Article

Identifying the 'Different we's' in Primary Teachers' Education for Sustainable Development Discourse—A Positioning Theory Perspective

Sonia Martins Felix *[ID], Annette Lykknes [ID] and Ragnhild Lyngved Staberg [ID]

Department of Education, Norwegian University of Science and Technology, 7491 Trondheim, Norway
* Correspondence: sonia.f.martins@ntnu.no

Abstract: Education can serve the purpose of trying to mitigate catastrophes. In a school context, teachers can have a role in enacting an interconnection between critical thinking (CT) as a potentially useful tool and education for sustainable development (ESD), in terms of educating and communicating the importance of sustainability to future generations. This paper uses discourse analysis, drawing on post-structuralism, to explore how Norwegian primary school teachers consider CT (skills, dispositions, and civic participation) in relation to ESD. The study draws on social constructivism and positioning theory (PT) in particular to find patterns in teachers' own shifting standpoints through individual and collective assertations around ESD. Specifically, in this paper we make efforts to implement the PT to study (i) teachers' own positioning about sustainability through their communication acts within primary-school contexts, and (ii) the functions of education in relation to ESD in this context. We explored the discussion between three teachers from the same school team during one focus group interview, by tracing the teachers' uses of *I* and *we* (as markers) in relation to Biesta's three functions of education in the discourse. Our discourse analysis has an exploratory character and is carried out on a limited dataset. PT was used as a framework to categorize the teachers' statements; treated as content of discourse. The pronoun *we* is identified in the discourse analysis in three different ways: with the underlying meaning of a humanitarian we, an institutional we, and a classroom we. In the one focus group interview, we also identified teachers' sense of belonging with the environment and nature, generally regarded to be prevalent in Norwegian society.

Keywords: critical thinking; education for sustainable development; discourse analysis; positioning theory; primary school teachers

1. Introduction

Global climate change is being recognized as a serious threat and is, therefore, causing an insecure period for humanity (Maslin, 2014 [1]). The threat to climate has created the need for common actions toward tackling climate change both at local and global levels (United Nations, 2015 [2]). In addition, communication about climate changes and the mitigation of the negative effects of these changes have attracted increased attention, and a deliberate human response is required to address these challenges (CRED, 2009 [3]). Understanding how climate change issues are communicated in public is, therefore, important, as the communication patterns influence how further actions addressing the challenges of climate change should be taken (Clayton et al., 2016 [4]).

Discourses around climate change can reveal ways in which sustainability issues are being framed within broader social, political, economic, and daily-life contexts. Public awareness of climate change has also led to an increased focus on education for sustainable development (ESD). Since education is expected to provide the competences required to deal with sustainability issues, teachers' communication about sustainability within schools, as part of the educational enterprise, plays a significant role, as emphasized in UNESCO's report (2018) [5].

We believe that ESD assumes a critical role in terms of creating communication actions that generate possibilities for teachers and students to engage with environmental discourses (Harré et al., 1999 [6]). One of the key aspects of teachers' communication in such discourses is how they decide and take actions. Critical thinking (CT) has recently been considered a useful tool for decision-making in sustainability contexts (Hasslöf and Malmberg, 2015 [7]) and can (in an educational context) be conceptualized as a combination of skills and dispositions (Ennis, 2015 [8]; Lai, 2011 [9]; Lai et al., 2017 [10]). A broader understanding of CT includes: (i) purposeful judgement, considering skills and dispositions; and (ii) civic participation and social justice, contemplating independent opinion and critical action (Jiménez-Aleixandre and Puig, 2022 [11]).

CT discourses, as well as sustainability in education, can start from early childhood (Davis and Elliott, 2014 [12]). Yet, CT in relation to ESD has only been explored at higher-education levels, but not at lower-school levels (Choy and Cheah, 2009 [13]; Santos, 2017 [14]). Therefore, there is a need to explore teachers' engagement with CT and ESD at primary-school level. Teachers' engagement with CT can be understood as an analytical tool used to capture sustainability issues. Sustainability issues create potential discourses in which teachers engage with communicating practices and actions around climate change in the school context.

Studies of sustainability discourses demand a theoretical lens that can capture the complex interplay of teachers. To this end, this paper aims to use positioning theory (PT) to explore the possibility of apprehending discursive patterns that indicate how different "functions of education" (Biesta, 2014 [15]) are being communicated within sustainability issues and CT. PT is a social theorization that tries to capture dynamic analysis of conversations and discourses (Harré and Van Langenhove, 1999 [16]). Furthermore, it allows us to see how teachers position themselves in their "speech act" as performances when they interact (Harré and Van Langenhove, 1999 [16]). Harré (2012) [17] defined an act as the social meanings of an action, and speech as a meaningful, intended performance. PT is well-suited for our discourse analysis since it brings attention to teachers' positions through the way they pursue their rights and duties. These rights and duties are shared assumptions about ESD, and CT can be revealed through teachers' communication acts.

Primary teachers' engagement in discourses regarding sustainability is further analyzed through Biesta's (2014) [15] functions of education; namely, qualification, socialization, and subjectification. *Qualification* can be characterized through skills, dispositions, and knowledge; *socialization* refers to political, social, and cultural orders; and *subjectification* refers to the subjective, as opposed to others' actions. The dynamics of conversations and discourses based on PT help us understand this action of "others". Here, we are particularly interested in the way teachers use the pronouns *I* and *we*. Hasslöf and Malmberg (2015) [7] found CT to be a nodal point in secondary school teachers' discourses on ESD in their analysis considering Biesta's functions of education.

In particular, this paper explores (a) teachers' positioning about sustainability through their communication acts within primary-school contexts and (b) the functions of education in relation to ESD. Through the exploration of the function of education, we also wish to identify teachers' sense of belonging in the environment and nature within Norwegian society, which is regarded as a context where a particular sense of belonging with nature is prevalent (Andersen et al., 2015 [18]). To this end, the discussion centers around how the functions of education resonate with (i) CT (skills, dispositions, and civic participation) and (ii) human connectedness with environmental issues (Foster, 2014 [19]) while addressing the social production of innocence (Norgaard, 2011 [20]). By so doing, using one teacher interview from a wider set of data, we attempt to explore how PT and functions of education can be used to unpack layers of collective intentionality (Tuomela, 2013 [21]) within sustainability discourses in Norwegian primary school contexts.

1.1. Climate Change and Communication

During the last 30 years, the importance of public awareness about climate change has been highlighted in public discourses (UNFCC, 1992 [22]). This communication has been instrumental in terms of public access to and participation in discussions around climate change.

As part of the United Nations' (UN's) 2030 Agenda for Sustainable Development, quality education (goal number 4) and climate action (goal number 13) highlight the role of teachers in developing students' awareness about climate change. This way, sustainability development goals (such as handling climate change) reinforce the role of teachers in implementing ESD within the school context (UNESCO, 2018 [5]). A report by the American Psychological Association Task Force on the Interface between Psychology and Global Climate Change (APA, 2009 [23]) indicates the close ties between human psychology and attitudes toward global climate change. Based on empirical analyses, psychology can make better sense of behaviors that drive climate change by building behavioral models. Therefore, teachers' discourses about ESD can be relevant to inform them about their own behaviors.

There is a global interest in climate change, and particularly through youth social movements (Han and Ahn, 2020 [24]). This interest has been reinforced by several governments that signed the Declaration on Children, Youth, and Climate Action on 9 December 2019, during COP25 in Madrid. The declaration acknowledged the critical roles of children and youth as agents of change and contained a commitment to acting on several youth-related climate goals (Thunberg, 2019 [25]). Therefore, social movements can be seen as a collective process where teachers and students together create a story about the future (Ojala, 2012 [26]).

In the Norwegian context, public self-image is considered to be strongly connected to environmental awareness (Norgaard, 2006 [27]). Religious beliefs can probably reinforce environmental awareness. The underlying concept is that respect through nature, sometimes even in a sacred way, helps to create a sense of belonging through the environment (Dietz et al., 1998 [28]). Additionally, in Scandinavia, and in Norway in particular, teachers' work on sustainability-related issues are often applied in outdoor education (Gabrielsen and Korsager, 2018 [29]; Sandell and Öhman, 2010 [30]; Aase, 2005 [31]), which might partly explain teachers' environmental awareness.

From the geo-political perspective, Norway is highly dependent on the oil and gas accounting (Abrahamsen, 2005 [32]) and has been saving its oil-boosted budget in a government petroleum fund. At the same time, energetic transition has been central all over Europe, since the European Commission has adopted a circular economy package that involves an increase of renewable shares in the energy mix, and incorporation of carbon capture and storage (Lausselet et al., 2017 [33]). In Norwegian society, the investment in "green" technologies is being pursued in multiple ways; for example, electric cars constituted 57.2% of car sales in 2021 (Norsk Elbilforening, 2022 [34]). For the last 100 years in Norway, energy consumption has mainly been supplied by hydroelectric power. In this way, Norway, despite of not being part of the European union, has been contributing to the European transition. Additionally, the current energetic crisis in Europe pushes societal and political awareness of how electricity is used in everyday life.

1.2. Teachers' Engagement with Sustainability

UNESCO (2018) [5] indicated the relevance of teachers' professional development for the teaching of ESD at the school level. Although such professional development is about helping teachers gain the skills and knowledge required to teach current environmental and societal issues, many such professional development programs only provide content or information about environmental issues without formulating relevant actions for the students to engage with the environment (Lee et al., 2015 [35]). Although the collectiveness is an important aspect of ESD, there is a danger of envisaging the core reasons. Young climate activists have been arguing the need for climate actions. This implies an ongoing

societal consumerism criticality, but this requires a continuous exploration of the public discourse (Blühdorn and Deflorian, 2021 [36]). To this end, education can serve the purpose of trying to mitigate catastrophes when anticipating and planning for them beforehand, particularly through the empowerment of collective action (Armstrong et al., 2018 [37]). Furthermore, reducing the psychological distance from which people experience the effects of climate change through education might increase their willingness to take action to counteract it (Drummond et al., 2018 [38]).

1.3. Functions of Education in the Context of ESD

As noted above, we use Biesta's (2014) [15] suggestion that education should be oriented toward three purposes: qualification, socialization, and subjectification. These purposes can lead to problematization of the functions of education around ESD. Hasslöf and Malmberg (2015) [7] explored these functions of education through teachers' engagement with ESD and CT at secondary and upper secondary schools in Sweden, where ESD is explicitly addressed in the curriculum. In Norway, as well as internationally, ESD has been recognized as a central goal of education (UD, 2017, 2019 [39,40]; UN, 2015 [2]; UNESCO, 2018 [5]) Originally conceived as an idea of progress that slowly developed as a concept that emerged in the context of a growing awareness of an imminent ecological crisis (Du Pisani, 2006) [41], ESD might be a captivating field to relate with functions of education. Hasslöf and Malmberg (2015) [7] considered CT as a nodal point at which CT is challenged by the scientific discourse through the lens of qualification; however, subjectification offers the possibility for students to develop their own thinking while challenging everyday norms.

Through discourse analysis with Norwegian primary school teachers, we consider teachers' perceptions of ESD and show some vivid examples of how they judge their own teaching (from their own critical stance) in light of the three functions of education. With the proposed framework of functions of education and PT, we aim to shed light on the extent to which CT can help identify the purpose of education in the ESD context, and how teachers are challenged by everyday norms through CT while invoking PT to trace teachers' use of pronouns.

1.3.1. Qualification: CT in Relation to ESD

In Biesta's conceptualization, qualification involves providing participants with the knowledge, skills, and dispositions that allow teachers and students to "do something" (e.g., knowing why climate change is an important topic to address, and how to address it). The description referring to skills and dispositions in the qualification context aligns well with similar descriptions of CT (Ennis, 2015 [8]). So far, many definitions of CT have been presented (Lai, 2011 [9]; Meneses, 2020 [42]), including reflective thinking (Dewey, 1916 [43]) and creative thinking (Facione, 2016 [44]). Most of these fall into one of the three scholarly traditions of philosophy, psychology, or education (Lai, 2011 [9]; Sternberg, 1986 [45]). Here, we draw on a revised definition that determines CT to be "reasonable reflective thinking focused on deciding what to believe or do" within the educational strand (Ennis, 2015 [8], p. 32).

Ennis is considered to be one of the founders of the field of inquiry into CT (Davies and Barnett, 2015 [46]). Over more than a decade, Ennis refined his definition of CT in such a way that it has evolved into 12 dispositions and 18 abilities (Ennis, 2015 [8]). These can be classified into six main categories: basic clarification, bases for a decision, inference, advanced clarification, suppositional thinking, and auxiliary abilities (Ennis, 2015 [8]). We investigate the extent to which the interviewed Norwegian primary school teachers consider CT (through skills, abilities, and dispositions; considered mixed in the six main categories) in ESD discourses. Because we rely on social constructivism (Bruner, 1987 [47]) we take the view that the cognitive dimension, such as experiential learning, is culturally shaped by the linguistic process. Therefore, PT in relation to CT within the ESD context can offer an interesting overview of the three functions of education (Biesta, 2014 [15]).

1.3.2. Socialization: Teachers' Engagement with ESD

Socialization, whether explicit or implicit, is concerned with integrating individuals into existing social, cultural, and political orders through the transmission of norms and values. According to Biesta (2014) [15], in general terms, socialization refers to the initiation of students or professional orders and cultures (i.e., integrating individuals into existing social, cultural, and political orders through the transmission of norms and values).

Civic participation and social justice, contemplating independent opinions and critical actions, have recently been incorporated into CT, extending Biesta's definition of socialization (Jiménez-Aleixandre and Puig, 2022 [11]). In the current study, we consider CT from the civic participation perspective in teachers' discourse analysis as part of socialization. In our view, the underlying socialization aligns with the idea that, through language, one accesses societal rules. Since the members of a certain society share similarities, according to Durkheim (1961) [48], the essential characteristics of the same ideal constitute the collective ideal. Therefore, socialization interconnected with PT can help to understand teachers' similarities when discussing CT in connection with ESD.

1.3.3. Subjectification: Through PT

How are the subjects of initiative and responsibility informed through an individual, rather than through objects of others' actions? This question from Biesta relates, in the current context, to understanding teachers' responsibilities, informed through the way they dynamically exercise their rights and duties through their self-positioning in ESD.

An understanding of how teachers position themselves in discourses around ESD can clarify their subjectification within ESD. However, when teachers position themselves (self-positioning), they are also influenced by others' actions, since oral conversations always imply some reciprocal positioning (Harré and Van Langenhove, 1999 [16]).

2. Methodology

Drawing on an exploratory, qualitative research approach (Quivy and Campenhoudt, 2005 [49]), in this study we use an example of a discourse to help understand teachers' engagement in CT with respect to sustainability issues. As previously mentioned, in the context of social constructivism (Bruner, 1987 [47]) discourse analyses is at the same time an evolving analysis (as it is largely dependent of teachers' cultural settings) and connected with the sociopolitical scenario.

We use a discourse analysis (Angermüller, 2015 [50]) to generate an empirically grounded hypothesis about the discourse. A discourse is understood as the use of utterances in teachers' interactions with each other. Thus, the discourse analysis focuses on the phenomena constructed and shaped in the discourse. We are interested in determining teachers' meanings about different topics in a continuously fluid discourse, where words are apart from a group of simple signs (structuralist perspective) and, therefore, study the discourse from a poststructuralist perspective (Foucault, 1969 [51]). These meanings, visible through the way the teachers engaged with their rights and duties, are linked to the institutional roles of the teachers in their schools, as well as with the particular circumstances related to the region or country in which they are situated.

Discourse analyses can have two approaches: (i) content or language-in-use approach (focused on the micro-dimensions of language or grammatical structures) and (ii) sociopolitical approach (how the social context is influenced by language) (Gill, 2000 [52]). In the present study, we consider both; while the sociopolitical implication gains more visibility through PT, the study also benefits from a grammatical lens, through the pronouns that the teachers use when referring to ESD or CT. The grammatical lens is attached to the differentiation of the power dynamics through the discourse practice in teachers, inspired from the Foucauldian (French) tradition.

Thus, this article aims to explore how PT can serve as a methodological or explanatory tool (Green et al., 2020 [53]). We use PT on a small dataset as an attempt to make sense of teachers' ESD discourses within a post-structuralist perspective. This approach is used

to understand if teachers' conception of CT and ESD has a power positioning addressed through the differentiation between the *I* and *We* standpoint. Departing from the French tradition within the post-structuralist tenet, we take the view that discourse analysis is a process that assumes certain existing systems and structures, since texts are material surfaces in which discursive practices are inscribed (Angermüller, 2015 [50]).

2.1. Data Collection and Informants

The dataset used in this exploratory study is a semi-structured focus group interview, and was conducted with three teachers who, at the time, taught 6th grade students in a Norwegian public primary school. Since this is an exploratory study where we take effort to implement the PT, we selected only one interview out of the nine focus group interviews in three different schools that we had conducted and transcribed. This particular interview was conducted by the second author, and the first author took notes. This made us more familiar with the context of this interview than with the remaining eight interviews, which were conducted by other members of the research team. For the overall research project, convenience sampling (Cohen et al., 2018 [54]) was used to select the three schools.

The teachers in the selected focus group interview have been given the pseudonyms Amy, Bill, and Carla. Since they work in team together, they naturally shared teaching experiences. One of the teachers had around 20 years of teaching experience, while the two others had less experience (but one of them with many years of experience from outside the school sector). Amy was responsible for teaching mathematics at grade 6, Bill was mainly in charge of social sciences, and Carla of Norwegian (Standard Language Education).

The study was conducted as part of the CriThiSE (Critical Thinking in Sustainability Education) project, and was approved by the Norwegian National Data Protection Agency (NSD) by complying to ethical guidelines. The chosen interview took place on 5 November 2020, at the end of the school day, and took approximately 60 min. All interviews were anonymized, informed consent was collected from all participating teachers, and they were informed that they had the right to withdraw from the project at any time.

2.2. Positioning Theory and Process of Data Analysis

When teachers negotiate different meanings about environmental issues, it can be seen as a dynamic and continuous negotiation process of shared, rejected, and ascribed meanings (Harré, 2012 [17]). The fundamental point in PT is how teachers continuously negotiate (from this perspective of sharing, rejecting, or ascribing) in these processes.

Seen through this lens, positions are clusters of short-term disputable rights, duties, and obligations (Harré, 2012 [17]). Positions, despite being highly dynamic, were previously defined as part of the so-called positioning triangle, where story lines and act interpretations are also part of the triangle (Harré and Van Langenhove, 1999 [16]). It is then in the iterative process of the different positions that individuals might limit or allow certain social actions, such as giving an opportunity to a person to speak in a particular context at a certain time (*idem*). Although rights and duties in social actions are located at a certain time, according to PT, they are always changing.

While studying the interaction between teachers perceived evolving rights and duties within the frame of the functions of education, we expect to gain more insights into teachers' underlying collective intentionality in the ESD field. Assuming the discursive device as a positioning through which "participants always position the other simultaneously positioning him or herself" (Harré and Van Langenhove, 1999 [16], p. 22), a focus on how teachers use pronouns can provide a deeper understanding of the way they pursue their rights and duties in relation to the main concepts, such as CT and ESD, within their professional development. Tracing pronouns is a way to make sense of how power is being addressed or changed by different teachers. Therefore, the use of pronouns can help understand teachers' positioning and possible underlying collective intentionalities (Tuomela, 2013 [21]).

The idea of narrativity as part of the storyline can help make sense of teachers' positioning. Therefore, positioning can be defined as a discursive construction of personal stories that make a person's actions intelligible and relatively determinate as social acts (Harré and Van Langenhove, 1999 [16]). The social acts within which members are allocated in a certain location can help define teachers' positioning in the ESD concept aligned with CT.

Using PT, we address (i) how teachers' professional agency is developed through ESD (i.e., the hypothetical shift from the "I" to the "we" entity considering the interaction between CT and ESD) and (ii) how this assumed shift in positionings of teachers contributes to the understanding of the different functions of education (Biesta, 2014 [15]).

To help locate the excerpts in the selected interview corpus, we numbered each utterance in the teachers' discussion in the interview transcript. To avoid losing the original context in the interview, in all cases, we referred to the original Norwegian transcript— although, for the purpose of this article, we worked with an English translation. We tried to keep the flow of language in line with the original grammar. The original context provides a specific social context that can be understood through the broadest way of systematizing human experience as "rendered meaningful" (Polkinghorne, 1988 [55]).

First, we identified the personal pronouns *I* and *we,* and then we used colors (green and yellow, respectively) while trying to understand a possible shift of positioning during the teachers' discussion. These analyses were characterized by a careful reading that moved back and forth between the text and context to examine the content, organization, and functions of the discourse, as suggested by Gill (2000) [52]. After the initial coding of *I* and *we*, we continued analyzing the *we* pronoun as formal markers of enunciation (Angermüller, 2015 [50]). In these discursive formations of utterances, it became clear that teachers were referring to different *we* entities, and that helped us to develop a categorization of content of statements with the different *we* categories. We also used PT to help understand teachers' positions, regarding a sense of belonging with nature, for example. The discourse analyses in connection with PT therefore offered a proposition of a determining base that could be captured through the idea of social consciousness (Williams, 1977 [56]).

3. Results of Initial Discourse Analysis

In this section, we present the discourse analysis conducted on the sample interview, to try out the use of PT to understand teachers' understanding of CT in the context of ESD. As previously outlined, this is an initial study, to explore the potential of using PT. First, we numbered each teacher's statement (utterances), keeping the flow of language and the original grammar. Thus, the results suggest future directions and possible trends, rather than conclude.

While analyzing the teachers' use of pronouns, we found that three types of *we* standpoints emerged, in addition to the *I* standpoint: (i) institutional we, which refers to teachers as a group; (ii) humanitarian we, which refers to societal standpoint; and (iii) classroom we, which refers to the classroom work. In the following, we present and discuss excerpts from the interview which highlight each of these three categories. We have organized them according to the categories and patterns that emerged from the discussion among the three teachers.

3.1. "Those Who Come after Us": Socialization and the Humanitarian we

In the first part of the interview, we asked the teachers about their perceptions of ESD and how they practice the concept. Most teachers responded from a *we* standpoint. Bill, however, started his answer from a classroom we perspective:

> 3 Bill: As we have explained to the students really, it is about living a life today then, which allows us to feel good, but also that those who come after us are well. And those who come after that again. So that in a way, yes. We can have a good life, but it should not be at the expense of those who come after, then.

Bill begins with a collective assessment and the use of *we* to imply a collective right, "which allows us to feel good, but also that those who come after us are well. And those

who come after that again". This indicates a (hidden) duty with the implication that certain acts toward the environment have consequences for others. The next statement: "We can have a good life, but it should not be at the expense of others", if considered a duty, helps understand what Biesta (2014, p. 4) [15] referred to as "becoming part of traditions and ways of doing and being"; we consider socialization to be integrated in a humanitarian we. Bill refers to the so-called Brundtland report (World Commission on Environment and Development, 1986 [57]), where sustainable development is explained as a way to "meet people's needs today without diminishing opportunities for future generations" (p. 43). Thus, the Brundtland report—famous among Norwegians because Gro Harlem Brundtland was a Norwegian minister of environment (and later, prime minister)—is internalized among the teachers. Through socialization, therefore, political discourse (and its associated documents) can help shape teachers' sense of doing and being.

3.2. "TV-Aksjonen": Qualification and the Classroom we

When we asked for examples of ESD practices in the teachers' classrooms, all referred to a specific TV show, the "TV-aksjonen" (an annual telethon hosted by the Norwegian state-channel NRK), which raised money in that particular year (2020) to collect plastic waste in the oceans. The TV channel offered teaching and learning resources with the TV show, which the teachers made use of. This is exemplified by Bill's and Amy's statements:

> 10 Bill: We've had quite a bit this fall really. Related to this "action week" which was "TV-aksjonen" about plastic in the ocean, that is. We have worked on this a lot both in science, but also in Norwegian. Actually, a bit interdisciplinary, then. With a focus on sustainable development and marine life, that is.

> 11 Amy: Everyone [all students in class] has written a reader's post about plastic litter and this is where we considered the concept of sustainable development and... and so they have... we have worked with this, and we have briefly touched upon it in [the subject] food and health, for in the 6th grade they have food and health, so we have briefly talked about it there . . . in relation to diet and food. Residue, waste and yes, food waste. Food waste then, do not throw too much food too.

The teachers agreed that the use of the TV show (TV-aksjonen) went on for a week as a source to develop knowledge in several subjects; for instance, in science and Norwegian. This indicates that the teachers appreciated the TV show and related materials as part of the students' qualifications. However, if we consider civic participation as part of CT (Jiménez-Aleixandre and Puig, 2022 [11]), the "plastic action week" can also be considered to serve the purpose of students' socialization. However, the main point is that through the *we* pronoun, the teachers assume an implicit collective duty toward a TV show that happened to tackle sustainability issues, such as collecting plastic. This is reinforced by the following comment by Carla:

> 17 Carla: Then we picked garbage along the shoreline, and sorted garbage, we did. Learned which kind of waste should be sorted where and what becomes of it, we also discussed. And they have been working with . . . what becomes of the plastic afterwards?

> 18 Bill: Yes we've really been through the whole life cycle of plastic I kept saying. In science, we have also talked about what does plastic originate from? What is sort of the raw material and which different types of plastic do we have and...

At the same time, Carla and Bill also raise some questions related to the knowledge of plastics (what happens afterward and how many types of plastic there are), which are again part of the qualification function.

3.3. Parents in the Oil Sector: Subjectification from the I to the Institutional we

Carla further referred to the complexity of handling students' realities when considering sustainable ways of living, and here, identifies the need to address the "parents" (#41 below) of the children who are working in the oil industry (Equinor) in a careful manner. As per Carla's mention, it is important to be able to ask questions (#41) to make pupils reflect.

> 41 Carla: Yes . . . you should be able to ask the questions then, to make them think. Now, if you were the head of Equinor then or worked for... we have pupils who work... whose parents work on oil platforms, for example. So now that we talked this through, it was kind of like someone who ploughed out that oil is good.

> 42 *joint laughter*

> 43 Amy: Everyone connected to Equinor wants...

The *we* mode statement (#41) and the joint laugh (#42) support the fact that "individual choices are reinforced by the collective agency" (Biesta, 2014 [15]), as part of the subjectification function. In the utterance below (#43), Amy also supports the idea about this collective agency when mentioning "everyone connected to Equinor". These two excerpts show how subjectification is present in the teachers' concerns as part of their teaching duty. The statement, "you should be able to ask the questions then, to make them think" (#41), suggests an implicit duty (PT). The importance of considering students' dilemmas regarding parents' employment in the oil sector is stated from a collective standpoint: "we talked a lot about this, it was kind of like someone who ploughed out that oil is good" (#41).

One way to handle the complex and delicate issue related to employment at Equinor is presented again by Carla (#44) when she addresses the idea of "balancing" to further help students to think differently.

> 44 Carla: So, there is a little bit of that balancing there, too. What... you cannot. A lot of people get to earn their wages, so... in that industry. Do not downplay it, but also think about how they can use this in a different way, then.

> 45 Bill: I think like that. That is personal competence, because that is what you're asking, isn't it? What we as teachers...

Implicitly, Carla suggests what Ennis (2015) [8] would call "be open minded" when she indicates to "use this in a different way". This implies that Carla's main purpose (#44) is to help students use different perspectives to think, based on their own family backgrounds. Carla reinforces this through the expression "Do not downplay it [that many people work in the oil sector]". She addresses the many implicated employees in the oil sector and suggests what could be teachers' approach in this situation. When he agrees with Carla, Bill mentions the pronoun *I* to mark his personal opinion (#45), as he considers the art of balancing a "personal competence"; however, in his last affirmation as "what we learn", he again uses the collective *we*. The statement starts from the *I* standpoint and moves to the *we* standpoint, and can be interpreted as a move from the personal meaning into an agreeing (collective) act.

3.4. CT in ESD in the Future of Education: The I Standpoint

Regarding the possible use of CT in relation to ESD, Bill (#310) suggests the following:

> 310 Bill: It is sort of, in a way, easy to link critical thinking to sustainability because . . . . Be critical to how we actually live today? Is it really sustainable? And maybe gaze inwards first, a bit at micro level, and then be able to start building outwards. Is the way we live as a society here in Norway sustainable? Etc. The international community, then.

Here (#310), Bill is asking a question to open up the meaning of sustainability, which is part of Ennis' (1996, 2015) [8,58] basic clarification questions, part of CT definition. This exemplifies how Bill connects CT to ESD. At the same time, the excerpt shows a connection between environmental concerns and the qualification function. Moreover, the statement "Is the way we live as a society here in Norway sustainable?", helps identify and question an implicit collective duty.

When the teachers are invited to offer their insights about CT and ESD as central concepts in the future of education, Carla and Bill increasingly refer to the "I" pronoun (#313).

> 313 Carla: I think I will do fine. Make kids think critically yes, I think so, but it depends on the topic in a way. Because to me, it is sort of more knowledge about a topic that is missing. Know a lot, right? ... So, you need to have that kind of academic weight and, feel confident in what you're going to teach, but to make students think critically and be conscious, I think I will manage to do that. I feel that this is innate to me.

In #313, when asked about the role of CT within ESD, Carla states, "I think I will manage to do that. I feel that this is innate to me". This assumption can be referred to as subjectification. Bill agrees that CT is a central concept and, at the same time, elucidates the importance of having concrete knowledge to be able to think critically (#314).

> 314 Bill: Yes, I think that's something we all manage to think about, but personally I would like to have more concrete knowledge, like you talked about ... as they probably talked about the last time [in the teacher professional development seminar], I wasn't here then... To somehow get more input then, a little bit useful and concrete, what is meant by that [CT] and how can you do it? So that you do not need to invent it yourself from scratch. I often think that this is helpful for me, at the very least.

In this last excerpt (#314), it becomes more evident how Bill sees the need to have concrete issues to elaborate on when dealing with CT in connection with ESD. The statement is made from the *I* standpoint, and Bill feels the need for a more concrete input to understand what CT is and how to use it in the classroom.

4. Discussion

The discourse analysis indicates that teachers are, to a certain extent, conscious about the relevance of CT and ESD in the school context. In the following, we discuss the use of pronouns from the perspective of PT, and then how the functions of education are visible in the discourse.

The teachers in this study position themselves differently in the context of ESD compared to CT, as observed through our tracing of the pronouns *we* and *I*. The focus on the *we* in ESD is consistent with the fact that it might imply a collective action that can involve a community to work together to address structural issues (Armstrong, 2018 [37]).

As mentioned in the results section, the way the teachers use the *we* pronoun suggests different underlying meanings of *we*. It is expected that teachers who articulate different meanings differ when they talk about teaching. Clearly, the *we* that reveals teachers as part of the teaching staff can be considered the institutional we. This institutional side indicates that teachers rely on each other to handle sustainability issues. However, the *we* dimension also includes the work developed with the students (the classroom we). The teachers also refer to the pronoun *we* from a broader perspective, which we consider here as the humanitarian we. We suggest that the institutional and humanitarian we's are layers of collective intentionality (Tuomela, 2013 [21]) in teachers' ESD discourse. We would consider that, as individual relation to nature is not necessarily determined by group identity (Clayton and Opotow, 2003 [59]), it might suggest that more in-depth individual interviews with the teachers could contribute to a more comprehensive understanding from the *I* standpoint. Here, we would like to emphasize that teachers considered "TV-aksjonen",

a telethon available for all Norwegian citizens, a useful tool, that we framed in qualification (as function of education) and the *we classroom.*

The *I* standpoint is explicitly referred to in relation to the use of CT in ESD in future scenarios. The *I* pronoun here becomes more visible as teachers give their opinions about the future. However, the humanitarian we is also part of the future, when teachers talk about the implicit duties of acting, so that it should not come at the expense of others. Otherwise, many of the *we* assumptions are located in the "past".

The differentiation of the *we's* reveals teachers' considerations about collective rights and duties. From the utterances, it is possible to link a collective right, for example, "it is about living a life today", with a collective duty, such as "also that those who come after us are well" (visible in #3). Indeed, duties are more prominent in the interview excerpts than the rights. The emphasis on the *we's* in this exploratory study prompted us to conclude that further research and elaboration about teachers' positioning, when considering their communication act regarding CT and ESD, is required. Indeed, the use of PT in this discourse analysis has helped shed light on teachers' implicit duties and rights concerning CT and ESD.

Regarding Biesta's three functions of education, the teachers in our selected dataset recognized the qualification function, such as knowledge or skills and dispositions (here pursued as CT), as a helpful tool to handle ESD contexts. At this point, we suggest that ESD might assume a critical role in terms of creating communication actions (Harré et al., 1999 [16]).

In the environmental discourses, Hasslöf and Malmberg (2015) [7] suggested that CT emerged as a nodal point in their teachers' discussion and that it invited room for subjectification within functions of education. Although we could identify some examples of teachers' considerations related to qualification and socialization, we also identified some challenges with the categorization of subjectification as part of the functions of education. Particularly, in Carla's testimony (#44), it becomes clear how subjectification plays a role when teachers (and students) are challenged to handle complex issues, such as interpretating and deconstructing the parents' role in a sustainable society when they work in the oil sector. This is hardly surprising, since Norway is highly dependent on the oil and gas accounting (Abrahamsen, 2005 [32]). This dependency on oil challenges teachers' readiness to deal with a parent's employment in the oil sector. This suggests that subjectification is a highly relational concept, and is seen through the use of the pronoun. Although teachers handle school/house dilemmas in the classrooms, subjectification can have an important role for teachers as a group.

Socialization as a function of education can help identify that the incorporation of structural documents (such as the Brundtland report) can be part of teachers' discourse (i.e., as "part of doing and being" (Biesta, 2014 [15]) to help explain the core meaning of sustainability, in this case). In this regard, there is an empowerment of the collective action (APA, 2009 [23]; Armstrong et al., 2018 [37]) toward sustainability actions, particularly visible through the humanitarian we and institutional we.

The functions of education can help reveal how CT, as a concept defined with skills and dispositions, is recognized by teachers. However, when dealing with some intricate and complex issues (such as parents' employment in the oil sector), teachers locate the complexity of relational aspects as part of the subjectification function. Indeed, subjectification offers the possibility for students and teachers to reflect on what is taken for granted (Hasslöf and Malmberg, 2015 [7]). Sezen-Barrie et al. (2022) [60] presents a spatial and temporal indexicality that helps to understand discursive dynamics in climate change education. Here, personal pronouns are identified from the students' perspective. One of the conclusions is that students tend to see climate change causes, impacts, and solutions as more of a collective action (we, they) than individualistic (I, you). Thus, it is interesting to compare with teachers' use of the pronouns. Particularly, because in the present study the pronoun *I* could be linked with a temporal indexicality (future).

5. Conclusions

The use of PT as a starting point for considering how different aspects underlie teachers' discourses, as seen through teachers' utterances. This means that it might help to reveal different facets of the way teachers use personal pronouns in relation to ESD and CT. In parallel with the positioning analysis, we attempted to understand teachers' communication acts through the functions of education (Biesta, 2014 [15]), thus locating the complexities regarding handling ESD and CT in the classroom. Interestingly, the subjectification function is identified from a *we* standpoint, and not exclusively from an *I* standpoint. The *we* standpoint is located in the context of a sense of duty within nature. This suggests that teachers, as part of the Norwegian society, have a particular sense of belonging with the nature (Andersen et al., 2015 [18]; Aase, 2005 [31]). Although the *we* facet can be considered a socially organized denial of climate change (Foster, 2014 [19]; Norgaard, 2011 [20]), the *I* facet in the near future suggests that teachers pursue individual duties. To better understand this, it might be beneficial to consider the *I*-mode collective intentionality (Tuomela, 2013 [21]) in future studies. Climate change issues are not at the core of the conversation between teachers, but here, we consider the communication patterns, and thus, have influence on further actions as they can address the challenges to climate change (Clayton et al., 2016 [4]).

Considering PT, we can conclude that educational duties are embedded in a larger social construct as part of the humanitarian we standpoint, probably related to the Norwegian public self-image of being strongly connected to environmental awareness (Norgaard, 2006 [27]). As mentioned, the fact that youth social movements within climate change have been increasing (Han and Ahn, 2020 [24]; Thunberg, 2019 [25]) can be further explored with students. To what extent can pursuing the pronouns be explored through the students' perspective? In other words, is it possible to identify the humanitarian we or the institutional we as part of the students' discourse? Tracing the pronouns as an attempt to understand discursive patterns, could provide more details about the collective process where teachers and students create a story about the future (Foster, 2014 [19]; Ojala, 2012 [26]), connected through the way they are revealing rights and duties (Harré and Van Langenhove, 1999 [16]). We also identify subjectification as an important function of education, which is particularly explicit in the teachers' insights related to students' parents' work.

The aim of this article was to explore how PT could be used to study teachers' positioning about sustainability through discourse analysis, and to analyse functions of education in relation to ESD in primary school contexts. Although the dataset is limited to one school, and therefore, difficult to generalize, PT has proven to be a useful tool, to identify underlying rights and duties in the teachers' discourses through an analysis of the uses of the pronouns *I* and *we*. In other words, our use of PT on our material has showed how the use of the pronouns can illuminate latent meanings of *we*, that vary from institutional features to a humanitarian we. The decision to frame these findings within the functions of education (Biesta, 2014 [15]) was made to clarify how rights and duties are widespread and interconnected within the latent meaning of the pronouns. This latent meaning can be further explored through the remaining focus group interviews and individual interviews, to understand if these three different *we's* are part of teachers discourse when they share teaching experiences about ESD on an individual basis.

To conclude, we suggest that the UN's sustainable development goals (such as handling climate change) reinforce the role of teachers in implementing ESD (UNESCO, 2018 [5]) by using a macro-approach, through the lens of teachers' utterances, and the *we (institutional* and *humanitarian)* in particular. The macro-approach reveals the rights, but mostly the duties, and herein lies the contribution of PT in the discourse analyses. To further develop this research, we will continue to explore the possibility of using PT in seven individual interviews where we intend to pursue the sense of belonging with nature and teachers' identity through the *I* standpoint. Through PT, teachers' discourse can reveal different *I*-modes, in the sense that it can encapsulate different layers of *I*-mode

collective intentionality (Tuomela, 2013 [21]). Thus, this can be enhanced by PT, particularly through teachers' storylines (Harré and Van Langenhove, 1999 [16]). To what extent the three different *we* dimensions are part of the ESD discourse in the individual analyses will also be pursued in the seven individual interviews and the eight remaining group interviews. We also suggest tracing the pronouns, in connection with temporal indexicalities that incorporate past, present, and future (Sezen-Barrie et al., 2022 [60]). Temporal indexicalities in connection with pronouns can then indicate discursive patterns, and can be useful in climate change education fields in findings out ways to act (*idem*).

Concerning the limitations of the study, we need to consider the sampling method. A convenience sampling was used because of the limited number of available schools in our district. When discussing the data, we need to consider that the participants may be well-intentioned, and do not represent the wider population. Due to the exploratory character of the study and the limited dataset, it is not possible to generalize these results. However, the results still give us valuable information on the possibilities to use PT to help us understand teachers' positioning and possible underlying collective intentionalities.

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