

Interplay of Critical Thinking and Education for Sustainable Development: Poststructuralist Analysis

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One of the modern challenges in education society is to educate the future generation about sustainability goals. The challenge lies also, in how to decide, due to the multifaceted embeddedness within scientific, ethical, and moral domains. To better understand these decisions, I will rely on critical thinking (CT). In this article, the poststructuralist lens has been used along with positioning theory as theoretical and methodological perspectives to understand the discourse of primary teachers when they are discussing Education for Sustainable Development (ESD) tasks. I explore how through a critical discourse analysis (CDA) positioning theory enlightens ESD as a form of social consciousness. This social consciousness is understood through the way two teachers in a focus group interview are positioning themselves when they are engaged in ESD tasks. How are teachers using the pronouns, such as I/me, and we/us when discussing environmental and sustainability issues is discussed from a Derridean perspective, as highlighting the formation of the “we” in terms of actions and its limitations.

Keywords: critical thinking (CT), critical discourse analyses (CDA), positioning theory, teachers’ professional development (TPD), positioning, poststructuralism

INTRODUCTION

I will begin this article with a clarification of three of the key concepts used as acronyms: Critical Thinking (CT), Education for Sustainable Development (ESD), and Teachers’ Professional Development (TPD).

Critical Thinking (CT)

In the literature, three different scholarly traditions have been identified, they can be summarized in three different categories: philosophical, psychological, and educational (Lai, 2011; Sternberg, 1986). In education, CT can be conceived as a combination of skills and dispositions. According to Lai (2011) skills or abilities are: analyzing arguments, making inferences using inductive or deductive reasoning, judging, or evaluating, making decisions or solving problems, asking and answering questions for clarification, identifying assumptions, interpreting and explaining and seeing both sides of an issue. The set of dispositions is concerned with the propensity to seek reason, open-mindedness, the desire to be well-informed, respect for, and willingness to entertain others’ viewpoints.

Education for Sustainability Education (ESD)

The concept of Sustainable Development (SD) was first introduced in the early 1970s and has since become a widely embraced concept on the political agenda. The main goal of SD is to “meet people’s needs today without diminishing opportunities for future generations” (Brundtland Report, 1987, p.43). UNESCO report from 2018 highlights an integrated approach to address the challenges associated with SD, where it recognizes the important role that ESD can play in forming society’s capacity to address varied pressing challenges around SD. Recent years have witnessed increasing international attention to this sustainability issue. Understanding the social aspect of Sustainability is an important aspect that relates to the engagement from the different institutions therefore, investigating about responses of people to different issues about sustainability, particularly how they exercise their rights and duties are important consideration. Moreover, as per UNESCO (2018) recognition, teachers have a critical role in implementing ESD within the school context and this is one of the main reasons teachers’ professional development has been defined and discussed within CT and ESD context. Within the CriThiSE project, the ESD concept is pursued and discussed with the teachers about three following dimensions: environmental, social, and economic.

Teachers Professional Development (TPD)

TPD can be defined as an opportunity for teachers to come together and engage in the process of working with each other to find approaches or challenges within their professional practices. Through this understanding of TPD evolving, the CriThiSE (CriThiSE - Forskning - Institutt for lærerutdanning - NTNU) project has defined project seminars, more precisely three project seminars organized in each school per semester and an interview per year. During these project seminars, teachers are sharing their own classroom experiences after implementing tasks related to CT and ESD. Each project seminar focus on a particular aspect related to CT while discussing ecological and environmental issues that connect them to the ESD concept. Within this context, teachers are planning and evaluating, while discussing with their peers (typically they are sitting in small groups, with their year-peers). Each project seminar has focused on a particular aspect related to CT while discussing environmental issues that connect them to the Education for Sustainable Development (ESD). To deepen teachers understanding of CT and ESD they will be part of 3 focus interviews in the project lifetime over 4 years (around 2-6 teachers per group + 1-2 researchers).

UNESCO (2018) has identified different challenges related to TPD in ESD at the school level. One important aspect is that teacher education should be designed to stimulate learners to act for sustainability. The historical interdependence between people’s needs (what) and how to use the knowledge they already have about a certain aspect related to issues in sustainability, make ESD an interesting educational context. In other words, ESD teaching has the potential to cover the complexity of sustainability issues and prepare students to be aware of the importance of their decision-making (what and how). Ultimately the ability to effectively participate in decision-making is influenced by a combination of formal and informal institutional mechanisms that structure ESD participation. Teachers have a vital role and through teachers’ discourse, it is possible to experience how they relate to the ESD construct. At the same time, CT is considered a key competence in promoting ESD (UNESCO, 2018). In specific, this article aims to explore how positioning theory can be conceived as an explanatory tool (Green et al., 2020) under the theoretical setting of poststructuralism as a theoretical-philosophical perspective while considering the discourse of the teachers when applying ESD in their school practice. Within this context, this article will explore the following research question: *How can positioning theory, conceived of as a “methodological analytical/linguistic tool,” serve the purpose of analyzing teachers’ discourse when they are discussing ESD tasks?*

Structuralism as an Incomplete Setting to Analyze Teachers’ Discourse While Considering TPD

TPD has been on the current political agenda due to its strong relations in ensuring students’ success (OECD, 2018). At the same time, the concept of CT has increasingly become more recognized since the principles of sustainability can transform decisions which have consequences for society. Beyond basic subsistence, or neglecting the use in ecosystems, the question is also, to what end and which meaning we give to such actions? Teachers’ decisions are, therefore, a key factor to understand how they are co-creators

of a sustainable society through their teaching actions addressed through a collective behavior when they manage ESD. Moreover, not much is known about how teachers' engagement occurs when they are discussing or implementing CT tasks with their students in ESD contexts in primary schools' settings (Santos, 2017). This study can fill the gap to make sense of collective engagements among primary teachers toward ESD and CT.

Poststructuralism Versus Structuralism

Making sense of the surrounding world can be pursued as a constant exercise of looking at similarities and differentiations. This requires a structure that can allow certain criteria or basic elements to be used as reasons to include or exclude certain parameters. However, at a certain point, looking for the structure does not seem to be enough (Derrida, 1970). There can be a danger that the structure can define a center of fixed origin, which can be the reductive way in nature and might not capture the complexity of a situation. While considering the fixed origin, Derrida (1970) argues that this fixed center closes free play. Taking the center of the structure (structuralism) and at the same time realizing that the existence of a certain structure also exists outside the same structure (poststructuralism) summarizes the transition between structuralism and poststructuralism. The existence of the outside as part of the structure in the existential perspective is, in other words, also part of the structure in itself, because all the interactions with the structure are defining the essence of the structure. If the discourse represents a structure, part of our condition as human beings, assume the constant mutation of the meaning implies that the most important characteristic of this linguistic turn is a shifting focus towards the dynamic *per se*, when people talk to each other. This can be pursued as the breakthrough because the textual representation in itself was brought to the center, instead of the description of what happened.

TPD and Poststructuralism

While teachers have the opportunity to discuss and engage about certain concerns of their professional practice, all these interactions themselves are also defining "the center of a certain structure". TPD is part of teachers' engagement while using and developing their discourse. Here discourse is understood as the use of utterances in teachers' interactions with each other. Considering positioning theory (Harré & Van Langenhove, 1999) as a preposition or methodological tool, through teachers' discourse and assuming that they are aligned with different roles, considering the rights and duties is an important part. This is an important aspect when the focus is on teachers' utterances as part of their discursive practice. In this way, the linguistic turn gains more relevance when combined with the role of a certain individual, that at the same time is combined with his or her rights and duties.

Making Poststructuralism Visible Through Positioning Theory

- "be positioned, or do not exist" (Langenhove & Harré, 1999, p.31)

While producing any kind of discourse, people all over the world, are i) positioning themselves; ii) positioning others. Despite certain extremism in the expression "be positioned, or do not exist" (Langenhove & Harré, 1999), people's existence is related to this double perspective of positioning. While engaging with each other, teachers are exchanging rights and duties in a continuously fluid discourse, where teachers are sharing meanings about different topics. Here lies the recognition of the discursive practices as a "process by which rights and duties are assigned, ascribed, or appropriated and resisted, rejected or repudiated" (Harré, 2012, p.123). The rights and duties are linked with the institutional roles of the teachers in their schools. At the same time, the schools are allocated in a particular region and country. This situated role with the implicit rights and duties is important to consider within teachers' positioning.

The underlying idea is that through the positioning of the teachers (themselves and how they are aligned or opposed to others), the shifting of their selves as a center becomes more diluted, *i.e.*, the center does not belong to the totality, but the totality has its center elsewhere (Derrida, 1970). Assuming the destabilization of the centers means that the continuous shift lies with different linguistic, institutional, cultural, and social

factors that come together in various ways. While keeping this in mind, how the meaning of ESD is produced and how it is circulating among the members as part of a group of teachers, can be traced. The circulation of the specific meaning is appropriated by this group of teachers and can be addressed by analyzing the power positioning shifting within the group. Considering a particular meaning of ESD, such as shifting of the power positionings, can be analyzed through the use of pronouns within the discourse. Contemplating CT, as a key concept in ESD, also includes dispositions, that could be helpfully linked with the discursive dynamic made by these teachers. Thayer-Bacon (2000) argues that CT, or in her own words “constructive thinking” broadens the definition to include more than just traditional skills and dispositions. One of the main arguments is that “constructive thinking” is more of a social practice than a skill or disposition inculcated in individuals. This social understanding of CT goes closer to the social dimension of the sustainability dimension on sustainability in the educational context, ESD.

Taking as a point of departure the poststructuralism perspective and considering the importance of the linguistic turn can provide an opportunity to trace how the concurrent discourse of a group of teachers is normative or as having its turning points. In this dynamic interface, rights and duties are continuously negotiated (Harré & Van Langenhove, 1999). Rights and duties are according to the positioning theory, related to people’s roles, which can be called a “moral role” and subsequently their “moral positioning”. Through teachers’ discourse, I trace how they make use of personal pronouns, such as I/you/we. Here I assume that positioning theory can contribute to a ‘proposition of a determining base and a determined superstructure’ which can be captured through the idea ‘form of social consciousness’ (Williams, 1977).

METHOD

Through the qualitative study, there is a potential to respond to epistemic challenges and crises, to unmask the layers of social life and depth of human experiencing (Smith, 2007) and this case study takes a stance on understanding teachers’ experiences located in one school in Trøndelag (county located in the middle of Norway). In this study, I focus on an interview that took place on November 2020. The focus group interview had a duration of 1 hour and occurred among two teachers (both males) and two researchers (as part of the CriThiSE project, one with an active role in the interview and the other writing field notes). The roles of these teachers, they were both responsible for teaching 5th grade, T1 was mainly responsible for teaching mathematics, science, and arts, and T2 was for teaching social science and religion studies. Both had several years of experience in primary school.

Critical Discourse Analyses (CDA)

Here I pursue the CDA as a focus, however, it is not completely isolated. The focus goes on the phenomena constructed and shaped in the discourse, but also on the actions. Here the CDA gains a relevant role since the discursive actions are underlying through the social functions, in other words, it poses a microanalytical perspective. CDA is then related to other elements, a process that assumes certain existing systems and structures and shows how particular discourses gain prominence (Fairclough & Fairclough, 2018). But the linguistic tenet is a small portion of the overall discursive action. In the discursive action, considering the CDA the main concern is with the action. This action is more relevant since it is situated as a sociocultural practice (*idem*).

ILLUSTRATION OF TEACHERS POSITIONING THROUGH EMPIRICAL DATA

In the interview, all teachers’ statements are numbered. During the interview, the posed questions were widespread about the potential of the use of CT in ESD contexts. However, in this article, the focus goes on teachers’ understanding of their own teaching experience with ESD as per the following excerpts. In the first excerpt, the teacher is giving his opinion about the ESD concept:

12 T1 – I think it is related to society...ESD is thinking about future generations. (...)

In #12, one can realize the ESD construct, while using a statement, that from the CT context is an inference (Ennis, 2015). First, the statement starts with an emphasis on society, as ESD shares a social concern. Second, it is about the importance of today's actions, despite the fact that the teacher is emphasizing the "future".

16 T2 - The next generation but also at the same time, the starting point is nature that should be considered first and not people. If it goes badly with (the nature) it goes badly with *us*. We should have it in order.
(...)

The second teacher is claiming i) nature is in the first place; ii) explicit use of the pronoun "we" as a collective entity. Here the statements are moving from a purely neutral statement "ESD is about thinking about the future generations" into a collective dimension. Connected with his "role-based positioning" (McVee, 2019) as responsibility for teaching mathematics, science, and arts and foregrounded during the pre-service course, the fluidity on the discourse goes from nature to a collective duty.

The teacher, identified as T2, in # 16, is using his right to i) reinforce T1 positioning; ii) but exercising at the same time, his duties in a collective sense. Here the dynamic analyses of conversation and discourses can be contributing to the understanding of the diluted center (Derrida, 1972). The diluted center is moving from the "I" to the "we" sense, but during the interview it is an ongoing process, highly dynamic, often shifting from "I" to "we" and vice versa. Probably, this positioning is not disconnected from the teacher's standpoint with interest in social science and religion studies. Aligned with this, in the next excerpt, T1 shares again his concern with the preservation of nature and relates to the wind turbine project as a positive teaching experience.

60 T1 – I took the example that we used in the project about wind turbines in Frøya [island-part of Trøndelag county] and then it came to the conversation that four of them [the students] have family there. The point here is that it was easier to engage them in this conversation when they *were feeling more closely related to the situation*.

Here T1 explains "The point here is that it was easier to engage them", where he is referring to a familiar environmental case dilemma in the region. This can be interpreted as a "utilitarian ethos" (Andresen et al. 2015) that characterizes the Norwegian society and national identity, and this can point to a direct implication for the "we" as a social dimension. This could mean, that students' apparent comfort level is highly related with the "utilitarian ethos", as being part of the Norwegian society, visible in #60. Part of the "we" discourse is then the social influence structure to an interpretation of nature, as the individuals make a connection to the "known" environment (Clayton, 2003; Clayton & Opatow, 2003). The teacher's claim is that ESD context is easier when immersed in familiar environmental situations for the students.

DISCUSSION

The attributes of the group of teachers in form of "interpersonal positioning" presuppose the "macro-positioning exercise" (Harré, 2012) as indicated by using the pronouns. Considering the macro-positioning exercise is contemplating that each society or group has its unique structure and within these signs and types of discourses deployed (Foucault, 1982). Part of the importance of the macro-positioning lies with i) people are affected by their context; ii) the social environment includes the influence of other people (Clayton & Brook, 2005) as has been exemplified through the implicit use of "we" by teacher T1 in form engaging students on familiar environmental concerns. In other words, when the first teacher (T1) is stating "I think it's related with ESD" in an "I" perspective, when the second teacher (T2) interacts, the center dilutes with the pronoun "we", i.e., the "power" of this statement shifts to the social collective dimension of the "we".

At the same time, the “we” pronoun can be widely spread. According to Butler (2001, 2002), the source of personal and political agency does not exclusively belong to the individual, but rather, through the complex cultural exchanges. The assertion is that identity is an ever-shifting, constructed, disintegrated, and recirculated process. In other words, perceiving the rights and duties may play into existing storylines that constrain the way people, in this case, teachers, position themselves (McVee et al. 2019) can contribute to the understanding of teachers’ positioning.

Taking CT dispositions (Ennis, 2015) interrelated with positioning theory, I try to understand the theoretical contribution as a form of social consciousness (Williams, 1977) applied to ESD. Here I pursue CT as a form of social practice (Thayer-Bacon, 2000). Providing the context in which the ESD discourse is situated, through the positioning of the teachers (themselves and how they are aligned or opposed to others) the shifting of their selves as a center becomes more diluted, *i.e.*, the center does not belong to the totality, but the totality has its center elsewhere (Derrida, 1972). The quote “be positioned, or do not exist” (Van Langenhove & Harris, 1999) assumes that despite the ever-shifting positioning aspect, it is through all the positioning stages that the role is defined. Institutionally a teacher the role is according to the positioning theory connected within this “moral order” or “moral positioning” (McVee, 2019). Positioning lies with one’s position, and therefore, with “moral positioning” because it is related to the role that people occupy within a certain moral order (Van Langenhove, 2017). Searching for a pre-discursive structure for both the self and its acts (Butler, 2001) can be enhanced through a discursive action. By analyzing the use of the pronouns, it is possible to trace the shifting of the powers, because there is a quick change in the pronouns, one can understand that the center is distributed because the “we” ethos can shift very quickly to an “I” ethos.

The further discussion of CT as a possible social construct within the edification with others (aligned with the other teachers) where positioning theory aims to examine and explore the distribution of rights and duties of the individual, is a permanently ongoing process. Considering that teachers exercise in certain ways, such as face-to-face interactions or intra-group relations, their rights, and duties (Davies & Harré, 1990), positioning theory seems to be a useful methodological tool to understand the discourse and to build up further theoretical considerations. According to Clayton and Opotow (2003), interpersonal and group membership emerges in a social context, as per in this context. In other words, the social structure can be interpreted to understand the awareness of the social “we” dimension, as it is intertwined (personal and group membership). One strong interrogation is if the pronoun “we” is a “form of social consciousness” or if it is a “phantasmatic construction” (Butler, 1990, 2001). Here the “phantasmatic construction” can be pursued as a political establishment (*idem*) through which social identity can be formed and understood. As a political establishment, the “We” dimension is particularly interesting since in the ESD context it is a supposedly imaginary share of a future vision. In many countries, environmentally sustainable behavior requires a strong community identity because personal and collective identity determines whether the values of sustainability are adopted (Clayton & Opotow, 2003). In addition to this, at the heart of CT conceptualization lies the dispositions that can be seen as attitudes, or habits of mind (Lai, 2011; 2016; Ventura et al. 2017). Here CT as an intellectual capability can be pervasive in goals of social responsibility within the context of collective decision-making (Aikenhead, 1985; 1994).

CONCLUSION

Positioning theory is helpful in the sense that a position is a cluster of “beliefs with respect to the rights and duties of the members of a group of people to act in certain ways” (Harré, 2012, p.169). From this perspective, when teachers are discussing tasks related to CT and ESD topics, the social interaction of the teachers through positioning theory becomes more intelligible, because it reveals the implicit and explicit reasoning in the way people act towards others (Harré, 2012). This leads to the positioning of the *self*, or according to Barnett (2015) the “reconstructing of the self” that he labeled as “critical self-reflection” as one form of criticality and as a social practice as a way to conceptualize CT. Ennis’ (2015) assumptions about CT dispositions relate very strongly with what to believe and do, and my claim is that positioning theory helps us to clarify how it occurs inscribed in the certain power structure, such as the primary TPD

sphere. In this way, CDA extends a perspective that goes beyond language use. The operationalization of ESD, in the social dimension while considering teachers' discourse while discussing the potential of CT is grounded in the richness of the social interactions that occur in the professional development of the teachers. These interactions highlight the "we" edification. The main finding is that ESD has a social dimension that cannot be seen apart from environmental and economic aspects. Through TPD it becomes more vivid how the social dimension is indeed part of the process of developing the core ideas about sustainability that concern their teaching. At the same time, and even despite the fact that CT is not directly addressed in the data, CT "auxiliary ability" can be understood as part of the disposition, and it appears in an educational/pedagogical context. Here I emphasize Ennis's work, highlighting the individual disposition, not the collective dimension as has been exemplified through "we" as a form of social consciousness in this article.

Trying to understand the implication of teachers' consciousness, the definition from the origin in Latin, can be perceived as *awareness* or *responsiveness*. The assumption made through this article is that exercise of power is not simply a relationship between partners, individual or collective but it is visible through certain actions that modify others (Foucault, 1982). Here the possible apparatus that allows for social theorization based on a dynamic analysis of conversations and discourses, presupposes that each person exercises rights, and duties (Harré & Van Langenhove, 1999) can contribute to the understanding of the diluted center (Derrida, 1972) through the social/grammatical construction as a unitary identity (Davies & Harré, 1990). Interestingly, the etymology of the word in Latin *conscius* is described in a more "social perspective" since it is a joint word composed of *con* (together) and *scire* (to know) (<https://www.etymonline.com/word/conscious>). The way the social dimension is discussed today is probably related to a more individualistic approach. In this way, awareness can be interpreted as something that is not necessarily noticeable for the teachers. Through the use of the pronoun "we", it is possible to trace some of the actions as a construction of a subject through a discourse set of strategies that are part of social practices (Foucault, 2000). Clayton and Opatow (2003) describe the process of individual versus collective framing support for environmental policies, considering the importance of individual attitudes with a significant role in determining justice perceptions. Accepting one's social position and group identities as a likely influence one's attitude. Here the central issue is that teachers as part of society have a unique structure where the words or signs and the different discourses are taking place. Particularly the 'epistemological confrontation' that allows us to understand knowability and agency and how they can be determined (Butler, 2001). The dynamic traced in the discussion between "I" and "we" emphasizes the discussion about sustainable development in education, when teachers are sharing their teaching experience, while handling critical thinking as a "tool", the social aspect of ESD is becoming more vivid.

The social dimensions of ESD are in this case highlighted through teachers' own positioning, and their discursive standpoints. Positioning theory informs about ESD social dimension and can be perceived as a form of social consciousness (Williams, 1977). This social consciousness is part of ESD discourse in TPD, particularly the appropriation of the "we" concept. If we navigate through sustainability issues through time, in the context of science it is a collective decision-making (Aikenhead, 1985). Inscribed in Norwegian society, teachers and students share the "utilitarian ethos" (Andersen et al. 2015) that seems particularly visible through discussing environmental issues in familiar contexts. As a further discussion, exploring the "we" as a possible 'phantasmatic construction' (Butler, 1990) or as social construction with these teachers, requires further investigation with follow-up interviews.

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