



'Let's go outside': Icelandic teachers' views of using the outdoors

Kristín Norðdahl & Ingólfur Ásgeir Jóhannesson

To cite this article: Kristín Norðdahl & Ingólfur Ásgeir Jóhannesson (2016) 'Let's go outside': Icelandic teachers' views of using the outdoors, *Education 3-13*, 44:4, 391-406, DOI: [10.1080/03004279.2014.961946](https://doi.org/10.1080/03004279.2014.961946)

To link to this article: <http://dx.doi.org/10.1080/03004279.2014.961946>



Published online: 29 Sep 2014.



Submit your article to this journal [↗](#)



Article views: 921



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 3 View citing articles [↗](#)

‘Let’s go outside’: Icelandic teachers’ views of using the outdoors

Kristín Norðdahl* and Ingólfur Ásgeir Jóhannesson

School of Education, University of Iceland, v/Stakkahlíð, 105 Reykjavík, Iceland

(Received 10 June 2014; accepted 15 August 2014)

This article discusses the views of 25 Icelandic preschool and compulsory school teachers who were interviewed on the role of the outdoor environment in children’s learning. The teachers reported not being afraid to take children outside. These teachers valued the learning potentials of the outdoors more than they feared the possible risks. They believed that the outdoors could provide opportunities for (a) enhancing children’s play and learning (b) promoting children’s health, well-being, and courage, and (c) affecting children’s views, knowledge, and actions towards sustainability.

Keywords: teachers’ views; outdoor environment; play and learning; well-being; health and courage; sustainability education

Introduction

Considerable concern has been expressed in many countries about children’s lack of opportunities to experience the outdoors and learn from these experiences. This study aims to enhance the understanding of how teachers see the role of the outdoor environment in children’s learning. Here, the use of the outdoor environment is seen as both teacher-directed activities and children’s free play-based activities, whether in schoolyards, playgrounds, or in the closest neighbourhoods of the schools. This is often referred to as school-based outdoor learning (Fägerstam 2013). (Hereafter, we use the terms schoolyard and playground somewhat interchangeably, or we use schoolyard when referred to compulsory schools and playground when referring to preschools.)

In Iceland as in other Nordic countries, the outdoors is seen as positive part of children’s lives (Garrick 2009; Halldén 2009; Nilsen 2008; Waller et al. 2010). In a study of discourses regarding the outdoor environment in Icelandic policy documents, it was apparent that the outdoor environment is seen as something good for children. In the curriculum guidelines of both school levels, the outdoors is emphasised as a learning environment, as a place for developing attitudes towards the natural surroundings, and as a place for exercise and a healthy lifestyle (Norðdahl and Jóhannesson 2013). This emphasis on the outdoors has a long tradition in Icelandic preschools intended for children from one to six years of age, where children play outside each day (Einarsdóttir 2001; Sigurðardóttir 1952). But in compulsory schools, intended for children from 6 to 16 years of age, children’s outdoor play has traditionally been limited to the break between classes. We do not know much about how

*Corresponding author. Email: knord@hi.is

teachers use the outdoor environment in children's learning, though it likely varies between schools as well as between teachers at each school. In Iceland, however, there are signs that compulsory school teachers are using the outdoor environment in the school curriculum more than they did before. In Reykjavík, the capital of Iceland, 70% of compulsory schools report that they practise outdoor education on a regular basis (Óladóttir 2008).

This study was done in connection with a year-long research and development project about education for sustainable development (ESD) in Iceland called ActionESD. The aim of this project was to further understanding of ESD and to determine what is needed to encourage children's actions in that direction. In this project, the teachers worked with specialists in teacher education, and the outdoor environment was not especially emphasised on their behalf. However, from the beginning of the ActionESD project, many of the participating teachers strongly connected outdoor education and ESD and discussed them in some cases synonymously. Thus we thought that it was of interest to investigate how teachers connected outdoor education and ESD as well as how they saw the role of the outdoors in children's learning in general. Furthermore, in spite of national curriculum guidelines, teachers are the ones who mainly decide whether and how the outdoor environment is used in children's education, and consequently it is of considerable interest to study how they see the role of the outdoors in the school curriculum.

Theoretical background

Five types of theories and concepts about learning have influenced the research question and the interpretation of data. These include experience and communication, place-based education theory, theories of children's participation and decision-making, and the concept of affordance.

This study is influenced by the view that children's experience of the physical environment is important for their learning. In the literature about outdoor education it is obvious that the experience offered by the outdoors is the core of outdoor education (see e.g. Jordet 2010; Priest 1986). Dewey (1938/2000) saw experience as a communication between the (physical and social) environment and the individual involved. He argued that experience involves both active and passive elements; the active element consists of trying to do something, and the passive element involves undergoing the consequences of what we did (Dewey 1916/1966). When a child is building a sand castle, the sand 'reacts' depending on what the child does and how wet it is. According to Dewey (1916/1966), this is an educational experience for the child if he or she reflects on how the water affects the sand in the construction of the castle. It is the teacher's obligation to choose an environment in a teaching situation that is likely to suit the children's abilities and needs in providing an experience that is of value for the children's education (Dewey 1938/2000).

The study is also influenced by the view that communication is important in children's learning. Dewey (1938/2000) saw the importance of reflection as a very important part of experience. The socio-cultural theory of learning drawn from Vygotsky (1978) supports this and has influenced our view of how social interaction affects learning. Vygotsky saw communication between people to be important in the learning process and some things people can only learn from other people. According to this theory, children learn by interacting and discussing with other children and adults, especially those that are more knowledgeable than they. Language is thus seen as very important in the learning process (Vygotsky 1978).

Since the places where outdoor activities take place are of importance for this study, place-based theories have been influential. Place-based education emphasises using the places where children live, the local environment, and the community in the school

curriculum. By this, place-based education addresses one of Dewey's central concerns that schools should not be isolated from the community around them but rather use it both as physical and social learning environment and participate in it (Smith 2013). Greenwood (2013, 93) argues that place-conscious education can contribute to environmental education 'that is culturally responsive, and committed to care for land and people, locally and globally'.

As this study is done in a project about ESD, the theoretical background for ESD has influenced the study, especially ESD's focus on children's participation and decision-making regarding their local environment based on their own experience and knowledge. It is seen as important to encourage children to act on their decisions in favour of the well-beings of themselves and others (Breiting 2008). These theories are built on children's right to be heard on issues that affect them (United Nations 1989, 2005) and to be recognised as competent participants in society (Dahlberg and Moss 2005; Einarsdóttir 2012). Some scholars stress the importance of empowering children so they can see themselves as actors of change in their own lives and in society (Ärlemalm-Hagsér 2012; Davis 2010; Ferreira 2013; Percy-Smith 2010). Therefore, getting to know the local community and participating in it by means of integrating the outdoor environment into children's learning is seen as an important part of sustainability education (SE) (Ardoin, Clark, and Kelsey 2013; Kozak and Elliott 2011) and in developing action competence (Breiting and Mogensen 1999; Jensen and Schnack 1997).

In collecting and analysing the data about teachers' ideas of the role of the outdoor environment in children's learning, the study draws on Gibson's (1979) theory of the affordance of the environment. Gibson saw people's interpretation of what the physical environment has to offer for their actions as the affordance of the environment. The affordance also has to do with the capability of the people involved, and it may not be the same for all. Thus the affordance of the environment describes the interaction between people and the environment.

Teachers' views of the outdoor environment

When reviewing the literature about how teachers see the role of the outdoor environment in children's learning, it is apparent that they focus on how the outdoor education can affect children in multiple ways and how it can be used in education.

The outdoor environment offers experiences important for children's learning

Studies of teachers' views in relation to the outdoors show that they believe children's experience outdoors is important in their learning. Preschool teachers in Scandinavia see outdoor play on a playground as an important part of children's everyday experience in preschool (Björklid 2005; Moser and Martinsen 2010; Szczepanski and Dahlgren 2011). The sensory stimuli the outdoor environment offers are often seen as important for children's learning. An example of this is the preference of early childhood educators in Canada who wanted the playground in preschools to provide diverse opportunities of experience. Most of them wanted more sensory stimuli installed, such as plants, shade, and water, as well as space and more challenging facilities, such as play equipment, fences, and small houses to play in (Herrington 2008). Preschool student teachers in the USA shared this view and stated that they would use the natural outdoor environment mostly because of the opportunities it offers for children's varied experiences (Ernst and Thornabene 2012).

It is interesting to note that often the outdoor environment, or schoolyard, most accessible in the compulsory school is not seen as part of the teaching environment. Thus only one out of five Swedish compulsory school principals regarded the schoolyard as a teaching resource and instead mostly saw it as a place for children's play and social interactions (Björklid 2005). Other studies show that teachers in Swedish compulsory schools (Magntorn and Helldén 2006; Szczepanski and Dahlgren 2011), as well as secondary school teachers, (Fägerstam 2013) stressed the importance of children's outdoor experiences for their learning. Similarly, teachers from Finland, Sweden, the UK, and the USA found that their school garden programme improved children's learning (Education Development Center and Boston Schoolyard Funders Collaborative 2000).

The outdoor environment provides opportunities to further children's health and well-being

There is also a widespread belief that spending time outdoors, especially in a natural, pollution-free environment, is good for children's physical health and well-being. In studies from Australia (Davis 2010), the USA (Ernst and Thornabene 2012), and Sweden (Björklid 2005; Szczepanski et al. 2006) preschool and compulsory school teachers, as well as student teachers, have been found to share this view.

Despite the benefits of using the outdoors in children's learning, teachers in many countries are concerned about diverse risks in the outdoor environment (Kernan and Devine 2010; Rickinson et al. 2004). This concern has developed in recent years or decades and Stephenson (2003) sees it as the impact of discourse about the dark side of risk, emphasising the possibility of failure and injury. How people view risks differs in different countries. In studies of preschool practitioners' attitudes in Norway (Sandseter 2012) and Australia towards children's risk-taking, practitioners from both countries found children's risky play important for their development and well-being. But a difference was found in the extent of their support for such play, with the Australian practitioners identifying more difficulties in doing so than the Norwegians (Little, Sandseter, and Wyer 2012). Preschool student teachers in the USA mentioned safety concern as one of the reasons for not wanting to use the natural environment in children's education (Ernst and Tornabene 2012). However, physical challenges or risk-taking are among the possibilities the outdoor environment often offers and which many children enjoy (Norðdahl and Einarsdóttir 2014; Sandseter 2010; Stephenson 2003).

The outdoor environment offers opportunities to further children's environmental awareness

Being outdoors and experiencing nature is often believed to cultivate children's positive attitudes towards the environment and their willingness to protect it and live in a more sustainable way (Chawla 2007; Davis 2010; Louv 2010). Findings from two Swedish studies indicate that preschool teachers (Årlemalm-Hagsér 2013) and compulsory school teachers (Szczepanski and Dahlgren 2011) share this belief. Environmental education centres personnel and secondary school teachers from Australia have also found encounters with, and knowledge about, nature to be important for developing children's environmental concerns as well as their place identity (Fägerstam 2012). Rickinson et al. (2004), however, note that research findings do not support the hypothesis that nature experiences automatically further children's environmental awareness and action. Sandell and Öhman (2010) point out that in the 1980s, the connection between outdoor experiences and people's willingness to take care of nature and do something to preserve it was seen as the main role of

outdoor education. They state that a more pluralistic approach in environmental education in later years has created a danger that people's relation to nature will be neglected in environmental education and, later, in SE.

Research focus

In a literature review of research on outdoor learning, Rickinson et al. (2004) indicate 'blank spots' in our knowledge of how teachers see the outdoor classroom and what aims are important to seek. In this article we explore the views of 25 Icelandic teachers on the role of the outdoor environment in children's learning. This study also contributes to our knowledge of how teachers connect the use of the outdoor environment to ESD as the participants in the study had experience in using the outdoors in children's learning and had also participated in a project about ESD.

The study will explore how teachers with experience in outdoor education and who participated in an ESD project view the role of the outdoor environment in children's learning.

Method

Participants

The sample in the study is a purposive sample (Lichtman 2010) drawn from eight schools participating in a research and development project intended to study and promote ESD, called ActionESD (Educational action for sustainable development) (see e.g. Jóhannesson et al. 2011). As these teachers had experience in using the outdoor environment in their teaching, and were involved in a project on SE, which focuses, among other things, on attitudes and actions towards the environment, they were likely to connect ESD to the use of the outdoors. Both experiences mean that these teachers are likely to be 'information-rich' sample (Gall, Borg, and Gall 1996, 218) knowledgeable about the role of the outdoor environment in children's learning. Altogether, 25 teachers, compulsory school principals, and preschool directors from four compulsory schools and four preschools were interviewed in the spring of 2009 after a year-long cooperation in the ActionESD project.

From each school participating in the project, the principal or the director was selected for this study, along with a project contact person with the ActionESD group, and one or two other teachers participating in the project (see also Pálsdóttir and Macdonald 2010). Four compulsory school principals (P), Baldur, Rafn, Ingibjörg, and Kolfinna, and four preschool directors (D), Alda, Freyja, Hildur, and Sara, were interviewed. Eight compulsory school teachers (CT), Birna, Björk, Ingunn, Inga, Klara, Katla, Rakel, and Ragna, as well as nine preschool teachers (PT), Alma, Anna, Fanny, Frigg, Hekla, Hulda, Sif, Sjöfn, and Sunna, were interviewed individually, except for one preschool where an interview with four was conducted. All names are pseudonyms. We refer to the whole group as teachers, interviewees, or participants.

Most of the compulsory teachers taught young children (six to nine years of age), but some also taught at a middle (10–12 years of age) or at secondary school level (13–15 years of age), for example, science teachers. Participants from the preschools were qualified preschool teachers, one being an art teacher and one a preschool student teacher. In addition, there was one preschool practitioner with no teacher education. The participating pre- and compulsory school teachers were 29–63-years old; they had a working experience of 5–32 years with an average of a little over 18 years. The average management experience of principals and directors was about seven and a half years.

Data gathering and analysis

Interviews were conducted at the end of the ActionESD project to study teachers' and principals' ideas about the outdoor environment and its role in children's learning, both in SE and education in general. These interviews dealt with different aspects of the project. The duration of individual interviews ranged from 40 to 130 minutes and the group interview lasted 108 minutes. Two researchers, always including one of the authors, were present at each interview, and the majority of the interviews were conducted by the third researcher (Pálsdóttir and Macdonald 2010). While specific questions regarding the outdoor environment constituted a relatively small part of these interviews, the participants often expressed their views about the outdoors in discussions focusing on other issues.

In the interviews, the participants were asked about different aspects of the role of the outdoor environment in children's learning. They were asked whether they used the school's outdoor environment with the children, why and how they used it, and what kind of outdoor environment they preferred in the school neighbourhood to further children's play and learning.

The intention in the study was to investigate the diversity of teacher's views on the role of the outdoors or the affordance of the outdoor environment. Even though we were acquainted with the relevant literature and theories, we tried to keep an open mind and waited to see what the data would tell us. We used a thematic research analysis method described by Braun and Clarke (2006) in this process. The interviews with the teachers were transcribed, read many times, and coded according to how the teachers saw the affordance of the outdoor environment in children's learning. Then potential themes from the codes were identified. In reviewing the themes we decided to make clusters of themes, and in the end there were three themes we could clearly define and name. In this process, a draft report about the findings was compiled.

Validity and limitations

This purposive sample is simultaneously valuable and yet has limitations. It is valuable because the researchers became acquainted with the teachers during their year-long cooperation. We also knew a lot – but not all – about the situation and the outdoor environment around each school. This gives us the confidence to state that the answers are honest reports. The sample is also valuable because all the teachers had experience in using the outdoor environment in children's learning. The main limitation of the research relates to the fact that the interviews were conducted in the context of an evaluation of teachers' experience in a SE project. This could have encouraged the teachers to connect the use of the outdoor environment to SE and thus the result should be seen in this light. Such a context also offers less opportunity to make general conclusions about other teachers' views from the findings of this study. At the same time, these teachers provided information about the connections of the affordance of the outdoor environment and ESD that was valuable for answering the question asked in the study.

Findings

All our participants had experience in using the outdoor environment in their teaching. Some of the compulsory school teachers used the outdoors occasionally, for example, in the spring or autumn, or when it was relevant to the topic they were working on, while others used the outdoors more often, even once a week. The preschool teachers said the children played in the playground each day, although there were days when they did not

go out because of bad weather. They mentioned going outside the playground once or twice a week in the summertime. Most of the teachers of both school levels referred to the outdoor environment beyond the schoolyard or playground when asked about outdoor area they used in their teaching. Most of the compulsory teachers referred to the natural environment when asked about this, whereas the preschool teachers referred to both natural and man-made environments. The compulsory school teachers said the places they visited outside the school grounds were forests, moor and grasslands, riverside, and the seashore. The preschool teachers said they visited moors – and grasslands, the seashore, a tree garden, and other playgrounds in the area. They also investigated the roads and the location of children's homes and visited institutions of the municipalities, museums and diverse workplaces in the neighbourhood.

In the analysis, three overarching themes or clusters of themes emerged from the data about the affordance of the outdoor environment according to the teachers: (a) children's play and learning, (b) children's health, well-being, and courage; and (c) children's views, knowledge, and actions towards sustainability. Here these three themes will be described and examples from the interviews given.

Children's play and learning

The first major theme we identified in the analysis of the data was the teachers' perception of the outdoor environment as a place for children's play and learning. The compulsory school teachers mentioned using the outdoors to teach different subjects like language, music, mathematics, and cooking. Most importantly, they explained how they used the outdoors to teach about the environment through all their senses.

Many interviewees reported that it is important for children to have their own experience of things outside. As Rakel (CT) said, she thought that when outside, the children:

are not in a constructed environment discussing things that are maybe in the school ground ... It is easier for them to learn the concepts when they have real examples and experience things instead of just reading about them. The experience is the most important.

A few compulsory school teachers mentioned using a man-made environment in the playground. Rakel (CT) argued: 'We have had a discussion about physics regarding the seesaw or the friction in the slide.'

The preschool teachers also mentioned many examples of how they used the natural environment to learn about nature and about children's own investigation of small animals, plants, water, sand, mud, and the weather. An example of this is what Anna (PT) told us about children's investigation: 'They find spiders and snails and put them in a box with a magnifying glass and we investigate them.'

Alda (D) said that the preschool teachers point out various aspects of the environment to children. For instance, when walking outside the playground the children 'observe their area and look for ... seasonal changes', and she added, 'We talk about the weather and investigate the weather. We talk about that each day.'

The preschool teachers also pointed out how they used the constructed environment outside to further children's learning about their home town, its history, and culture. As Frigg (PT) said, 'We visit the fish market, especially with the older children, because we are working on fish and preparing for the festival, The Constantly Happy Fisherman (I. Sjóarinn síkati).' Other preschool teachers mentioned that they teach children traffic signs, names of places, and about different institutions in their municipalities. Hulda

(PT) also maintained that the five-year-olds knew more about their hometown than their parents because of regular field trips conducted with the children.

Included in this theme are teachers' ideas of how the outdoor environment supports children's play and learning in multiple ways. This is mostly about how teachers see the importance of experiencing the outdoor environment, both natural and man-made, can offer children for their play and learning.

Children's health, well-being, and courage

This cluster of themes includes how the teachers saw the role of the outdoor environment in furthering children's physical movements and well-being, as well as developing their ability to tackle risks and build up courage.

Both preschool and compulsory school teachers pointed out the importance of children's outdoor play to release extra energy. As Ingunn (CT) pointed out, after spending a whole morning outside with the children, that they were 'happy and tired ... and then they maybe sit and work on mathematics without a sound ... for two hours'. Many teachers of both school levels also mention physical movement and 'being out in the fresh air'. Some compulsory school teachers expressed concerns about children's lack of exercise and resulting weight gain. Many participants referred to the role of the school in encouraging children's physical exercise in the outdoors. Björk (CT) found such activity to be benefits of outdoor education since it was important for children's health. She said that this was something that teachers 'in the compulsory school have to begin to think about'.

The compulsory school teachers discussed the fact that taking the children outdoors is a way to create diversity in teaching and thus stimulate the children's interests; they saw this as a good way to meet the needs of children who 'find it difficult to sit for a long time and be in the classroom', as Ragna (CT) phrased it. Klara (CT) said:

I experienced it with a group of boys that were problematic inside. Outside they were not the same children. They just needed to have something to do ... fetching firewood, putting it on the fire and watching it. They need other things than the girls.

The compulsory school teachers also referred to the outdoors as a place for teaching children to 'be a good group' and solve problems among the children, or as Ingibjörg (P) said, 'There are often some conflicts in the school grounds that need solving.' In this way, the outdoors was seen as a learning place for good communication among the children and contributing to their well-being.

The teachers were not specifically asked about risks and dangers, but they were asked what could limit their use of the outdoors. Only one preschool director mentioned related risks, a topic which may have seemed particularly relevant in his case since this director was in charge of a school with regular field trips on the agenda. A few compulsory school teachers addressed risks in general, but did not see this aspect as limiting the use of the outdoors, though Klara (CT) mentioned it specifically as something that must be taken into consideration when going out with children. She said, 'There are some risks of accidents, for example, when we got the fireplace. If you are lighting a fire there have to be two grown-ups present. I would prefer this arrangement, if you have a whole class of children.'

The preschool teachers who mentioned risks in the outdoor environment addressed them more in the context of the need to teach children to tackle risks in the environment in order to build up their courage. Hekla (PT) said that the 'parents thought it was amazing how good the children were in traffic education ... they learned to know how to

avoid the dangers ...'. The teachers also noted that children wanted to challenge themselves and try out new things 'such as climbing on big rocks' or on the top of the play houses in the playground. Hekla (PT) argued that in society there is a trend to overprotect children, but she explained that 'there is a difference between protecting [the children by] wrapping them in cotton or ... letting them try out things'.

In this theme, we grouped together items teachers brought up concerning the importance of the outdoor environment for enhancing children's physical health. Teachers also noted that the use of the outdoor environment in teaching helps children to learn to interact with one another. Furthermore, they argued that the outdoor environment had a role in furthering children's self-esteem through learning to handle risks in their surroundings.

Children's views, and knowledge of, and actions towards sustainability

As mentioned earlier, all of these teachers worked on a project about SE so it was interesting to hear whether, and if so how, they connected SE to outdoor education. Almost all interviewees saw a strong connection between using the outdoors and SE. Half of them referred to these as almost synonymous, though they had some difficulties in explaining why and how; as Hildur (D) said, 'It is just one and the same, I believe.' When asked further, the teachers expressed the following reasons presented here in three subthemes: (a) getting to know the outdoors will help children respect it and foster willingness to protect it, (b) teaching children about their place in nature and how to use it in a sensible way, and (c) encouraging children's participation in society.

Getting to know the outdoors will help children respect it and foster willingness to protect it

Many teachers at both school levels said that taking children outside is a way of providing them with an opportunity to come into contact with nature and enjoy being there. These teachers saw it as fundamental and necessary to further children's environmental awareness, thereby encouraging them to respect nature and assist in its preservation.

When asked specifically about the connection between using the outdoors and SE, Freyja (D) argued, 'I had not thought about this connection directly. It is just being outside and enjoying nature. Yes of course that is what it is.' Birna (CT) said in this connection:

I think ... taking children on these trips and teaching them to enjoy things we have here all around us ... getting to know both plants and birds and ... geography ... then they will respect it more, respect nature.

Others said that this was obvious and would happen naturally. Ragna (CT) stated that if children experienced growing their own plants they would respect other people's plants, and Klara (CT) remarked that it is important to focus children's attention, for example, on the sounds of nature, to enhance their environmental awareness.

It was apparent that connecting sensual experiences, especially when they were positive, was in many teachers' minds a suitable way of encouraging children to be positive towards the environment. The teachers saw it as a necessary element in education for sustainability to learn by doing, thus building the ground experience for respecting the environment.

Teaching children about their place in nature and how to use it in a sensible way

Teachers of both school levels stated that the outdoors offered numerous opportunities to use environmental and social knowledge to teach children about their place in nature, as

well as how our behaviour can affect the environment and how we can make sensible use of nature and our surroundings.

Teachers of both school levels emphasised the importance of cleaning up garbage outdoors and teaching children not to litter. In this connection Inga (CT) summarised, 'You are always stressing that they should ... not throw things; they should pick up litter, and not ruin the moss'.

Ingunn (CT) connected using the outdoor environment and SE so as to help children see the relationship between man and nature: 'I went out with them ... and they were looking at the water and asked me, Can we drink this?' She argued that it is important for children to think about what happens to sewage from the community. She also said that if children are taught outside, it is easier to refer to shared resources like air and water which connect and concern all of us.

Another example of how the teachers connected the outdoors and SE came from Rafn (P), who discussed a Brent Goose project that the teachers and the children in the whole school work on each spring. In spring, the Brent Goose spend a few weeks grazing on the shores and agricultural land in the neighbourhood of the school, before flying to Canada for breeding. Rafn emphasised the importance of having opportunities in the neighbourhood that could further children's learning about our responsibility to secure a habitat for these birds and our international responsibility in protecting them.

Anna (PT) used when children take care of the animals in the playground as an example of how the use of the outdoors connected to SE. They 'find it very exciting to pick the eggs ... and we also have compost and things like that'.

Teachers of both school levels pointed out the importance of learning about their community, although the preschool teachers emphasised it more strongly. Freyja (D) said that she thinks, 'SE involves many things. Culture and ... connecting with the community and ... we do lots of visits to institutions'. She continued to discuss the importance of children learning about the special characteristics of their municipalities.

This theme comprises teachers' ideas about how the outdoor environment can offer opportunities to build children's knowledge. Thus encouraging them to reflect on how we should behave in a sustainable way and how important nature is to our lives as well as other organisms.

Encouraging children's participation in society

Participation in society, where children could have some impact on what happens or see them self as actors of change, was also considered important in SE. Children's outdoor experience gives them diverse knowledge about their surroundings, which can be valuable for decision-making about the outdoor environment. Kolfinna (CT) used the example of planning footpaths; the children know where it is best to walk and, therefore, where footpaths should be placed. Participation in decisions about their own environment, for example, the school grounds, was also seen as important and three of the schools worked on a project about this subject.

Hekla (PT) noted that in regular fieldtrips with the children they loved walking by the seashore and watching the sea. When the municipality built a barrier at the seashore the children could not observe the sea any more. The children and teachers discussed this and decided to suggest a platform where, you could go up on the barrier and look out over the sea. The children made drawings of the platform and took it to a meeting with the town's mayor. The mayor liked their idea; about a month later the platform was there and they could see the sea again. Hildur (D), in the same preschool, made the point that

if you are going to teach children to participate in society you have to take them outside, especially outside the playground.

This theme comprises teachers' ideas of how the outdoor environment offers opportunities to participate in society. Children get to know the environment and therefore they are knowledgeable about it and can come up with ideas which may result in environmental changes. This can further their action competence.

Discussion

This study investigates 25 Icelandic teachers' views about the role of the outdoors in children's learning. All teachers had used the outdoor environment in their teaching, and they valued the positive educational potential more than the possible risks that could be involved in taking children outside. It was interesting that most of the teachers at both school levels referred to the outdoor environment beyond the schoolyard or playground when discussing their own teaching or planned activities with children. They seemed to view the schoolyard and playground as places mostly for children's own free play and inquiries, and it was obvious that teachers at both school levels saw this as important for children's learning. This supports a Swedish study in which the compulsory school principals saw the school grounds mainly as a place for play rather than a place for teaching (Björklid 2005).

Regarding how the teachers saw the role of the outdoors as important in children's play and learning they highlighted the importance of children's sensory experience of various phenomena that cannot be found inside for their learning in accordance with experience-based theories (Dewey 1916/1966; Jordet 2010). The teachers also made the point that they teach children names of things and places as well as talking about what they experienced outside. This is consistent with theories that emphasise the importance of communication for the learning process and that some things, we can only learn from others (Vygotsky 1978). Furthermore, these results support conclusions from other studies to the effect that teachers find combining communication and children's experience of the physical environment important in their learning (Herrington 2008; Jordet 2010; Magntorn and Helldén 2006; Szczepanski and Dahlgren 2011).

The participants also saw the outdoors as having a role in furthering children's health and well-being, which thus supports findings from earlier research that teachers see the outdoors as important for children's physical health and well-being (Björklid 2005; Davis 2010; Ernst and Thornabene 2012; Szczepanski et al. 2006). The compulsory school teachers stated that children are spending increasing time indoors and argued that the school should react against this development. They further, emphasised the health-improving effects of the outdoors such as clean air and possibilities for physical movement. The compulsory school teachers saw using the outdoors as a way to increase diversity in their teaching, which would help them to meet the needs of all children. This is consistent with Szczepanski and Dahlgren's (2011) findings of how teachers see the opportunities of outdoor education. Thus, using the outdoors helped the compulsory school teachers to look at children's learning and overall development as something they could work on simultaneously and also to accommodate the needs of all children. On the other hand, the preschool teachers did not mention using the outdoors to increase diversity in their teaching; indeed they seldom spoke of what they did with children as 'teaching'. In contrast, they saw outdoor play as part of the daily routine. This supports research findings about preschool teachers in Scandinavia seeing playing outdoors as something that is part of children's everyday experience

in preschool (Björklid 2005; Moser and Marinsen 2010; Szczepanski and Dahlgren 2011).

The finding of this study regarding how the teachers viewed the possible risks of children having accidents in the outdoor environment was interesting. They seemed to think about this as something they had to take into consideration but did not see it as a hindrance. These Icelandic teachers valued the educational potential of the challenges the outdoors offered children to build up courage more than they feared the possible dangers of taking children outside. This is in step with findings from Norway (Sandseter 2012) and conclusions about how teachers there and in Sweden regard risk concerning children and the outdoors (Magntorn and Helldén 2006; Sandseter 2012). However, these findings are in contrast with the fear for children's safety that seems to hinder teachers in many other countries from taking children outside (Ernst and Tornabene 2012; Kernan and Devine 2010; Little, Sandseter, and Wyer 2012; Rickinson et al. 2004). Viewing children's outdoor play and learning so positively may be something special to the Nordic countries. This view probably has to do with the culture of outdoor life in these countries (Waller et al. 2010) and the low threat of lawsuits in case of accidents.

The participants in this study also saw the role of the outdoor environment to further children's views, knowledge, and action towards sustainability. As mentioned before, these teachers were participating in a project about ESD, and this background gave them a new perspective on the use of the outdoors. This was valuable for our understanding of the possible role of the outdoor environment in children's learning, so it did not come as a surprise that these Icelandic teachers connected the use of the outdoors with ESD. Even though, some teachers used the terms outdoor education and SE synonymously in the beginning of the interviews and had difficulty explaining why, some seemed to realise that environmental awareness is not something that happens automatically, as Rickinson et al. (2004) argue that many teachers believe. When asked further, it appeared that the teachers connected the use of the outdoors and SE in three ways. Two of those are well known: first, that experience of the outdoors helps create positive attitudes towards nature, as can also be seen in the literature (Chawla 2007; Davis 2010; Louv 2010); and second, that the outdoor environment is well suited to learning about the place of man in nature, which can help to improve man's behaviour in nature (Ärlemalm-Hagsér 2013; Davis 2010; Fägerstam 2012, Szczepanski and Dahlgren 2011). The third way that the teachers connected the use of the outdoors and SE had to do with children's participation in their community. The teachers gave examples of how using the outside provided children with opportunities to participate in and affect their environment and community. Some claimed that this was something they found hard to do without going outside the playground. These examples indicate that an increased emphasis on participation in educational projects regarding the environment does not have to cause a loss of children's outdoor experience, as Sandell and Öhmann (2010) argued. On the contrary, these findings support the recommendations of scholars that the outdoors be seen as a place for children's participation in society, offering them opportunities to be actors of change and thus learn how decisions are made (Ardoin, Clark, and Kelsey 2013; Ärlemalm-Hagsér 2013; Greenwood 2013).

The findings of this study contribute to the growing field of research about how teachers in various socio-cultural contexts see the opportunities of using the outdoor environment in children's learning. These teachers show us how the outdoors can be used as a diverse learning environment. The focus is not only on the experiences the outdoors provides to further play and learning and the improvement of health and well-being the outdoors can offer; but this study also contributes to our knowledge about the connection to SE. These findings reveal that the outdoors can offer opportunities for children to become visible in the

society and offer children opportunities to experience themselves as actors of change in the society by participating in it.

Conclusions

The findings of the study indicate that the Icelandic teachers who participated in the study valued the educational potentials of the outdoors much more than they feared the possible dangers children could be exposed to. These teachers saw diverse opportunities of the outdoor environment for children's learning, not only as a place for stimulating their play, learning, health, and well-being, but also as a place that could affect children's views and action regarding their environment in a sustainable way.

Among the most important implications of this study for school curricula is that many outdoor places afford opportunities for children's learning beyond that which can be done indoors. According to the teachers, these places offer different experiences that children could learn from directly, or these experiences can be used as grounds for discussions that are important for children's learning in many subject areas. This is something that teachers of all school levels can take notice of in their teaching and use the opportunities the neighbourhood offers for children's learning. This should also be considered when schools and their surroundings are designed.

Another important implication is to consider whether these findings may focus attention away from the potential risks and dangers connected to the outdoors. The risk discourse seems dominant in relation to using the outdoors in the school curriculum in many countries. Of course, it is important to be aware of the dangers children can face outdoors and take proper precautions to avoid them. Nevertheless, it is important to note the importance of providing children with an opportunity to tackle such dangers instead of avoiding them. Thus circumstances that some teachers may find dangerous can be used to further children's self-esteem and courage.

The third implication of the study that we wish to draw attention to concerns how the outdoors can be used in ESD. These teachers' experiences in an ESD project gave them opportunities to connect ESD and the use of the outdoors in children's learning, something that is of value for the design of the school curricula. Teachers' views of how experience and knowledge gained outdoors could affect children's views and action regarding their environment in a sustainable way. Also important are teachers' views about the outdoors as a place for children's participation in society, where they can experience themselves as actors of change. This approach to school curricula can help to make the school a part of the society – as well as help to build a sustainable society.

It would be of interest to follow up some of the findings in this study, such as how the teachers saw the connection between indoor and outdoor learning and how they consider the role of the schoolyard or the playground in their teaching. Why teachers in some countries are more afraid to take children outside than those in other countries also needs further investigation. This would make it possible to better understand what causes such difference and which social phenomena cultivate an atmosphere of fear in some countries more than others.

Acknowledgements

The authors acknowledge the financial support of The Nature Conservation Fund of Pálmi Jónsson (Náttúruverndarsjóður Pálma Jónssonar), the Environmental and Energy Research Fund (Umhverfis-og orkurannsóknasjóðurinn) owned by Reykjavík Energy (Orkuveita Reykjavíkur), the municipal energy company of Reykjavík, and the Research Fund of the University of Akureyri.

References

- Ardoin, N. M., C. Clark, and E. Kelsey. 2013. "An Exploration of Future Trends in Environmental Education Research." *Environmental Education Research* 19 (4): 499–520. doi:10.1080/13504622.2012.709823
- Ärlemalm-Hagsér, E. 2012. "Lärande för hållbar utveckling i förskolan: Kunskapsinnehåll, delaktighet och aktörskap kommunicerat i text [Education for Sustainable Development in Preschool: Knowledge Content, Participation and Agency]." *Nordisk barnehageforskning* 5 (14): 1–17. Accessed May 8, 2014. <http://journals.hioa.no/index.php/nbf/article/view/417>
- Ärlemalm-Hagsér, E. 2013. "Respect for Nature. A Prescription for Developing Environmental Awareness in Preschool." *Center for Educational Policy Studies Journal* 3 (1): 25–44. Accessed May 8, 2014. <http://paper.researchbib.com/?action=viewPaperDetails&paperid=3434&uid=r49513>
- Björklid, P. 2005. *Lärande och fysisk miljö: En kunskapsöversikt om samspelet mellan lärande och fysisk miljö i förskola och skola* [The Learning Process and the Physical Environment: Literature Review Regarding the Relationship Between Learning and the Physical Environment in Preschool and School]. Stockholm: Myndigheten för skolutveckling. Accessed May 8, 2014. <http://www.skolverket.se/publikationer?id=18270>
- Braun, V., and V. Clarke. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3 (2): 77–101.
- Breiting, S. 2008. "Mental Ownership and Participation for Innovation in Environmental Education and Education for Sustainable Development." In *Participation and Learning: Perspectives on Education and the Environment, Health and Sustainability*, edited by A. Reid, B. B. Jensen, J. Nikel, and V. Simovska, 159–180. London: Springer.
- Breiting, S., and F. Mogensen. 1999. "Action Competence and Environmental Education." *Cambridge Journal of Education* 29 (3): 349–353. doi:10.1080/0305764990290305
- Chawla, L. 2007. "Education for Strategic Environmental Behaviour." *Environmental Education Research* 13 (4): 437–452. doi:10.1080/13504620701581539
- Dahlberg, G., and P. Moss. 2005. *Ethics and Politics in Early Childhood Education*. London: RoutledgeFalmer.
- Davis, J. M. 2010. "What Is Early Childhood Education for Sustainability?" In *Young Children and the Environment: Early Education for Sustainability*, edited by J. M. Davis, 21–42. Cambridge: University Press.
- Dewey, J. 1916/1966. *Democracy and Education: An Introduction to the Philosophy of Education*. New York: Macmillan.
- Dewey, J. 1938/2000. *Reynsla og Menntun* [Experience and Education] (in Icelandic) (G. Ragnarsson, Icelandic translation). Reykjavik: Rannsóknarstofnun Kennaraháskóla Íslands.
- Education Development Center, and Boston Schoolyard Funders Collaborative. 2000. *Schoolyard Learning: The Impact of School Grounds*. Newton, MA: Education Development Center. Accessed May 8, 2014. http://promiseofplace.org/research_attachments/schoolyard.pdf
- Einarsdóttir, J. 2001. "Starfsaðferðir og sannfæring leikskólakennara [Preschool Teachers' Practices and Beliefs]." *Uppeldi og menntun* 10: 149–165. http://timarit.is/view_page_init.jsp?gegnirId=000527098
- Einarsdóttir, J. 2012. "Raddir barna í rannsóknum [Children's Voices in Research]." In *Raddir barna* [Children's Voices], edited by J. Einarsdóttir and B. Garðarsdóttir, 13–27. Reykjavik: Háskólaútgáfan & RannUng.
- Ernst, J., and L. Tornabene. 2012. "Preservice Early Childhood Educators' Perceptions of Outdoor Settings as Learning Environments." *Environmental Education Research* 18 (5): 643–664. doi:10.1080/13504622.2011.640749
- Fägerstam, E. 2012. "Children and Young People's Experience of the Natural World: Teachers' Perceptions and Observations." *Australian Journal of Environmental Education* 28 (1): 1–16. doi:10.1017/ae.2012.2
- Fägerstam, E. 2013. "High School Teachers' Experience of the Educational Potential of Outdoor Teaching and Learning." *Journal of Adventure Education & Outdoor Learning* 14 (1): 56–81. doi:10.1080/14729679.2013.769887
- Ferreira, J. 2013. "Transformation, Empowerment, and the Governing of Environmental Conduct: Insights to Be Gained from a "History of the Present" Approach." In *International Handbook of Research on Environmental Education*, edited by R. Stevenson, M. Brody, J. Dillon, and A. E. J. Wals, 63–73. New York: Routledge.

- Gall, M. D., W. R. Borg, and J. P. Gall. 1996. *Educational Research: An Introduction*. New York: Longman.
- Garrick, R. 2009. *Playing Outdoors in the Early Years*. London: Continuum.
- Gibson, J. J. 1979. *The Ecological Approach to Visual Perception*. Boston, MA: Houghton Mifflin.
- Greenwood, D. A. 2013. "A Critical Theory of Place-Conscious Education." In *International Handbook of Research on Environmental Education*, edited by R. Stevenson, M. Brody, J. Dillon, and A. E. J. Wals, 93–100. New York: Routledge.
- Halldén, G. 2009. "Innledning." In *Naturen som symbol för den goda barndomen* [Nature as a Symbol of the Good Childhood], edited by G. Halldén, 8–24. Stockholm: Carlsson bokförlag.
- Herrington, S. 2008. "Perspectives from the Ground: Early Childhood Educators' Perceptions of Outdoor Play Spaces at Child Care Centers." *Children, Youth and Environments* 18 (2): 64–87. Accessed May 8, 2014. <http://www.jstor.org/stable/10.7721/chilyoutenvi.18.2.0064>
- Jensen, B. B., and K. Schnack. 1997. "The Action Competence Approach in Environmental Education." *Environmental Education Research* 3 (2): 163–178. doi:10.1080/1350462970030205
- Jóhannesson, I. Á., K. Norðdahl, G. Óskarsdóttir, A. Pálsdóttir, and B. Pétursdóttir. 2011. "Curriculum Analysis and Education for Sustainable Development in Iceland." *Environmental Education Research* 17 (3): 375–391. doi:10.1080/13504622.2010.545872
- Jordet, A. N. 2010. *Klasserommet utenfor. Tilpasset opplæring i et utvidet læringsrom* [The Outdoor Classroom. Adapted Learning in a Broader Learning Space]. Oslo: Cappelen Akademisk Forlag as.
- Kernan, M., and D. Devine. 2010. "Being Confined Within? Constructions of the Good Childhood and Outdoor Play in Early Childhood Education and Care Settings in Ireland." *Children & Society* 24: 371–385. doi:10.1111/j.1099-0860.2009.00249.x
- Kozak, S., and S. Elliott. 2011. *Connecting the Dots: Key Learning Strategies for Environmental Education, Citizenship and Sustainability*. Executive summary 2011. Accessed January 22, 2014. http://lsf-1st.ca/media/LSF_Connecting_the_DOTS_ExecutiveSummary.pdf
- Lichtman, M. 2010. *Qualitative Research in Education: A User's Guide*. 2nd ed. Los Angeles, CA: Sage.
- Little, H., E. B. H. Sandseter, and S. Wyver. 2012. "Early Childhood Teachers' Beliefs about Children's Risky Play in Australia and Norway." *Contemporary Issues in Early Childhood* 13 (4): 300–316. doi:10.2304/ciec.2012.13.4.300
- Louv, R. 2010. *Last Child in the Woods: Saving Our Children from Nature – Deficit Disorder*. London: Atlantic Books.
- Magntorn, O., and G. Helldén. 2006. "Reading Nature – Experienced Teachers' Reflections on a Teaching Sequence in Ecology: Implications for Future Teacher Training." *Nordina* 5: 67–82. Accessed September 19, 2014. <http://www.naturfagsenteret.no/c1520014/binfil/download2.php?tid=1509855>
- Moser, T., and M. T. Martinsen. 2010. "The Outdoor Environment in Norwegian Kindergartens as Pedagogical Space for Toddlers' Play, Learning and Development." *European Early Childhood Education Research Journal* 18 (4): 457–471. doi:10.1080/1350293X.2010.525931
- Nilsen, D. R. 2008. "Children in Nature: Cultural Ideas and Social Practices in Norway." In *European Childhoods: Cultures, Politics and Childhoods in Europe*, edited by A. James and A. L. James, 38–60. New York: Palgrave Macmillan.
- Norðdahl, K., and J. Einarisdóttir. 2014. "Children's Views and Preferences Regarding Their Outdoor Environment." *Journal of Adventure Education & Outdoor Learning*. doi:10.1080/14729679.2014.896746
- Norðdahl, K., and I. Á. Jóhannesson. 2013. "Children's Outdoor Environment in Icelandic Educational Policy." *Scandinavian Journal of Educational Research*. doi:10.1080/00313831.2013.821091
- Óladóttir, H. 2008. *Ársskýrsla 2008* [Annual Report 2008]. Reykjavík: Náttúruskóli Reykjavíkur.
- Pálsdóttir, A., and A. Macdonald. 2010. "Hlutverk skólustjóra í menntun til sjálfbærni: Reynsla af þróunarstarfi í fjórum grunnskólum [The Role of Principals in Education for Sustainability: Experience from a Development Project in the Four Compulsory School]." *Ráðstefnurit Netlu-Menntakvika* 2010. Accessed July 28, 2014. <http://netla.hi.is/menntakvika2010/004.pdf>
- Percy-Smith, B. 2010. "Councils, Consultation and Community: Rethinking the Spaces for Children and Young People's Participation." *Children's Geographies* 8 (2): 107–122. doi:10.1080/14733281003691368

- Priest, S. 1986. "Redefining Outdoor Education: A Matter of Many Relationships." *The Journal of Environmental Education* 17 (3): 13–15.
- Rickinson, M., J. Dillon, K. Teamey, M. Morris, M. Y. Choi, D. Sanders, and P. Benefield. 2004. *A Review of Research on Outdoor Learning*. London: National Foundation for Educational Research and King's College London.
- Sandell, K., and J. Öhman. 2010. "Educational Potentials of Encounters with Nature: Reflections from a Swedish Outdoor Perspective." *Environmental Education Research* 16 (1): 113–132. doi:10.1080/13504620903504065
- Sandseter, E. B. H. 2010. "'It Tickles in My Tummy!' Understanding Children's Risk-Taking in Play Through Reversal Theory." *Journal of Early Childhood Research* 8 (1): 67–88. doi:10.1177/1476718X09345393
- Sandseter, E. B. H. 2012. "Restrictive Safety or Unsafe Freedom? Norwegian ECEC Practitioners' Perceptions and Practices Concerning Children's Risky Play." *Child Care in Practice* 18 (1): 83–101. doi:10.1080/13575279.2011.621889
- Sigurðardóttir, V. 1952. *Starfshættir á leikskólum og dagheimilum* [Work Procedures in Preschools and Day Care Centres]. (Fjölrítað kennsluefni). Reykjavík: Uppeldisskóli Sumargjafar.
- Smith, G. A. 2013. "Place-Based Education: Practice and Impacts." In *International Handbook of Research on Environmental Education*, edited by R. Stevenson, M. Brody, J. Dillon, and A. E. J. Wals, 213–220. New York: Routledge.
- Stephenson, A. 2003. "Physical Risk-Taking: Dangerous or Endangered?" *Early Years* 23 (1): 35–43. doi:10.1080/0957514032000045573/
- Szczepanski, A., and L. O. Dahlgren. 2011. "Lärares uppfattningar av lärande och undervisning utomhus [Teachers' Perspectives of Learning and Teaching Outdoors]." *Didaktisk Tidskrift* 20 (2): 119–144.
- Szczepanski, A., K. Malmer, N. Nelson, and L. O. Dahlgren. 2006. "Utomhuspedagogikens sårart och möjligheter ur ett lärarperspektiv. En interventionsstudie bland lärare i grundskolan." *Didaktisk Tidskrift* 16 (4): 89–106.
- United Nations. 1989. *Convention on the Rights of the Child*. Accessed May 8, 2014. <http://www.ohchr.org/en/professionalinterest/pages/crc.aspx>
- United Nations. 2005. *General Comment No. 7. 2005. Implementing Child Rights in Early Childhood*. Accessed May 8, 2014. http://www.ecdgroup.com/docs/lib_004410633.pdf
- Vygotsky, L. S. 1978. *Mind in Society. The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.
- Waller, T., E. B. H. Sandseter, S. Wyver, E. Ärlemalm-Hagsér, and T. Maynard. 2010. "The Dynamics of Early Childhood Spaces: Opportunities for Outdoor Play?" *European Early Childhood Education Research Journal* 18 (4): 437–443. doi:10.1080/1350293X.2010.525917