewer

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[6] NCSE made two inputs, one of them is through NBP

conflicts, improved health, equality and education." Three inputs reacted to the assertive phrasing of "That will lead" and according to one of the inputs, from Sørburøy school, this is illogical because it possible to "steer towards a sustainable development with violent decimation of population numbers all over the world" (Sørburøy barne- og ungdomsskole, 2017)[7]. This is not the view of the document, but it reveals a view of SD as to be about an environmental concern only.

Having mentioned technology twice at this point in the text already reveals a great emphasis on it, coinciding with both the ecocentric and economic discourse. What is interesting is that NDLA, the Norwegian Digital Learning Arena who have competency with regards to assessing future potential benefits and challenges of digitalization and technology, consider the role of technology in the text to be exaggerated. "The one-sided focus on technology simplifies complex problems, and downplay the understanding of responsibility. We cannot understand and solve problems related to migrations, climate, hunger and inequality in living standards, and conflict through technology alone." (NDLA, 2017). Viewing the role of technology as one-sided is supported by FN-Sambandet and RORG- Samarbeidet (FN-Sambandet, 2017; RORG-Samarbeidet, 2017a)

The paragraph of the text does however then include the above-mentioned emphasis on what knowledge of the topic entails:

> "Knowledge about the topic entails an understanding of basic dilemmas in the
> societal development and how these can be handled. That provides foundation
> to actively and consciously contribute to a better world." (p. 14).

This presentation of knowledge points to a structural dimension. "Basic dilemmas" is also the closest the chapter gets in terms of presenting the conflict element. The text has been criticised for its lack of focus on the inherent conflicts of interests by RORG- Samarbeidet, the Faculty of Educational Science, NDLA (2017) and Utdanningsforbundet (2017). Arguments are made for a wider approach to SD where conflicts of interests and values, and structural challenges and critical thinking of systems are included.

The sub-sub-chapter ends with how the "topic is to build hope for the future and show that the effort of each has significance" (p. 14), which then leaves the chapter of having included a

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[7] See appendix 2

focus on both the actor and the structure, though superficially. The chapter appears to have links to all three discourses, but colour coding according to the mentioned discourses reveal a tendency towards the ecocentric and economic dimension. This impression is confirmed in several of the inputs. Of the 43 inputs provided by schools, municipalities, organizations, research and educational institutions etc., which elaborated on SD as a topic, 27 states that there is more to the concept of SD than what is presented in the text. They consider the presentation of SD to be primarily about the environmental dimension and want more focus on the social and economic dimensions, including the connections between them, as well as the greater global focus mentioned earlier.[8] Of the 16 remaining inputs speaking of SD some state that they are satisfied that SD is one of the three interdisciplinary topics, some urge for more emphasis on culture, and some for aesthetical and practical skills. There are also two inputs that want the traditional knowledge and lifestyle of the Sami people to be included. In sum, the impression is that the interdisciplinary topic of sustainable development is treated too narrowly in the draft.[9]

The current plan incorporates challenges, potential conflicts of SD, values, attitudes, skills and knowledge to create a sustainable development. As claimed in several inputs the social and economic dimension need to be better integrated. This also concurs with the UN recommendation of the interdisciplinary approach. The ESD strategies, Sinnes, Sæther, Klein from RORG, Grieg from FN-Sambandet all argue that democracy is an central part of a sustainable development. "Democracy and citizenry" is an own topic next to SD, but this topic does not present a focus on the conflict or structures either. The lack of connection between the three interdisciplinary topics is considered a weakness of the draft.

Although elements of the economic discourse are present through the view of technology and the technocratic approach, knowledge about economic growth and consumption, about personal economy and economic systems and theories are more or less completely absent, a view confirmed by Econa (2017a). Econa is an interest- and worker organisation for "civil economists" (siviløkonomer) and workers with a master degree within the economical and administrative discipline (Econa, 2017b) Few of the inputs elaborate about what they mean the text should include specifically when they speak of the social and economic dimension. In several of the inputs it is referred to the SDGs as good points of departure for an

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[8] For further details see appendix 2

[9] For further details see appendix 2

interdisciplinary approach. [10] Some are more specific, such as FN-Sambandet, RORG-Samarbeidet and a few others who focus on how issues such as conflicts, poverty, system critique, peace, human rights, inequality, distribution of resources, and more, should be included. Even fewer are specific in terms of defining what the economic dimension should include. Many of the topics mentioned above can also be considered part of the economic dimension, such as poverty, inequality, conflicts, distribution of resources etc. However, few of the inputs focus on personal economy and none of the inputs, except for Econa's input, refer to issues such as economic systems and economic theory. As Econa states: "Society is constantly requiring higher demands of economic understanding. At the same time the presence of personal and central economic dynamics in society is almost absent in Norwegian education." Econa fear that without a focus on understanding economics the "knowledge gap will lead to increased differences" (2017), as view also of post-politics. Econa does not connect lack of economic understanding to democracy, but in a time when politics is becoming more and more about questions of economy, economic understanding becomes crucial to democratic participation.

5.2.7. The final draft

The final draft arrived on the 1st of September 2017, which provides the opportunity to assess how the inputs about SD from the hearing process have been incorporated. An analysis of this draft is presented in the table below.

Table 11: The final draft

Indicator:	Final draft: "Overarching part – values and principles"
Dimension	All dimensions are mentioned.
Harmony vs conflict	Mentions "fundamental dilemmas and societal development trends and how these can be handled" (p. 14). Mentions conflicts as one of nine issues.
Actor/Structure	Actor: "The students are to attain an understanding of how the actions and choices of the individual have meaning."
View of democracy	Does not connect it to the other interdisciplinary topic of democracy.
View of nature/environment	Refers to the Purpose Paragraph by stating: "Through working with the topic the students shall develop competency that enables them to take responsible choices and act ethically and environmentally friendly." Apart form the 'environment' and 'climate' is mentioned as two of 9 relevant issues within SD.

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[10] Appendix

View of technology	"Technology has a significant influence on human, environment, and society. Technological competency and knowledge about the interconnections between technology and the social, economic and environmental aspects of sustainable development therefore is central to this topic. Technological development can contribute to solving problems, but it can also create new ones. Knowledge about technology entails an understanding of what dilemmas can occur by using technology, and how these can be handled."
View of economic growth	Not mentioned.
View of poverty	One of the nine issues mentioned.
Inequality	State that "The topic includes issues related to environment and climate, poverty and distribution of resources, conflicts, health, equality, demography, and education." (p. 14)
View of international agreements	Not mentioned
Global focus	Both local, regional and global focus mentioned.
Main solution	Technology

The final document has managed to alter the focus away from the environmental focus by adopting more of the terminology used in the WP. Parts of the text are moved around and it now starts with how "Sustainable development as an interdisciplinary topic in school is about accommodating so that the students can understand fundamental dilemmas and development trends in society, and how these can be handled." (p.14). A local, regional and global perspective is included, and by introducing various topics the chapter includes elements of the three dimensions. The first two paragraphs can be interpreted to have changed according to the inputs. What is interesting is that the final paragraph now is exclusively about technology despite several inputs stating that its role was over-emphasised in the first draft. The whole paragraph is presented in the table under "view of technology". It is not a focus on technology that is exclusively positive, though it is provided a key role within the SD topic. Amongst several important issues to be included within a short text, technology receives 1/3 of the space. Although dilemmas are reiterated and conflicts mentioned as one of the several relevant topics, there is little trace of system critique, focus on structures, power, and conflicts of interests and values. The nature of the document might not allow for too much elaboration, but compared to the general core curriculum, this document lacks connections between the topics, and it lacks reflections on why an unsustainable development has become a challenge in the first place.

5.2.8. The renewal documents compared to the ESD strategies

In this section the checklist presented at the end of RQ1 addressing the ESD strategies, is used to evaluate the extent to which the renewal documents and the efforts so far reflect an Education for Sustainable Development.

Table 12: Renewal documents compared to the Check-list - Structural Accommodation

Structural accommodation	
Permeate all relevant subjects	Currently 'sustainable development' is mentioned in the natural science- and social science subjects. It has been a challenge for permeation into all relevant subjects that "relevant subjects" is an undefined statement and that there is a general perception of SD to belong to the natural sciences. Despite the renewal documents' referral to "relevant subjects" neither of them clarify what is meant by it. It can appear as though the natural science subject still is the primary point of departure; though the representatives of the Directorate for Education and Training stated that which subjects would be relevant would be decided upon in the groups developing the subject syllabuses.
Ensure policies, laws and frameworks support EST	The NIR emphasise NBP as the main effort. Although NBP is an important initiative it does not coincide with the responsibilities described in the strategies in terms of national, municipal and school level. The report shows some reflection on this by stating that teacher training is inadequate. The renewal process is a tool itself to better incorporate the concept in policies, laws and frameworks, and introducing SD as one of three interdisciplinary topics is an effort. As the analysis of how SD is viewed in the renewal documents thus far has shown, the presentation so far has emptied the concept of some of its meaning compared to the content of the strategies. This can however still change in the continued work of the renewal process.
Promote research and development of ESD	The NIR state that research has been inadequate. Most of the research presented has been conducted without specific encouragement, rather from personal engagement. The Ministry of Education and Research has however sent out a letter to higher education institutions encouraging the institutions to "relate actively to the Sustainability agenda and assess how they can contribute to reaching the goals" and continues by referring to specific sub-goals of SD goal 4: Quality Education for All (Larsen, 2017).
Equip teachers and	Through DNS and external actors there are tools and materials available.

ensure accessibility of tools and materials	Inadequate promotion of research and teacher training can however explain why accessibility of tools and materials might be considered inadequate. With SD as one of three interdisciplinary goals more materials might be developed.

The permeability of the SD concept depends on what the content of SD is viewed to be, and as the analysis has confirmed, there are different views of this. It also appears as though there is a lacking acknowledgement amongst education authorities of the differences in views of SD because nowhere is it encouraged to discuss the concept itself. The following table addresses what the ESD strategies consider important when teaching.

Table 13: Renewal documents compared to the Check-list – When teaching

When teaching	
Wide use of teaching methods	The NIR state that a fair amount of teaching methods are both available and in use.[11]
Involve local community in teaching	Difficult to assess from the data.
Use of evaluation methods that consider an expanded concept of knowledge	The expanded concept of knowledge is not defined. In this context it will be interpreted as a concept based on an interdisciplinary approach. Interviews reveal that finding evaluation methods for interdisciplinary approaches can be challenging (Interview Scheie and teacher), but not impossible and probably easier if the competency goals were framed to encourage such an approach (Interview Sinnes).
Use of external actors	FN-Sambandet, Green Flag are examples of external actors used in connection with SD.
DNS projects	About 570 schools[12] have received funding from DNS to create sustainable development projects. These encourage an interdisciplinary approach.
Focus on knowledge and skills for SD	There is not a specific definition of SD knowledge- and skills. FN-Sambandet does however promote the concept of skills for SD (Interview with Kai Grieg).

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[11] See appendix
[12] In time of writing

The NIR also addressed the use of multiple methods, and in it Norwegian authorities stated that several methods are in use in Norwegian classrooms (Ministry of Education and Research, 2015). With regards to consider an expanded concept of knowledge, such a concept is, as mentioned, not clearly defined. In this context, it is interpreted to be about an interdisciplinary approach that incorporates the environmental, social and economic dimensions. Research and interviews reveal difficulties in implementing the interdisciplinary approach, and the analysis of views reveal that views from each dimension are presented, but with a tendency toward environmental view on problem, economic view on solution, and with certain issues of the social dimension mentioned. Although it is stated that the three dimensions should be seen in connection, there is no mention of how, and little focus on the inherent conflicts between them. Neither is a discussion the concept itself encouraged. This also reflected through the lack of reflection on what kinds of knowledge and skills sustainable development requires. The external actors are present and offer additional views and competency through presence in school and through hearing inputs. NBP is the main effort to date. According to Scheie there is currently no plan to expand the budget provided to the NBP (Interview).

Table 14: Renewal documents compared to the Check-list – Content of teaching

Content of teaching

Generational perspective and precautionary principle	The generational perspective is present in the reiteration of the UN terminology. The precautionary principle is however not mentioned in relation to SD in the documents relevant to the renewal process.
The three dimensions	A focus on the three dimensions is present in all relevant documents and among the informants. As the indicator framework has revealed, the environmental dimension appears to be of primary concern in terms of the problem, and the technology aspect of the economic dimension dominant as the solution. By briefly mentioning issues such as poverty, inequality, conflicts, health, education, and demography the social dimension has a presence.
See phenomena in connection and analyse problems in	Managing an interdisciplinary approach has been presented as difficult in earlier research. Mentioned reasons for this are: structural accommodation, differences in views and personality amongst teachers, time constraints, a lack of involvement of social science academics, etc. Several inputs have

an interdisciplinary perspective	requested such an approach to be better incorporated into the new "over-aching plan", but it appears to have been left out of the final draft.
Emphasise ethical challenges	Ethical challenges are present in most documents, though is repeatedly seen in relation to technology and technological development in the WP and the final draft of the over-arching plan.
Solidarity with the world's poor and a global perspective	Solidarity is mentioned in the documents but not as a part of SD. A lack of global focus is argued in several inputs, and is mentioned in the final draft.

The generational perspective is mentioned and so are the three dimensions. Seeing phenomena in connection and analysing the problems in an interdisciplinary perspective is perhaps the element of the strategies that are missing the most in the documents so far. One could argue that it is much to expect from a short document such as the over-arching plan, but its predecessor, the general core curriculum managed to include reflections on incoherencies and conflicts within the SD topic. The LR and WP are longer documents, which should also be able to offer room for such an analysis, but neither does, and the impression of the SD concept's presentation is that the concept is narrowed down and superficially treated.

Neither the syllabuses, the LR, the WP, or the new over-arching plan documents refer to the strategies. One of the inputs does (RORG-Samarbeidet, 2017a). Two strategies were made: the first by the Norwegian Directorate of Education and Training, and the second was made by the Ministry of Education and Research. Although earlier research has referred to these strategies, and Norwegian authorities mentioned them in the NIR to UNECE, one can wonder why Norwegian authorities have had these strategies made when there is no follow-up- or action plan, and why they are not mentioned in a renewal process where SD is one of three key topics.

5.2.9. Summarizing

Compared to the strategies the renewal documents include some elements and exclude others. SD is not presented in accordance with the strategies in that the concept is presented as narrower, with a primary focus on the environment challenges with technology as the solution. By presenting SD next to democracy instead of seeing democracy as part of SD, or seeing the two as interconnected, the concept is presented with a very different meaning

compared to the strategies. Another distinguishable difference in terms of content is the lack of focus on conflict and structures. In this context, these indicators reveal whether or not the ability to provide students with the competency to become critical, analytical and democratic citizens is included in the view of SD. Without the ability to question the structures that cause the current unsustainable development it becomes difficult to enact change. These indicators reflect the social dimension and a greater focus on the social dimension can perhaps contribute with a more critical, value-based approach to the understanding of sustainable development. By pointing towards structures and conflicts of interests the social dimension can encourage the questioning also of the dimension whose indicators, apart from technology, have been least spoken of, namely; the economic dimension. By providing "technology" with increasing amount of space and focus, it becomes the most compelling indicator reflecting the economic dimension. An essential indicator such as "Economic growth" is not mentioned. Consumption is briefly mentioned. The harmony indicator is the only indicator that reflects only the economic dimension. And the presence of the harmony indicator can possibly explain why consumption is not presented as problematic to SD. Generally; a discussion about the concept of SD itself is not promoted. Understanding the economic dimension's influence on the SD concept, and the economic system's influence on a sustainable development therefore remains untouched.

So far SD has been treated superficially and technocratic in the sense that discussions and reflections concerning different interests and values are excluded. A summary of key challenges include: difficulty of implementing the interdisciplinary approach; lack of focus on SD in competency goals; existing efforts are viewed as primarily focused on the environmental dimension; competing views on what SD includes results in superficially treated concept; and as SD is one of three interdisciplinary topics, operating at the mercy of the subjects, ESD is far from being the vantage point of education.

5.3. What are the potential implications of the present views for the concept of Sustainable Development and an Education for Sustainable Development?

5.2.10. Implications for the concept of Sustainable Development

The renewal documents have been analysed to have a dominantly ecocentric view on what is the problem within the concept of SD: environmental degradation, climate change and the management of resources and an economic discourse solution: technology. The development discourse is present through the mentioning of poverty and inequality, but these are not main aims, and they are not seen in relation to democracy. A first impression of the analysis could be presented through figure 2:

Eco-centric perspective
- Most visible
- Most prevalent words: environment, nature, climate change
- Though there is a focus on climate change the perspective give a local impression through the focus on Norway. Little is said of a global responsibility.
- Individual focus
- A focus on critical thinking

A focus where the social dimension is included in the sense that a focus on individual's lifestyles are included.

SD is about sustaining and managing nature to take care of human needs

Faith in technology to solve the problems, and ethical considerations with regards to technology development

The development discourse is present through civil society organizations and a regional representative who consider the current eco-centric perspective as too narrow.

Poverty
Inequalities
Global dimension
Conflict perspective
Structures
Solidarity

A technocratic perspective Consciousness about this dimensions and knowledge about the theoretical foundations of this perspective is stated as missing.

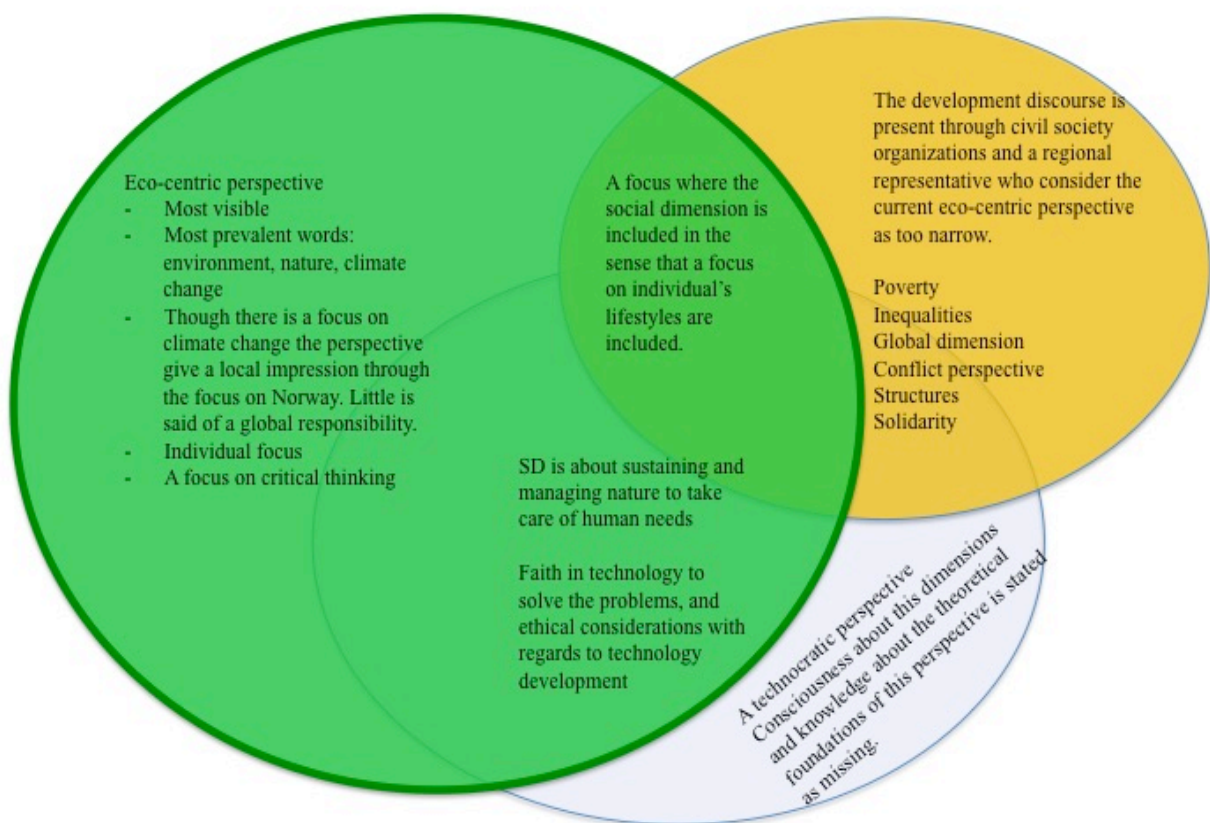Figure 3: presentation of views

This figure is meant to exhibit the roles of the different perspectives in the Norwegian discourse of SD. The green circle representing the ecocentric view is given the very visible green colour with the demarcated lining to indicate that it is the most visible discourse due to its role of defining the main problem. The yellow-orange circle depicts the views of the

development discourse within the social dimension and the blue circle represents the economic dimension and discourse. The overlapping areas of the circles serve to describe discourses in between discourses and dimensions.

Why is the ecocentric view dominant?

Considering the main problem of SD to be primarily about the sustainability of the environment is a dominant perspective within the documents, though slightly less in the final draft of the "over-arching plan" replacing the former general core curriculum. ESD's predecessor; Environmental Education, was quite popular for a period of time (Sandås & Isnes, 2015) and competency was developed. SD has been considered an expansion of EE and the natural sciences have for a long time been given the primary responsibility of SD as a topic, with the social science subject having a secondary responsibility. SD in the social- and natural science subjects compliment each other fairly well, but as concluded in their presentation the total number of relevant competency goals limits the concept's permeation. These syllabuses are the only syllabuses that currently address SD, and according to research and interviews, efforts so far have to a great extent been dependent on the engagement of individual teachers.

In the interview with two representatives of the Norwegian Directorate of Education and Training (NDET), it was apparent that the main effort towards SD was to happen through the National Centre for Science Education (NCSE) and the Natural BackPack. However, NDET could tweak the direction though the mandate given to the NCSE. It also appeared as though NDET was reluctant to be too decisive on how SD is to be implemented, that the NCSE and teachers were to be left room to decide how SD should best be taught and communicated. In a presentation made by another NDET representative at a seminar organized by the NCSE and the Department of Teacher Education and School Research at UiO, it was stated that the interdisciplinary topics "shall not be included in all subjects, only those of which they are a central part of the scientific content" (Bech, 2016).[13] SD is presented to have "good opportunities for interdisciplinary treatment" and the natural science-, social science-, mathematics, and food- and health- subjects are suggestions. The presentation refers to the already existing efforts, such as NBP, miljolare.no and the science strategy. These efforts are primarily oriented towards the natural sciences.

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[13] Presentation presented at the abovementioned seminar with approval of use provided by representatives from the NDET in interview.

In the interview with Astrid T. Sinnes she explained that in the years since EE the focus has gone from "more interdisciplinarity to less" with the example of "O-faget" (Orientation-subject) which combined social and natural sciences becoming "Naturfag" (Natural Science Subject). In general, there was an increasing focus on 'fact-oriented' knowledge, but at the same time there is a wish to work interdisciplinary.

> "But when what is measured in the end is about fact-oriented knowledge…
>
> At least when we speak to teachers they wish they could work more interdisciplinary, but they do not have the time because they have to get through all of these competency goals." (A. T. Sinnes, intw: 24.01.17)

Andresen et al. also found that increased focus on measurement and evaluation is part of causing the time constraints (2015). There are however teachers who consider the 'sustainable development' concept as a very convenient topic for interdisciplinary projects because the concept allows for an inclusion of a great number of competency goals. In an interview with a social science teacher at a lower secondary school in Bergen, s/he told that SD had been used for an interdisciplinary project comprising the social and natural science subjects. Although this was the choice at the time, the teacher stated that almost any subject could have been included, which reveals a broad view of SD. Teachers at the school initiated the SD project where the students developed problem statements they worked with in groups and they used globalis.no, a FN-Sambandet webpage, and the textbooks of the subjects as primary resources. This project reveals some of the initiatives happening in addition to the NBP. One challenge the teacher mentioned was how to evaluate the projects the students made. As there were two subjects involved it was difficult to figure out how to grade the group-work (Teacher, intw: 20.01.17). According to Sinnes it should be possible to overcome this challenge by framing the competency goals to take the interdisciplinary approach into consideration (A. T. Sinnes, intw: 24.01.17).

In the interview with Eldri Scheie, she stated that the NBP initiative puts great emphasis on an interdisciplinary approach within SD projects that the schools develop. Most projects have 3 or more subjects involved, with more subjects involved in primary and secondary school, than in high school. Scheie also stated that though the interdisciplinary approach is a key focus, it is a gap between how the teachers respond when asked to "Explain what you mean by the concept SD?" and " Explain what you mean by teaching for a sustainable development?". There is a gap in the sense that concepts such as 'society' and 'economy' is almost absent when explaining the latter, which could indicate that these are elements either forgotten or

considered difficult to teach about. Apart from the NBP that encourage the interdisciplinary approach, other projects from the NCSE are primarily directed towards the natural sciences. The centre and their projects are therefore more commonly approached and used by natural science teachers than the social science teachers, which could also explain the lack of focus on social- and economic dimension topics. When asked why not more social science didactics were involved in the administrative side of the Natural BackPack Scheie explained that there had been an effort to include these, but lack of social science didactics applicants and lack of encouragement from the NDET made it a solitary effort from the side of NCSE. During the interview it was reflected upon the difference between the natural- and social sciences of academia's participation in SD and in primary and secondary education in general in Norway. A national centre for science education exists for the natural sciences, but no such centre exists for the social sciences. In the interview with Elin Sæther, she confirms the impression of less awareness among the social sciences of their role as 'teacher educators', that: "what happens in school is important, that this consciousness has been low among social scientists is almost the most common notion" (E. Sæther, intw: 25.01.2017). She also stated that social science didactics has been underdeveloped. The academic social sciences are structured differently from the subjects in primary and secondary education, whereas the natural science related subjects to a greater extent follow the categorization within academia. According to Sæther and Scheie, a cooperation effort is now established between the NCSE and the teacher training education of UiO, and SD is now included as an element in the interdisciplinary program of the teacher education. Also, Sæther stated that a network for the social sciences has recently been established, though it currently does not work as a centre such as the NCSE. Signals from authorities and the structures of academic disciplines appear to have been part of shaping how SD and ESD have been integrated in education so far.

Other contributors to the social dimension

Even though social science academia appears to be lagging behind the natural sciences in terms of contribution to the concept of SD in primary and secondary education, there are other actors that have contributed. The aforementioned Norwegian branch of the UN; FN-Sambandet has developed programs and games with various topics of which sustainable development is a dominating one. In order to make these programs and games as relevant in school as possible, they take departure in competency goals. They also refer to the SDGs, which provide a good opportunity to see different elements, such as the indicators in this thesis represent, in connection. In an interview with Kai Grieg working for the Bergen office

of FN-Sambandet, he spoke of Sustainable Development skills where the focus is "that you should do something, not just think it" and that action has to come first and then attitude will come after. This coincides with the concept of action competency, and can also in some cases include a conflict-perspective in terms of addressing conflicts of interests.

Another actor is the umbrella organization RORG – *RammeavtaleORGanisasjoner* representing about 50 organizations, which work on communicating North-South questions to the general public, including in schools. This organization has created a network for Education for Sustainable Development and written a paper aiming to create a common terminology on ESD (RORG-Samarbeidet, 2017b). The network includes organizations, researchers, school initiatives, private persons etc. As referred to, both of these organisations contributed with inputs to the hearing documents where they pointed to the narrow concept that has neglected a structural, conflict- and global perspective.

Reflections on an ecocentric approach to the problem

Sæther attended the seminar where the other Udir representative held the presentation. She reacts to the presentation of SD as "naturally" belonging to the natural sciences and considers "no word as scary in terms of prolonging conventional habitual thinking. What is natural?" Sæther is concerned with

> "the social and political processes that are drivers of creating the challenges we are facing, and to then think of how we approach climate- and environmental problems as questions of democracy, as questions of identity, as questions of distribution. And how do our human challenges affect us thinking about distant others?"

She also questions why it is so easy for us to not take these problems into consideration. Sæther thus raises questions in connection to both the actor vs. structure indicator and towards the harmony vs. conflict indicator. Although she considers the NCSE to do great work, she is concerned that a departure in the natural sciences will not take such questions adequately into consideration. In view of the findings from key documents, this consideration appears legitimate and corresponds with concerns presented in some of the hearing inputs (Det Utdanningsvitenskapelige Fakultet, 2017; RORG-Samarbeidet, 2017a). The consequence is that valuable knowledge and perspectives in terms of understanding the structures that causes our challenges remains unquestioned and unchallenged. Within academia there exist competency in addressing these issues within the humanistic and development faculties and

institutes of several universities. This competency does, however, spend time "trickling down" to the school level according to Per Jarle Sætre. If social science academics neglect their responsibility towards teacher education and schoolbooks are being exchanged every ten years or so, it becomes difficult to renew knowledge and ensure an up to date debate. Which combined with the difference in subject structure and a lack of encouragement from the educational ministry can explain why it takes time to include the social dimension of the SD concept in schools. And without the social dimension it becomes difficult to connect the three dimensions, as it is the development discourse that appears to be offering the focus on raising the challenging questions.

Reflections on having an economic approach to the solution

The general core curriculum shows that it is possible to include reflections on conflicting interests, incoherencies and the need to discuss values in relation to the concept of SD. By providing technology with the amount of space given in the over-arching plan, though not only positive, it gives the impression of a technocratic approach where discussion about our current trajectory and the possible future trajectories is narrowed down to be about technical fixes.

In effect having an ecocentric perspective on the problem make environmental challenges the primary focus of concern. Combined with the focus on individual choice and action each student is presented with a responsibility through the choices they make. With a limited global focus the impression is that the responsibility of environmental concern is narrowed down to a Norwegian context. In combination with a lack of focus on conflicts of interests and on structures, and by not seeing SD in relation to democracy the concept of SD loses the ability to encourage students to question and challenge development trends that are part of causing the challenges. Critical thinking is presented as an essential skill in the renewal documents. It is however not mentioned in relation to SD and there is a lack of conflict- and structural focus that can encourage challenging current unsustainable development trends. Providing technology with the amount of space as seen in the final draft of the over-arching plan, exemplifies a technocratic approach. However, as NDLA and RORG stated in their hearing inputs we "cannot understand and solve problems related to migrations, climate, hunger and inequality in living standards, and conflict through technology alone." What is underemphasised in the current ecocentric- and economically inspired approach to SD is the will to encourage skills such as critical, analytical and alternative thinking.

Lacking the critical focus might also hinder questions regarding the implications of not focusing more on elements within the economic dimension. As presented by ECONA a lack of economic understanding can cause greater differences. According to the Rethinking Economics network, the way economics is taught is out of touch with reality, yet greatly affect policy and threatens democracy by being perceived as too complicated. And post-politics view economic theory and its approach of expert knowledge and techno-managerialism as already influencing our ability to partake in democracy. Why is it that economics is so complicated? In order to better understand economic theory and economics as subject in school, I interviewed Jonas Christophersen and representatives of the Rethinking Economics organization.

5.3.1. The missing dimension

If there is a slowly trickling connection between the social sciences in academia and its influence on the social sciences in primary- and secondary educations, the connection between economics and presence in said education is more or less missing. Economics is a social science as well, but in social science academia, there are also barriers between the economic discipline and the other social sciences.

To my knowledge there is no economics didactics within teacher education. Economics is a subtopic within the social science subject and has a small presence in maths. Apart from this economics is primarily encountered through elective subjects. As the aforementioned Econa stated "the presence of personal economy and central economic dynamics in society in education is almost absent in Norwegian primary and secondary education." (2017a). In the interview with Jonas Christophersen he provided insights into how economics up through the years has been present in school in a variety of ways. From once having own "trade gymnasiums" where the students learnt about national and corporate economics, these "trade gymnasiums" with time were incorporated into the general term "common high-school". 'Economics' as a subject is now an optional subject depending on the study disciplines offered at each school. Econa argues: "that the majority of the population has good basic economic knowledge is decisive to meet the changes that will come and to hinder increasing differences in society." (2017). In this statement, economic understanding is directly linked to the ability to combat inequality. In teacher education, the interdisciplinary subject "Nature, Society and Environment" (NSM in short in Norwegian), was taught from 1993 to 2003, inspired by the Brundtland-report (J. Christophersen, intw.: 16.05.17). Jonas Christophersen

was part of developing two topics for this subject, called "Inequality and development" and "Environment and economy – conflict or harmony?". These two topics reflect a focus of the time where issues such as economic growth were questioned. Due to a shift in focus this subject was removed in 2003, a removal many were displeased with (Andersen, 2003; Sætre, 2002; Aarre, Jacobsen, & Dahl-Hansen, 2014). Another interdisciplinary approach did not replace this interdisciplinary subject, but instead the focus towards more specialized knowledge, as mentioned by Sinnes, was prioritized. According to Christophersen, this specialised focus is representative also of the current focus in the Social Science Section of the teacher education at the Western University of Applied Science.

It seems as though economics gradually has received less focus in school, yet economic understanding appears to become increasingly important. In the interview with representatives of the local group of the Rethinking Economics networks, one of the two RE representatives stated that having an economic education as politician provides power; "fewer dares to contradict you". As an economist it appears you are perceived to have knowledge and an understanding difficult to refute. On the international webpage of the Rethinking Economics (RE) organisation, it is referred to an article that found that in the UK "only 12% of the public feel like the media and politicians tend to talk about economics in a way that's accessible and easy to understand" (Economy Team, 2016). The RE state that

> "elections are fought and won on economics, whilst social policy is formed on how people think it will affect the economy. If people don't understand what politicians are doing and who they are voting for, this is a real problem for democracy." (Rethinking Economics, 2017)

Rethinking Economics is an international network of students, academics, and professionals who want to have a more critical approach to economics and who work to include more perspectives in economic teaching. In the interview with the two representatives, it was stated that the RE network was initiated after the financial crisis of 2008 due to a perceived need to ask more questions and be more critical of the harmonious models presented in economic studies. The two representatives are last year bachelor students of public economics and confirm economic theory's objective approach with the affinity for mathematical models, referred to in the theory and methods chapters. They also state that during their bachelors there has been little emphasis on presenting alternative theories and little encouragement of reflection and discussion over the models they were taught. Both of the students appeared to have been frustrated at the lack of discussion concerning normative assumptions used in the

foundation of the models. They have been told that it gets better when reaching master-level, but many students leave at the end of the bachelor, if not before. Apparently the drop-out rate is high (RE representatives, intw: 06.06.2017). While discussing the book "The Econocracy" one of the RE representatives referred to the question

> "what happens when economic knowledge is reserved for those with a master degree in it, when at the same time economics have become so extremely important in the current political landscape? It is nearly only social economic arguments that have impact."

"The Econocracy" is a book written by three economics-student in the UK who experienced their educators not speaking of the financial crisis though it was happening during their studies (Chakrabortty, 2017). They started a movement questioning how economics is taught, and the RE takes inspiration from them. The Norwegian part of the RE network has stirred debate with Norwegian professors of economics[14] (Holden, 2017) and both nationally and globally they are opening up for a different approach to economics. Such an approach can contribute with valuable knowledge and views also into the SD concept.

5.3. An alternative circle-dimension figure

Although the initial impression is that the ecocentric focus defines the main problem of SD to be about the environmental challenges, resulting in the large green circle in figure nr 3, there is an alternative way of interpreting the three dimensions. The indicators representing terms related to the economic dimension are scarcely mentioned. Despite of this, the economic dimension is still very present. Technology as solution is one example, and the harmony perspective and actor-focus are two other. Overall, the economic dimension is perhaps a lot more present than the first impression reveals, though somewhat transparently.

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[14] See various articles on this webpage: https://rethinkingeconomicsnorge.com/i-media/
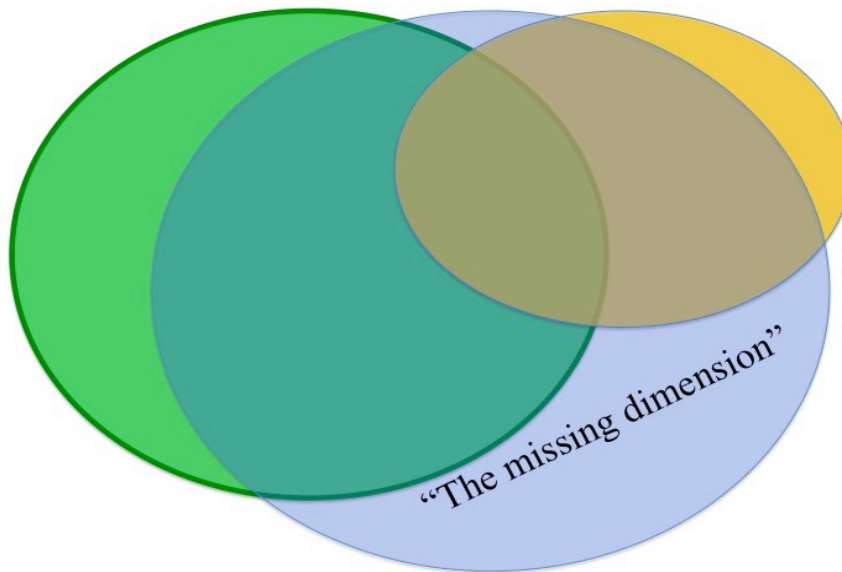
Figure 4: an alternative impression

In this figure the green and the yellow circle representing respectively the environmental dimension and the social dimensions have maintained the same size, whereas the economic circle has grown and become slightly more visible. Such a presentation depicts a perspective, or one way of seeing 'reality', as social constructionism would perceive it. What this presentation can contribute with is shifting the focus more towards what is there without being clearly demarcated, and towards what is being left out of the SD concept. The economic dimension is present through the technology indicator, and the analysis and the hearing inputs have provided confirmation of the presence of the harmony- and actor indicators. The two latter indicators are indicators that are not necessarily easy to discern, which is why the blue circle in the figure above still is quite transparent. The size is meant to reflect how the implications of the harmony-perspective and actor-focus can have great affect on how issues within the three dimensions are addressed. It is difficult to see how students are to be able to develop knowledge and skills for a sustainable future without the ability to analyse and understand conflicts of interests and the structures shaping our challenges.

To further exemplify the perspective of the economic circle as depicted, the following table presents the present views according to the indicator table.

Table 15: Indicator list with concluding comments

Discourse	"Ecocentric"	"Inequality"	"Economy"	Renewal documents
Dimension	Environmental	Societal	Economic	All are present
Harmony vs conflict	Conflict	Conflict	Harmony	Harmony
Actor/ Structure	Actor	Structure	Actor perspective to solve issues of climate change, and structure perspective to solve the issue of poverty	Actor
View of democracy	Do not consider it	Considered the most important aim	Important, but after economic growth	Not in relation to SD, but as one of the three interdisciplinary topics
View of nature/ environment	The most important factor in this. Both as resource and as inherently valuable. Systems	Culturally dependent, but influenced by the hegemony of economic discourse where it is considered as a resource	Nature as goods/resources	Focus on nature, environment and climate change as primary challenge is present
View of technology	Can solve some problems, but is also part of the problem due to its connection to economic growth	Not of primary concern. Over emphasis on technology moves focus away from the real problem	Will solve the environmental challenges	Presented to be both a solution to- and a cause of, challenges. In the final document technology is given a lot of space as integral to the concept of SD.
View of economic growth	Problem	Important, but currently unfair due to unfair distribution	Solution	Not spoken of
View of poverty	Less important than saving the environment	Poverty alleviation as top priority and is to happen through encouragement of democracy	Its alleviation is important and is to happen through economic growth	Mentioned briefly

View of inequality	Less important than saving the environment	Important	Becoming important	Mentioned briefly
View of international agreements	Important, but action is still focused on the individual	The UN and its agreements are important	Important tool	Not mentioned in the renewal documents (though in the hearing inputs)
Global focus	Both local and global	Important	Global focus through international agreements	Briefly mentioned
Main solution	Recycling and reuse, and generally use less. Respect nature.	First democracy and then economic growth	Economic growth and technology	Technology as few other solutions are talked of.

Although the indicator terms of "Economic growth" and "Consumption" are absent in the context of SD, the economic dimension is present through the harmonious- and actor-focused indicators. These indicators both have significant impact on the other indicators because they are part of how the views of 'democracy', 'nature and environment', 'poverty', 'global focus' and especially 'technology' are shaped. Without the critical perspective on contradictions, competing interests and structures causing poverty, inequality and environmental degradation it will, simply put; be difficult to know what to do about these challenges. Combined with the lack of focus on economic concepts, it will also be difficult to see and understand the influence of the economic system.

5.3.1. Implications of the views for an Education for Sustainable Development

To achieve an education for sustainable development is not stated to be an aim of the renewal process. Strategies exist, they are, however, not mentioned in relevant documents. Even though ESD is not a stated aim of the renewal process, it is still strange to present SD as one of the three interdisciplinary topics, and then not refer to the work that has already been done to promote the concept.

As the analysis have revealed it appears as though the development perspective, which were emphasised in the second strategy, is somewhat neglected in the renewal documents. The concept of SD is presented as one of three interdisciplinary topics. This provides the concept

with a more deliberate focus than it does in current education plans. The two strategies, especially the latter, to a larger extent exhibit a conflict-perspective. The structural perspective is not as visible. Neither of the strategies address economic growth, though consumption is included in topics presented as central to SD. The ESD strategies go further in describing a holistic approach to SD than the renewal documents. They do, however, also lack a more specific focus on the economic dimension. Compared to both the ESD strategies and a perspective of ESD that includes more focus on the economic dimension, the renewal documents fall short of both.

6. Discussion and conclusion

6.1. The coffee example

When buying coffee in Norway you have a fairly wide variety of coffees to choose from. There are various options with different brands, beans and treatment of beans, and you might also find an organic option or a Fairtrade option. The existence of an organic option reveals that the options that are not organic, do not ensure a focus on environmentally friendly production. The existence of a Fairtrade option reveals that those options that are not Fairtrade do not guarantee a minimum wage to their farmers. Coffee is an interesting example because it is a commodity everyone has some kind of relation to. Many developing countries now export coffee beans, which then usually are refined in developed countries, where they are sold at a higher price than the cost of the raw materials or its refinement. Coffee is one of the first products Max Havelaar, the predecessor of Fairtrade, wanted to certify due to volatile prices that left farmers with very unpredictable incomes (Fairtrade International, 2017). Fairtrade ensures farmers a minimum wage regardless of price of the raw material at the world market, but the farmers also have to pay to become Fairtrade-certified. Coffee is an example of the advantage rich countries have by having the resources, technology and power that currently leaves them with the largest piece of the pie.

Returning to the selection of coffee in Norway, it is also an example of how environmentally and socially responsible options, is a choice left to the consumer. The example illustrates how environmentally friendly, and socially responsible, production is at the mercy of supply and demand. The coffee example illustrates what happens when the primary focus is on actor levels rather than the structures. The organic and Fairtrade certification becomes an example of what happens when we do not have the mechanisms to change the structures that uphold

the very different vantage points developed and developing countries have. It also illustrates that technological advancement can contribute to the increase of inequality by giving developed countries an advantage in production of goods. The example therefore also illustrates the importance of addressing the conflicts of interests. Of addressing issues such as inequality, poverty and the structures upholding them, and of addressing interests and values supporting or challenging the structures that makes environmentally friendly and socially responsible option a choice for the individual.

The coffee example illustrates the three dimensions and some of the many views and interests represented in the sustainable development concept. The aim of this thesis has been to analyse what views of SD are present in the ESD strategies, the current natural- and science subject syllabuses and in the renewal documents, in order to reflect on the potential implications with regards to what knowledge and skills are encouraged to teach students.

Research question 1 addressed the content of the ESD strategies. The strategies present what ESD can be in a Norwegian context by building on the terminology of the UN. Both of the strategies include a focus on local and global contexts, on the environmental, social and economic dimension, the latter somewhat superficially. They also focus on relating SD to democracy. These strategies, especially the latter from 2012, represent a view of SD and ESD that to a greater extent incorporate the social dimension and the development discourse than the White Paper and the two drafts of the new "over-arching" part do. The latter strategy specifies that there is need for a greater focus on inequality, poverty and conflicts of interests and different political answers to them. It also connects this to democratic participation. It has not been stated that the renewal process is about creating an education for sustainable development, yet one can wonder; why have not any of the renewal documents referred to the strategies when SD is to be a key topic? Although the strategies treats the economic dimension superficially, they reveal knowledge and reflections that could be useful in such a process. Even though the strategies have not been referred to so far, they can still be used in the continued renewal process.

The second research question about what views of Sustainable Development can be uncovered in documents of the renewal process, and how they compare to the content of the strategies revealed that the environmental view appeared dominant in terms of defining the problem, and the economic view appeared dominant in defining the solution. The

environmental view of the problem is somewhat downplayed in the final version of the "over-arching part", which is replacing the general core curriculum. In this document the two first paragraphs contain elements of all three dimensions. The last paragraph does however confirm a transition in the view of technology. Technology was only briefly mentioned in the two ESD strategies. Technology is not mentioned in connection to SD in the Ludvigsen-report, but in the White Paper nr. 28 it is presented as "central" to the SD topic. This view is continued in the draft of the new "over-arching part", which is to replace the general core curriculum. Finally it is strengthened in the final version and has moved from initially reflecting both the ecocentric and the economic discourses, to primarily represent the economic discourse. Compared to the latter ESD strategy the new "over-arching part" of the curriculum has less of the conflict- and structure perspective, and significantly more focus on technology. This primarily reflects less presence of the social dimension compared to the strategies.

Research question 3 presented reflections from the interviews used to explain why the social dimension is less present, why the economic dimension concepts are not spoken of, and what the potential consequences are of a less present development discourse and a lack of economic understanding.

Structural differences in academia partially explain the lacking social dimension. The predecessor of ESD; Environmental Education, was an educational programme belonging to the natural sciences and the existing natural science institutions that worked with EE were given mandate to continue with ESD. ESD is presented as an extension of the EE by including the development perspective. This perspective is present in the strategies, especially the latter, and is also present in the current syllabuses and in the general core curriculum. The development perspective does however become less visible throughout the renewal documents. This is exemplified in the view of conflicts of interests, an indicator that is specifically mentioned in the 2012 strategy, in the social science subject syllabus, and in the general core curriculum. This indicator is more or less absent in the White Paper and in the draft and final version of the new "over-arching part" replacing the general core curriculum. The other example is that of individual responsibility. A focus on individual responsibility is important. It does however appear to overshadow a focus on the structures that are also part of shaping the available options that individuals have.

The lack of economic understanding does not appear to have a good explanation. There is, however, movement in terms of changing and expanding on the content of economic theory, and to make economics in general more accessible as it becomes increasingly important in political debate and democratic participation. The consequences of a combined lack of focus on structures, conflicts of interests and economic understanding are discussed by going back to the theoretical framework of post-politics.

6.2. Post-politics and the de-politicisation of SD

Within the renewal documents it is possible to argue that SD as a topic is presented in such a way that it reflects elements of a de-politicisation process. Views on environmental degradation, consumption, poverty, economic growth, inequality, technology and a global focus are all present in the analysed documents, some more than others. The structure and conflict indicators exemplify the ability to see the other indicators in connection, and a focus on that ability appears to be limited. A lack of focus on conflicts is also related to the understanding of the structures that are part of causing poverty and inequality. With the limited presence of economic terminology, i.e. terms such as consumption and economic growth, the concept of SD becomes void of content that could point to structures causing unsustainable development. Teaching about SD as a topic without addressing conflicts of interests and structures can lead the students to be unable to understand and analyse what causes unsustainable development. By not connecting SD to democracy and values the concept loses its ability to encourage the students to become actors of change. This can explain the lacking encouragement of discussions and debates concerning the contradictions of the presented views. Such discussions and debates would be essential both in the renewal process and when teaching the concept itself. Using the theoretical framework of post-politics has ensured a focus on actor vs. structures, on harmony vs. conflicts, and on the economic dimension, when analysing the renewal documents.

6.3. An interdisciplinary approach

Critical Theory and critical realism encourage an interdisciplinary approach. It has been an aim of this thesis to look for specific indicators, but also to see the three dimensions, its discourses and related scientific disciplines in relation to each other. Ontological and epistemological differences complicate the approach to SD due to how the different scientific disciplines, and consequently; different subjects promote different views of what the challenges are, and how to solve them. Simplified; the natural sciences' primary concern is

over-exploitation of a warming planet, the economic sciences' concern is towards how the economic system and continued growth should be maintained, and the social sciences' primary concern is a development that alleviates poverty and combats inequality. This is a simplification, yet this presentation illustrates the different interests and focus. The different focus of the three dimensions shape different 'realities' demanding different kinds of knowledge. The three dimensions are all central and an approach to SD that incorporates these three dimensions is repeatedly emphasised, though it appears as though the economic dimension' concerns is often excluded in this particular context. It has been my intention that this thesis should shed light on how the three dimensions are represented in the renewal documents and consequently where focus need to be directed. There need to be more attention toward how the economic dimension, and toward how the discourse is part of shaping views of SD. As Econa stated in their input:

> "Society is constantly requiring higher demands of economic understanding. At the same time the presence of personal and central economic dynamics in society is almost absent in Norwegian education." (2017).

In a school context more focus and knowledge need to be directed toward economics in order to understand how economic theory affects politics and societal development. In such an approach it is essential to incorporate the approach of the social scientific discipline in order to critically address the theoretical foundations of economic theory and its underlying values. And the needs of the economic and social dimension need to be understood within the knowledge of the boundaries that the natural sciences of the environmental dimension provide. This exemplifies both the curse and the blessing of the interdisciplinary approach. One the one side it is challenging to take competing interests and views into consideration and find a "common ground". On the other hand an interdisciplinary approach can contribute with a triangulation of methods providing different kinds of knowledge of a complex situation. Such an approach could help seeing the different dimensions in connection and perhaps improve on the knowledge foundation we base future action on.

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8. Appendices

8.1. Appendix 1:

Issue	Indicators*	Nor	Swe	Den	Fin	Ice	Ire
1. Ensure that policy, regulatory and operational frameworks support the promotion of ESD	1.1: Prerequisite measures are taken to support the promotion of ESD	4/5	2/5	5/5	4/5	2/5	5/5
	1.2: Policy, regulatory and operational frameworks support the promotion of ESD	8/8	7/8	4/8 1NA	8/8	8/8	7/8
	1.3: National policies support synergies between processes related to SD and ESD	0/1 NA**	1/1	0/1	1/1	1/1	1/1
2. Promote SD through formal, non-formal and informal learning	2.1: SD key themes are addressed in formal education	1/3 2 NA	2/3	2/3	3/3	3/3	3/3
	2.2: Strategies to implement ESD are clearly identified	3/5 1 NA	2/5	4/5	5/5	3/5	4/5
	2.3: A whole-institution approach** to SD/ESD is promoted	0/3 3 NA	2/3	1/3	3/3	2/3	3/3
	2.4: ESD is addressed by quality assessment/enhancement systems	1/3 1 NA	2/3	1/3	2/3	2/3	2/3
	2.5: ESD methods and instruments for non-formal and informal learning are in place to assess changes in knowledge, attitude and practice	2/3	2/3	0/3	3/3	3/3	0/3 1NA
	2.6: ESD implementation is a multi-stakeholder process	1/1	1/1	0/1	1/1	1/1	1/1
3. Equip educators with the competence to include SD in their teaching	3.1: ESD is included in the training of educators	1/3	3/3	1/3	3/3	3/3	2/3
	3.2: Opportunities exist for educators to cooperate on ESD	1/2	1/2	2/2	2/2	2/2	2/2
4. Ensure that adequate tools and materials for ESD are accessible	4.1: Teaching tools and materials for ESD are produced	2/2	1/2	2/2	2/2	2/2	2/2
	4.2: Quality control mechanisms for teaching tools and materials for ESD exist	2/5	2/5	0/5	2/5	2/5	5/5
	4.3: Teaching tools and materials for ESD are accessible	4/5	3/5	1/5	2/5	4/5	5/5
5. Promote research on and development of ESD	5.1: Research on ESD is promoted	5/8	5/8	5/8	7/8	5/8	3/8 5NA
	5.2: Development of ESD is promoted	1/1	1/1	0/1	1/1	0/1	1/1
	5.3: Dissemination of research results on ESD is promoted	2/3	2/3	0/3	3/3	0/3	1/3 2NA
6. Strengthen cooperation on ESD at all levels within the ECE region	6.1 International cooperation on ESD is strengthened within the ECE region and beyond	4/4	4/4	1/4	4/4	3/4	2/4 1NA
Total sum:		42/65	43/65	29/65	55/65	46/65	49/65

*Under each indicator there are sub-indicators.
** "A "whole-institution approach" means that all aspects of an institution's internal operations and external relationships are reviewed and revised in the light of SD/ESD principles." (Source: NIR report)

Appendix 2: The following table present the inputs that address the Sustainable Development concept according to certain content.

Nr	Input provider:	Main argument	Democracy	System critique And/or conflict And or values	Narrow view	Also about humans and society/ about the social and economic dimension	Level (nivå) of concept	Base concept on UN Def.	Miss global focus	Opinion about the focus on the individual	Too big focus on technology
1	Aust Agder fylkeskommune	County councellor (Fylkesrådmannen) considers the concept "sustainability" is used too narrowly. SD is not just about the physical environment, though this is naturally central. It is also about humans and society, and this should be more visible/apparent. https://www.regjeringen.no/contentassets/ef613b8281384bdc8767d2ca4c79ddc8/aust_agder_fylkeskommune.pdf			Yes	Yes					
2	Bergen municipality	Positive to SD to be promoted and given more attention https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=458416cd-9b67-4c7d-ad80-3e1835595ef2		Values	(Indirectly ?)	Yes		Yes		Is positive to the focus on the individual's responsibility	
3	Børsa skole	"Climate, environment and technology are prioritised in the draft. That is well, but it becomes too narrow. A world citizen needs to also learn about the interaction between social, economics and environmental conditions." Ref UN https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=d687823d-7c7f-45c2-9b1a-311bb37b3a8f			Yes	Yes		Yes			
4	DNS	"It is particularly unfortunate for an overarching work with environment and sustainable development that the purpose law is divided so that one is left with environmental consciousness." Wants to change the title of 1.5 from "Respect for nature and environmental consciousness" to "Sustainable development" and that the phrasing is closer connected to purpose law paragraph 6: "The school shall contribute to the students acting as value oriented, responsible, creative and critically thinking citizens within the topic of sustainable development" Emphasise using the word "holistic" and holistic understanding https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=afcb861f-55f1-4aaa-a608-12f0709bcc8b	Mentions democratic processes: "Work with democratic processes, values and attitudes shall enable student to act and interact consciously, ethically and responsibly for a sustainable development."	Values (Thinking critically and reflect on what is needed for SD locally, nationally and globally)	Yes	Yes		Yes			

5	Den norske UNESCO kommisjonen	Responsible production and consumption not adequately reflected/present in the document. In the same way it is necessary with a conscious attitude towards climate- and environmental questions, it must be developed a conscious attitude towards consumption among children and young. Include culture in 1.5 as culture is the entirety of a societies characteristics https://www.regjeringen.no/contentassets/ef613b8281384bdc8767d2ca4c79ddc8/den_norske_unesco_kommisjonen.pdf			(indirectly)	Yes, cultural dimension		Mentions SDGs			
6	Faculty of Educational Science, UiO	"The text emphasises a consensus-perspective (harmony?) and to a great extent disregard value- and interest-conflicts where the positions in the principle are not compatible/coherent." https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=23bfb426-99c3-4e1f-8307-3a3fb945538b	Mentions developments that can challenge a democratic form of rule. "The concept of sustainable development is emptied of much of its meaning if one disregard democracy, citizenship and health and life mastery."	Conflicts	Yes	Yes	Yes	Yes			
7	Drama- og teaterpedagogene	Suggests a new paragraph about sustainable education, with emphasis on taking the whole human being in use, according to UNESCO ESD. https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=34bc6d0d-ef84-493e-ad74-36f4a2202474			(Indirectly)						
8	Dyrevernung	Concerned with including the word "animal" Speaks of the signals an individual can send to others, that creates attitudes and affect the culture of consumption and lifestyles https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=2f088de8-3b9c-436e-80bb-8bc25ce02078			Yes						
9	ECONA	Need more focus on personal and social economics. Emphasises the connections between the three dimensions, which in turn are connected to technology development. Importance of understanding central economic connectiongs. Adds "efficient" to the sentence about equitable sharing https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=3dd3f0d1-fd2e-42ca-bac5-bbda9e36e490			(Indirectly)	Economic dimension					

#	Organisation	Comment										
10	Eide skole og Kastellet kultursenter	Sustainable Education… "Sustainable actions and choices" as basic skill Combine the Cultural Backpack with the Natural Backpack https://www.regjeringen.no/contentassets/ef613b8281384bdc8767 d2ca4c79ddc8/eide_skole_og_kastellet_kultursenter.pdf			Yes							
11	Faglig råd for naturbruk	Wants to change the second sentence to: *En bærekraftig utvikling innebærer å forvalte miljøet og ressursene på jorda slik at både dagens mennesker og fremtidige generasjoner kan få dekket behovene sine.* https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=a9e0b3be-bf45-412b-8661-2cfb195ee744										
12	FN-Sambandet	UN, less technology focus https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=76009293-8614-4981-9681-c96226f8a485	Constructive and critical debate, and action competency. "If the students are to aquire a faith in a sustainable future where they can themselves contribute, the school must provide room to explore inter-connections, challenges attitudes and create debate."	Til en viss grad	Yes	Yes	(Yes)	Yes				Yes! "One-sided"
13	Rafto	Make teaching about current challenges (climate, etc) closer. Pedagogical focus https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=9c253494-9147-458d-8231-b33028a35b26										
14	Fylkesmannen I Aust og Vest-Agder	First support the view that the text is too focused on the environmental dimension. Then sceptical to the analysis in the first part of the last paragraph…? A sustainable development CAN… not will https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=f5d071bc-c7dd-4627-8212-81579e4e542b			Yes							

15	Fylkesma nnen I Vestfold	Focus primarily on environmental dimension https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=d3799ae5-bf3f-4697-a0fb-4e98d52b5aed			Yes	Yes		yes			
16	Helsedire ktoratet	**Forslag**: Foreslår at følgende setning bygges ut med ett ord og et eksempel, her understreket: «*Sammenhengene mellom teknologiutvikling, miljøutfordringer, etisk bevissthet og miljøvennlig praksis står sentralt i dette temaet. Målet er å gjøre elevene i stand til å drøfte og ta reflekterte valg om hva som er nødvendig for en bærekraftig utvikling for alle, blant annet når det gjelder forbruk og matsvinn.*» https://www.regjeringen.no/contentassets/ef613b8281384bdc8767d2ca4c79ddc8/helsedirektoratet.pdf									
17	Hordalan d fylkesko mmune	A central perspective is then the connections between how local and global conditions/relations affect each other. Promotes local initiatives and solutions, entrepreneurship and innovation https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=36cca25d-278b-4e13-ade2-3466632fbae9	Does not specifically connect SD to democracy, but speaks of the importance of understanding global development and tendencies for active democratic participation.		Yes	Yes					
18	Horten municipal ity	Considers several of the sentences in the last paragraph of 2.6.3. to be too assertive. Should be moderated to include: "could lead to", "can entail"… https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=e1255dae-b3e5-436a-a200-9185b7d8ae2a									
19	HiOA	1.5: Promote outdoor activities and experiences in nature, cause without it students will not develop good understanding of environmental work 2.6.3: wants to change the last paragraph to include: "Knowledge about the topic entails both an understanding of the laws of nature and connections and understanding of basic dilemmas…" https://www.regjeringen.no/contentassets/ef613b8281384bdc8767d2ca4c79ddc8/hioa.pdf			Yes	Yes					No, is positive to its presence
20	HVL Dramases jonen	I likhet med teaterpedagogene									
21	Kautokei ne ungdoms	Få sameness mate å ivareta nature på og utøvelse av tradisjonell naturbruk gir en bærekraftig utvikling som betyr at mennesket kan høste av naturen, men samtidig ivareta kontinuitet i mangfold									

#	Organization	Comment									
	skole	og vekst.									
22	Kirkeråde t	Wants values to be included https://www.regjeringen.no/contentassets/ef613b8281384bdc8767 d2ca4c79ddc8/kirkeraadet.pdf		Values							
23	Kristians and commune	Interdisciplinary topics requires more cooperation and new working methods. https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=3aa60925-b9ea-4dac-8aa4-0f4410c80650	Wants the interdisciplinary topics to be seen in connection. Students as world citizens.		Yes		Yes	Yes			
24	KS	https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=c6966ee1-879f-4d2a-be76-8da9957761ea	Same as above.		Yes		Yes	Yes			
25	NDLA	Make SD more present in the whole document. Technocratic understanding The focus on technology can cloud the environmental challenges → requires greater focus on individual responsibility and participation Requests greater global focus https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=94d62de7-7eae-43d7-b371-221d8e6ae6a1	Focus on global cooperation	"SD is not an individual problem, it must be solved globally. Therefore a system critical dimension needs to be incorporated, with emphasis on the responsibility of the system."	Yes	yes	yes	yes	Yes	The opposite, wants more focus on individual responsibility	Yes. The focus on technology is exaggerated. "The one-sided focus on technology simplifies complex problems, and downplay the understanding of responsibility. We cannot understand and solve problems related to migrations, climate, hunger and inequality I living standard and conflict through technology alone."
26	NMBU	Connect 2.6.3 to 1.5 https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-									

No	Organization	Comment									
		opplaringen/id2542076/?uid=065594c4-5596-4785-b63d-5af9ade180c3									
26	Norges Husflidlag	Vil at praktiske ferdigheter skal inkluderes I de tverrfaglige temaene.									
27	Norsk friluftsliv	Introduce a future perspective:									
28	Oppland fylkeskommune	Emphasise the importance of including the connection between the social, economical and climate and environment for a holistic understanding for what SD entails and the county commission presupposes that all the three dimensions are included in the foundation of the coming work of the syllabuses https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=129ecaaa-7dd3-4f21-ba44-3d450f9de229			Yes						
29	Oslo municipality	The school as a contributor to societal development, still: "the discussions regarding the follow up of the Ludvigsen-commission has to a large extent been dominated by how the school should adapt to a future societal- and worklife, not what society the school should contribute to create." https://www.regjeringen.no/contentassets/ef613b8281384bdc8767d2ca4c79ddc8/oslo_kommune.pdf			Yes	Yes			Yes		
30	Redd Barna	https://www.regjeringen.no/contentassets/ef613b8281384bdc8767d2ca4c79ddc8/redd_barna.pdf		Values	Yes	Yes		Yes	Yes		
31	RORG	Complex questions and dilemmas are left out, harmony model, de-politicize. Requests power analysis, conflicts, cross-connections and clarification of tensions Wants structural challenges and concept of scale should be included. Systems critical dimension, the responsibility of the systems. The relation between individual and structure should be included. "Inter-connections must be made more visible." https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=146699ee-173a-4d60-a34a-348e58438573		System understanding. Harmony-model. "It is unclear, does not take stands, de-politicise, avoid controversial questions and simplify."	Yes	Yes	Yes	Yes	Yes	Focus on both individual and structure	YEs
31	Røde Kors	"A definition of SD which reflects the SD goal maintains to a greater extent international conditions, international humanitarian law and humans rights." https://www.regjeringen.no/contentassets/ef613b8281384bdc8767d2ca4c79ddc8/roede_kors.pdf			Yes	Yes		Yes	Yes		
32	Samarbeidsforum for	"Skolen skal bidra til at elevene utvikler en forståelse av hva det innebærer å vise respekt for naturen, og bygge motivasjon for og vilje til å ta vare på miljøet." De praktisk-estetiske fagene gir gjennom utforsking og forming av bærekraftig materialbruk en									

No	Organization	Comment									
	estetiske fag	spesiell mulighet for å utvikle elevenes kunnskap, bevissthet og motivasjon for å ta vare på miljøet. Dette vil få økt aktualitet og betydning i årene som kommer.									
33	Senter for samisk I opplæring gen	Vi lurer på hva menes med naturmiljøet? Vi lurer også på hvorfor vektlegges det ikke dette: Når er vi mennesker fornøyd med ressursbruken? Hvordan gjenbruke ressurser? Urfolksnaturbruk og religion begynner å bli viktigere og viktigere i dagens levesett og ressursbruk, og derfor synes vi at dette skal tas med i overordnet del. Overordnet del må ta inn Hvordan urfolks tradisjonsøkologiskkunnskap (TEC) bidratt til bærekraftig utvikling gjennom tidene. Urfolkskunnskap vil gi en dimensjon i diskusjon om bærekraftig utviklingen. Hvordan forvalte det vi har på en god måte?									
35	Sørburøy	Logical error… reveals a view of SD that does not consider humans needs, but purely a "sustainable" in terms of environment view. https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=ec0edd81-c566-4417-8e59-4f817935d719									
36	Tromstun skole og Tromsø kommune	Vi er også svært tilfredse med at bærekraftig utvikling er et viktig begrep som løftes fram, men vi savner eksempler på bredden i begrepet, hvordan både menneskelig, naturvitenskapelig, ideologisk og teknologisk ressursforvaltning påvirker hverdagen for oss alle. Vi antar at fagplanen vil beskrive på hvilke trinn de tre tverrfaglige temaene skal ligge og hvor stor plass de skal få i fagene.									
37	UNICEF Norge	Points to how the current plan better covers the need for holistic knowledge, ethics, connections, solidarity.. https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=f62249bf-13e0-4b4e-a34c-4f79b858265a		Yes	Yes		Yes	Yes	Focus on individual action is not enough		
38	Unio	Thinks that it must be made more clear that education about SD shall be central in school and that the teaching shall be founded in the same holistic understanding of SD which is the foundation of the SDGs and which is described in White Paper 28. Emphasise how the "students must be provided with knowledge about connections both in and between subjects, between individuals and society, and between the local, national and global. This is central to ensure that the students are able to see themselves as a global		Yes	Yes		Yes	Yes	Focus on connection between individual and structure		

		citizen and have the opportunity to contribute to good sustainable solutions." https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=80651ee0-bb27-4579-a02d-84cdaceed657										
39	Utdannin gsforbun det	Pdf Tredje avsnitt: *En bærekraftig utvikling **vil innebære at livsvilkår og sosiale forhold blir bedre for alle mennesker gir samfunnet mulighet til å bedre livsvilkår og sosiale forhold for alle mennesker**. Det fører til mindre fattigdom og færre konflikter, bedre helse, likestilling og utdanning. Teknologiutvikling kan bidra til å løse slike problemer, men kan også skape nye. **Kunnskap om temaet innebærer en forståelse av grunnleggende dilemmaer i samfunnsutviklingen og hvordan disse kan håndteres**. Det gir grunnlag for å handle aktivt og bevisst for å bidra til en bedre verden. Temaet Elevene skal gjøres kjent med ulike grunnleggende dilemmaer i samfunnsutviklingen og konflikter mellom ulike hensyn – som konflikten mellom vekst og vern. Samtidig skal elevene få et grunnlag for å forstå at det finnes mange muligheter til å være en aktiv borger og bidra til en bedre verden. Elevene skal ikke bare lære om bærekraftig utvikling. De skal også settes i stand til selv å bidra til en bærekraftig utvikling, og skolen skal være en arena som gir dem erfaringer med bærekraft i praksis. Det tverrfaglige temaet bærekraftig utvikling* skal bygge håp for fremtiden og vise at innsatsen til hver enkelt har betydning. https://www.regjeringen.no/contentassets/ef613b8281384bdc8767d2ca4c79ddc8/uf.pdf	Maintains the view that SD leads to improved living conditions. Focus on active and conscious participation "to contribute to a better world". Adds conflicts between considerations – "such as the conflict between growth and protection. At the same time the students shall receive a foundation to understand that there are many opportunities of being an active citizen …. (se over).										
40	Utforbun d klubb	<mark>· Bærekraftig utvikling</mark> <mark>Det er vanskelig å få øye på det globale perspektivet og en bred forståelse av bærekraftig utvikling</mark>. Fremtidens skole må speile den verden vi er en del av og gi elevene kunnskap om sammenhengene mellom det lokale, nasjonale og globale. Høringsuktastet sier lite om de sosiale og økonomiske perspektivene for en bærekraftig utvikling. Intensjonen om dybdelæring og tverrfaglighet må komme tydeligere frem.										
41	Vest-Agder Fylkesko mmune	SD is too narrow https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=d68354e8-a7ea-46b6-a8d4-			Yes	Yes						

| 42 | Vestfold fylkeskommune | "The topic SD is naturally connected to the natural sciences by focusing on resource use and nature/environment challenges. The global perspective on equitable/fair sharing, and the common responsibility we all have as world citizens is not very visible." https://www.regjeringen.no/no/dokumenter/horing-om-forslag-til-ny-generell-del-av-lareplanverket-for-grunnopplaringen-som-skal-erstatte-gjeldende-generell-del-og-prinsipper-for-opplaringen/id2542076/?uid=f488b3e6-6274-4e07-b738-61b08ec5ef58 | | | Yes | | | | Yes | | |
| 43 | Østre Toten | Vi mener at det er positivt og dagsaktuelt at det er et tydelig fokus på bærekraftig utvikling, respekt for naturen og miljøbevissthet. Selv om dette er dagsaktuelt er det grunner til å tro at dette vil være dagsaktuelt langt frem i tid, og vil slikt sett ikke bryte med dokumentets ønske om å holde seg over tid. En mindre strukturmessig utfordring vi ønsker å peke på er at 1.5 og 2.6.3 har delvis overlappende områder. | | | | | | | | | |

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