



Brief

Statement game as a tool in education for sustainable development in early childhood teacher education

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Apart of the mandate of Norwegian early childhood education (ECE) is to emphasize respect and care for nature and being aware of children's opportunities for learning and development in nature (Kunnskapsdepartementet, 2017). In Norwegian ECE pedagogy, there is a long tradition for working and being outside (Bae, 2018). Considering climate change and loss of nature, working with the parts of ECE framework concerning sustainable development and exploration of nature becomes ever more important. Several studies indicate that positive experiences in nature during childhood, and adult role-models communicating nature's value, influence future environmentally friendly actions and values (Beery et al., 2020; Chawla, 2006; D'Amore & Chawla, 2020). It is of pivotal importance that ECE teachers have enough knowledge, feel comfortable in nature, and are aware of their own attitudes and practices related to nature and sustainable development.

As humans, our relation to nature is complex, and encompasses both knowledge, attitudes, emotions, and experiences. Nature connectedness is a large international research field, and several tools have been developed aiming to measure nature connection (reviewed in Chawla, 2020). Here we used one of these tools: "nature relatedness scale", developed by Nisbet et al. (2009). This scale is developed by psychologists and contains 21 statements concerning different aspects of the relationship between humans and nature: affective (NR-self), cognitive (NR-perspective), and experiential (NR-experience).

In this paper we aim to investigate and discuss how statements from the nature relatedness scale can be relevant for early childhood teachers, and how this can be used to develop student active teaching and learning practices informed by research. Our research

questions are: (1) *Which practices, attitudes, and knowledge become evident in students' dialogues of statements from the nature relatedness scale?* (2) *In what way can a statement game contribute to education for sustainable development?*

We have used statements from the nature relatedness scale to develop a statement game which has been tested by students in work-based ECE teacher education. Statement games are tools that can be used to facilitate reflections on attitudes and actions (Akre, 2014). We observed and documented students' dialogues during the statement game and asked them if they found this relevant for their profession.

During the discussions of most of the statements, ECE perspectives became evident, and the students stated that the discussions made them aware of their own attitudes towards nature and sustainable development. The students highlighted statements connected to experiential dimension (e.g. "I enjoy being outdoors, even in unpleasant weather") as important for their professional practices. The role and importance of education and knowledge about nature also emerged during the discussion. We further observed that some statements were interpreted differently by the students, which highlights the importance of dialogue to understand each other's attitudes and values. In conclusion, we find that student dialogues concerning statements from the nature relatedness scale can highlight practices, attitudes, and knowledge related to sustainable development and add specific content in education for sustainable development relevant for ECE.

Keywords: *dialogue; early childhood teacher education; nature relatedness; sustainable development*