

## **Local environment as learning arena in education for sustainable development. A study of practice and the teachers' perspectives on why and how.**

### **Introduction**

Education for sustainable development (ESD) is a growing educational field with roots in environmental education and international discourses connected to UN (Gough, 2013; UNESCO, 2005; WCED, 1987). In the report *The School of the Future: Renewal of subjects and competences* (NOU 2015:8 Official Norwegian Reports, 2015) ESD is highlighted as an important interdisciplinary topic area that should be strengthened in the Norwegian school curriculum and integrated in a number of subjects. Schools need to work on sustainability issues to help develop students' competencies, but many teachers are uncertain of what sustainable development is, and how this teaching should be conducted (Borg, Gericke, Höglund, & Bergman, 2013; Breiting & Wickenberg, 2010; Laurie, Nonoyama-Tarumi, Mckeown, & Hopkins, 2016). The complexity of these issues challenge teachers' competence and the organization of teaching in separated subjects (Blum, Nazir, Breiting, Goh, & Pedretti, 2013; Sinnes, 2015).

In Norway there has been a tradition for connecting outdoor, local learning arenas to environmental and sustainability education (Sandås & Isnes, 2015 s. 24), but this is most evident in the guidelines and there is little empirical evidence of the implementation in practice. Both in Norway and internationally, there has been little research on the teachers' experiences and perspective on ESD-practice (McNaughton, 2012; Reid & Scott, 2013; Stevenson, 2006).

### **Aim of the study**

This project aims to explore the use of local environment as learning arena in the practice of ESD. The first part is an interview study of teachers' perception of using the local environment as a learning arena for sustainable development (SD), to examine their justifications and their perceptions of the challenges. The second part is an action research project where researchers, teachers and management at a primary school maps the local environment around the school and develops locally adapted approaches for ESD.

### **Summary of theoretical perspective**

The development of the environmental and sustainability education has been categorized in three different teaching traditions: a fact-based, a normative and a pluralistic – which can be viewed as ESD (Öhman, 2003). Although there are different conceptualization of central ideas in ESD, there are some characteristics with more consensus, like the three dimensions: natural environment, social environment and economy (UNESCO, 2005). The educational field has in recent years focused on the complexity of these three dimensions through normative issues, conflicts of interest and by focusing on action and the action competence (Breiting, Hedegaard, Mogensen, Nielsen, & Schnack, 2009; Jensen & Schnack, 1997; Stevenson, Brody, Dillon, & Wals, 2013). Use of the community as a learning arena has a long tradition in environmental education and can provide appropriate opportunities to work with realistic issues in the students' everyday environment (Christensen & Kristensen, 1999; Jordet, 2010; Sandås & Isnes, 2015).

### **Summary of methodology**

The research approach is twofold, and in both approaches, the teachers' perspective is strongly emphasized. The first part is an interview study of eight primary and secondary school teachers, where the teachers were asked about their experiences of ESD practice and their use of local learning arena. The data is analyzed using the constant comparative method and constructivist grounded theory (Charmaz, 2014; Glaser & Strauss, 1967). The second part is an action research project (Bradbury, 2015; Levin, 2017) where researchers, teachers and management at a primary school, cooperate through a school year in mapping the local environment around the school developing locally adapted approaches for ESD. All research participants were selected among teachers who had conducted education in environmental and sustainability issues and participated in

The sustainable backpack, a government funded initiative to increase the focus on education for sustainable development in regular school teaching (Sandås & Isnes, 2015).

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