

## Chapter 21

# Land–Based Participatory Pedagogical Experiment in Sami Language Distance Teaching: Maintaining Children’s Relationships With Land and Nature

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### ABSTRACT

*This chapter discusses teachers’ professional experiments with distance education in Indigenous Sami language with children aged six to seven years in Finland. The three Sami languages spoken in Finland have law-based status in the Sami domicile area. Outside of this area, where 75% of Sami children live, the Sami languages are taught as voluntary subjects online. This challenges teachers’ culturally responsible land-based pedagogical practices, which are typical of Sami education. The case study investigates one teacher’s professional creative experiment that focused on land-based online pedagogies using a participatory approach. The data consist of simulated recall interviews, a logbook, and Post-it® notes. The results indicate that, as reflective practitioner, the Indigenous teacher was able to maintain culturally and linguistically responsible pedagogies through experiment. This study carries a hopeful message for the future of minority communities: through educational experiments, teachers can provide language and culture survival tools for learners in diverse contexts.*

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## INTRODUCTION

How can we recreate a connection with the land and nature, which are the basis of Sami culture and identity? These are important questions in Sami education. This article deals with this challenging question in a Sami<sup>1</sup> language distance teaching setting—a context in which Sami is studied for two hours each week in a distance learning environment outside the Sami domicile area in Finland with small children aged six and seven years. This article is based on the results of a Finnish case study funded by the Academy of Finland—*Socially Innovative Interventions to Foster and to Advance Young Children's Inclusion and Agency in Society through Voice and Story* (ADVOST). This article reports findings based on the study, the purpose of which was to investigate and find ways to strengthen children's voices and agency and innovate new pedagogical models for providing culturally responsive Sami teaching. The research collaboration is connected to the *Pilot project on distance education in the Sami languages*. In educational experiments designed in collaboration with researchers, teachers' aim, through different case studies, to test how various methods used in teaching, such as traditional storytelling, play and land-based pedagogy, can be utilised in distance learning. This article describes the land-based participatory pedagogy experiment as a case study carried out in the teaching of the Inari Sami language.

The situation of teaching Sami languages is influenced by the history of various processes of colonialism, which has led to assimilation and language loss and, as a result, weakened the minoritised languages' linguistic heritages (Minde, 2005). These processes have led to Sami generations who have lost their native languages as children. For example, in Sami history, from the 1950s onwards, Sami children were often educated at boarding schools located far from children's homes and cultural and linguistic surroundings. Before basic education was launched in the 1970s, education was provided in Finnish almost without exception, and children were not encouraged to speak Sami languages at school (Lehtola, 2012).

Traditionally, Sami people live in the middle and northern parts of Sweden and Norway, Northern Finland and the Kola Peninsula in Russia. Despite living in four countries, the Sami share close connections (Mikaelsson, 2016). Nowadays, more and more of the Sami live outside the core Sami areas, usually in larger cities. There are nine Sami languages, three of which are spoken in Finland: North Sami, Inari Sami and Skolt Sami (Moseley, 2010). All of these languages are endangered at different levels. North Sami is spoken in Norway, Finland and Sweden by less than an estimated 30,000 speakers (1,700 registered speakers in Finland). The seriously endangered Inari is only spoken in Finland; there are approximately 400–500 speakers of Inari Sami. There are approximately 300 speakers of Skolt Sami, some of whom live on the Kola Peninsula in Russia (Salminen, 2007).

In Finland, in 1995, when the Sami Parliament was established, the Sami people gained self-governance concerning Sami culture and languages (Act on the Sami Parliament 975/1995). This act defined the legally based Sami domicile area in Northern Finland, including the municipalities of Utsjoki, Inari, Enontekiö and the northern parts of Sodankylä. According to the Primary School Act (628/1998), Sami-speaking children and young people living in this domicile area have the right to receive most of their basic education in Sami languages. However, 75 percent of the Sami people live outside of the Sami domicile area and are not covered by Primary School Act. Municipalities that do not belong to the Sami domicile area can provide supplementary Sami education, with separate funding provided by the Finnish National Agency for Education. Currently, this supplementary Sami education reaches only about 10 percent of the Sami children and young people living outside the Sami domicile area (Sami Parliament, 2019).

## ***Land-Based Participatory Pedagogical Experiment in Sami Language Distance Teaching***

To facilitate access to learning Sami languages outside the core Sami areas in Finland, the *Pilot project on distance education in the Sami languages* was launched in 2018. The project is managed by the Municipality of Utsjoki and is coordinated by the Sami Parliament of Finland. It offers two hours of online Sami language teaching for those outside the Sami domicile area. Teaching in the pilot project is synchronous teaching, in which the teacher and children participate in the lessons at the same time from their own computers but physically in different places. Teaching takes place using the Microsoft Teams online communication environment and the Microsoft OneNote digital note-taking application. In the school year 2021–2022, approximately 100 pupils received Sami language education through the pilot project.

This article reports on a participatory pedagogical experiment carried out with Sami language distance teachers of small children. The planning of the pedagogical experiment was based on the practical need to develop teaching of a heritage language (Sami) teaching setting online. Based on teachers' needs and children's interests, an online teaching in land-based pedagogy was started to be promoted to teach the Sami language. Based on language teaching theories, learning is much more than just learning about words and grammar (Li & Song, 2007). In addition, the Indigenous education context brings other dimensions into learning, such as nurturing identity and connection to a culture (McCarty & Lee, 2014). The aim of the educational experiment carried out in the pilot project was to create distance learning lessons that transform pedagogical practices towards a pedagogy that will help teachers teach endangered Sami languages in a motivational and child-centred way. Linguistically and culturally responsible pedagogy is socio-linguistically conscious, values linguistic diversity and promotes learners' activity and agency (Finnish National Board of Education, 2016; Naukkarinen & Tiermas, 2019). In the context of Sami languages, this kind of pedagogy supports children to become Sami language users and to be attached to the language community.

In the pedagogical experiment designed by the teacher, the second author of this article, the choice of land-based education as a way to transform education practices was based on her practical need to recreate culturally sustainable and linguistically conscious ways to work in diasporic educational contexts. The teacher explored the possibility of strengthening the use of land-based pedagogy anchored in Sami's traditional knowledge and epistemologies applied in online teaching. Traditional knowledge is based on the Sami worldview and value system, ensuring cultural continuity from generation to generation (Guttorm, 2011; Porsanger, 2011) by taking care of local contents. Sami language teachers play an important role in providing stability and continuity in the education of children in their own communities<sup>2</sup>. Sami language distance education involved the teacher arranging for her students to interact with land through different pedagogical measures to create a stronger connection to the land than in current teaching. This requires online teaching and learning practices to be transformed by conscious outside-classroom measures to better fit the learners' cultural and linguistic starting point (Keskitalo, 2010; see also Wulf, 2008). This was not only for the sake of developing teaching methods but for the essence of Sami education to transform pedagogical practices and include traditional knowledge and land-based education in a new setting in online teaching (see also Westra, 2012).

The experiment was strengthened through cycles of interviews, observations conducted using a simulated recall method and interaction within the research group. The teacher carried out and recorded the pedagogical experiments in a distance learning lesson in November 2020 and January 2021. After the pedagogical experiments, the teacher was interviewed using the simulated recall method (Malva, Leijen, & Arcidiacono, 2021). In the interviews, pedagogical choices were created by negotiating and discussing together about pedagogical experiment so the research consists of strong participatory meaning. The

analysis of the data used an analytical framework developed for eliciting young children's voices. The framework's eight theoretical principles served as sensitising concepts, leaving room for new ideas that emerged during the interview and analysis of the data. The concepts of Blaisdell et al.'s (2019) analytical framework were adapted to this study, and the teacher's perception of supporting children's voice and identity in distance teaching of the Sami language was examined through eight concepts: define, inclusion, empower, listen, process, structure, approach and purpose. To address our central question—How can we recreate a connection with the land and nature, which are the basis of Sami culture and identity?—the following sub-questions were developed: 1) What issues does the teacher emphasise when planning and conducting the land-based teaching experiment and organising Sami language teaching for small children? 2) What purposes do teachers emphasise in land-based teaching online? 3) Which positive practices and challenges did the teacher mention? Through these questions, it is possible to examine the important issues concerning Sami language distance education for Indigenous children living in suburban areas.

## **METHODOLOGICAL APPROACH**

### **A Participatory Pedagogical Experiment Study**

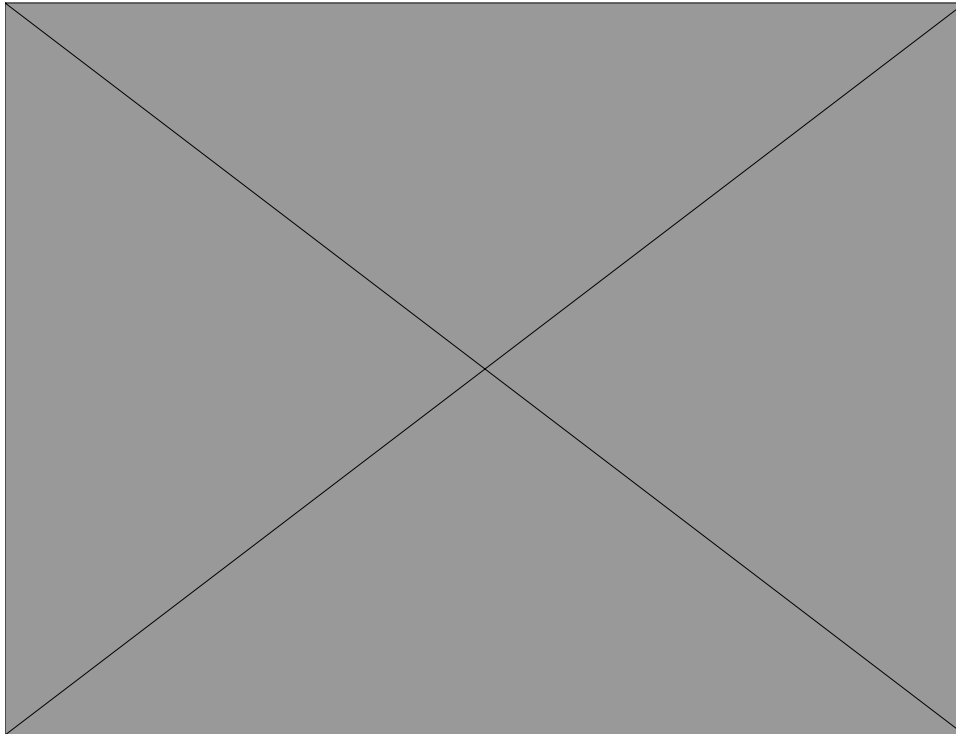
The method used in this study is intertwined with ideas of creative participatory pedagogical experiments, in which teachers are regarded as experts in their own pedagogical practices and where professional development occurs together with increasing pedagogical agency (Berliner, 2001; Tomasik et al., 2021). According to Hagood (2007, p. 34), an experiment can be understood as 'an action or process undertaken to discover something'.

This article is based on a pedagogical experiment study model by Kolb (1984) consisting of three developmental cycles (Bybee, 2009; Duran & Duran, 2004). This model was used to examine the practical teaching that was planned with the support of the researchers. It is hoped that the experiment will lead to educational innovation through testing, corrections and recognition (Aithal, 2016). The current study presents the first cycle of this method. As illustrated in Figure 1, this study consists of planning in a group of four teachers, followed by one teacher's experimental pedagogical activity.

The aim of the Sami culture-based pedagogical experiments of the ADVOST research project was to strengthen children's identities and support inclusion in the language community. To understand the situation of distance learning in the pilot project, teachers recorded a distance learning lesson and were interviewed using the simulated recollection method in the spring of 2020. Simulated recall is a method in which the teacher first records a lesson and then the recording is watched together with researchers. While watching, the researchers used a semi-structured interview to preserve a teacher's recollections of the ideas and feelings she had and the pedagogical choices she made during the lesson (Schepens et al., 2007).

A pedagogical experiment planning workshop was held in the fall of 2020. The workshop started with an expert lecture in which the teachers were introduced to the cycles of creative experimental research and the purpose of the current study. The teachers were then asked to write on Post-it notes what they would like to develop in their teaching and put them on the wall for each other to see. After getting to know each other's ideas, they classified the ideas together into four categories: development needs, good practices, student-related matters and technology.

*Figure 1. Cycles of an experimental study consisting of planning, action, observation, evaluation and reporting*

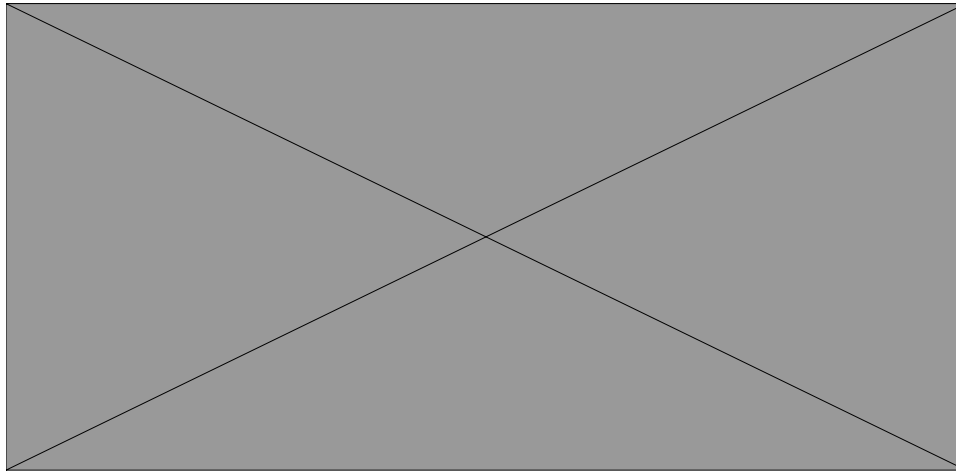


Teachers' Post-it notes were transformed into a word cloud (as presented in Figure 2) that dynamically visualises the needs of Sami language teaching with keywords (Cui et al., 2010). Teachers highlighted the societal dimension, such as the distance learning of Indigenous peoples in a suburban setting. Finally, each teacher chose one aspect of their teaching that they wanted to concentrate on and develop during the experiment. In the workshop, teachers started to plan pedagogical experiments to test how storytelling, play and land-based pedagogy could work in an online environment.

The researchers assisted the teachers based on their needs in planning the experiment. The third author of the article gave a lecture on Sami pedagogy to the teachers and project staff of the pilot project. Distance teachers and project staff discussed how Sami pedagogy can be applied in distance education and what kind of support and tools distance teachers need for this. The Inari Sami teacher also received support in the technical implementation of the teaching experiment from a researcher at the University of Lapland who specialises in media education.

The teachers implemented their experiments in November 2020 and recorded them. They were interviewed again after their experiments using a simulated recall method. The teachers were also asked how they would develop the pedagogical experiment, and the researchers suggested ways in which the pedagogical experiments could be developed. The teachers were also asked to write their ideas, feelings and pedagogical choices made while implementing the pedagogical experiment in logbooks. The writing was supported by questions to help with their reflections. The logbooks were written before, during and after the experiments.

Figure 2. The words of the post-it notes made by the teachers in the workshop



The data consist of the four teachers' Post-it notes (35 pieces, unidentified) collected during the autumn 2020 workshop, one teacher's logbook written before and during the experiment and one audio-recorded simulated recall interview carried out after the experiment in 2020. The interview lasted 112 minutes and was transcribed). The data were collected for a larger project: *Socially Innovative Interventions to Foster and to Advance Young Children's Inclusion and Agency in Society through Voice and Story* (ADVOST). The current article focuses on one cycle of the pedagogical experiment of one teacher, providing a case study strategy that includes an in-depth study of a particular case within a real-life context (Yin, 2013).

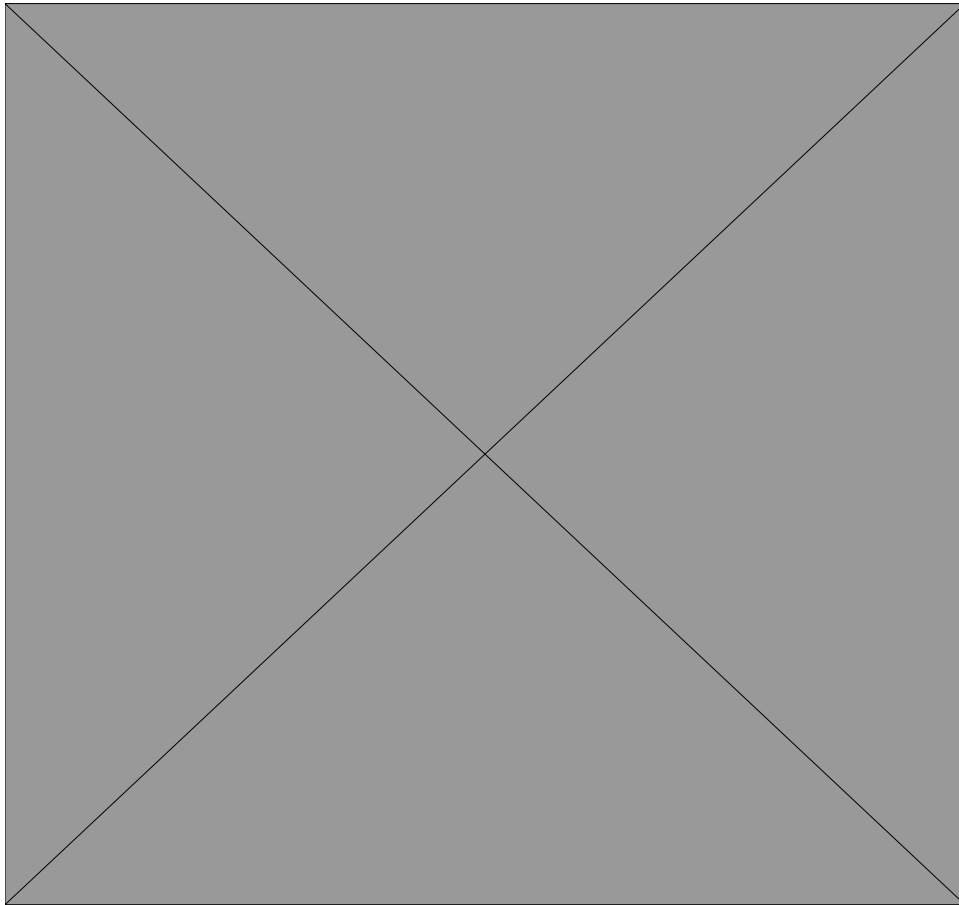
## ANALYSIS

Blaisdell et al. (2019) created the framework to promote research with small children, as children are vulnerable, but child groups may also include vulnerable groups, such as the Indigenous Sami children in this study. The framework aims to put forth these fragile groups' voices, which may not otherwise be heard (Blaisdell et al., 2019; see also Wall et al. 2017).

The Blaisdell framework was used as an analytical lens during the analysis. It worked well to describe the complex conditions of Sami language teaching and learning in an online environment with small children and to elicit the teacher's perception of supporting children's voice and identity in distance teaching of the Sami language (Figure 3). The analytical framework was constructed in this article by authors as a Sami brooch, a *risku*, which is a traditional jewel worn by women, to fasten a silk scarf belonging to the Sami traditional dress, *gákti*.

The analytical framework was applied as follows. *Define* refers to how the teachers defined children's voice and agency. *Inclusion* refers to how the children's voices and agency were promoted. *Empower* refers to the children's connection with the land. *Listen* refers to how the teacher maintained the children's voices and agency. *Process* refers to developmental needs and things that interfere with pedagogical practices. *Structure* explains the content of the experiment and how it was practically conducted. *Approach* describes which skills the teacher needed to promote the children's voice and agency. *Purpose*

*Figure 3. The analytical framework applied by Blaisdell et al. (2019)*



refers to an explanation of the teacher's background, purpose and meaningfulness regarding the conduct of this pedagogical experiment in the teacher's planning modus.

### **Ethics Highlighting the Agency of Indigenous Participants**

Research ethics are always critical, especially when including Indigenous participants with their history, societal conditions and status (Olsen, 2016). Indigenous involvement should be meaningful and should serve the Indigenous community, in this case the teachers and the children with whom they are working (Juutilainen & Heikkilä, 2016). In the ADVOST research project, the benefits of the research for teachers and pupils of the *Pilot project on distance education in Sami languages* have been ensured through close cooperation with the target group. The study serves the needs of the target group.

The ethics of the current study were approved by the ethical review at the University of Lapland, which places special attention on data gathering, storing and handling. The study complies with the rules of the Finnish National Board on Research Integrity (TENK) and regulations of the European Union (EU, 679/2016), the European Regulation (EU), the European Parliament and the European Council, which is known as the General Data Protection Regulation.

The participants were offered the option to drop out at any phase of the study. In addition, the ethical review highlighted the importance of the minors and ethnic groups involved, so special attention was provided to ensure the protection of the interviewees. This meant careful anonymisation and consideration of small Sami communities in which the inhabitants might be easily identifiable. Hence, this included the importance of anonymising indirect identifiers, such as the mode of speaking and the description of setting.

There is a strongly participatory approach of researchers in this study and the role of the researcher is always scrutinised in this kind of study because of researcher effects when researchers and teachers collaborated. For example, researchers facilitated collaboration with the Sami language project and the teachers. Support happened in multiple ways. The interview context involved interaction and the open sharing of ideas and questions, so the interview involved more than just questions and answers. The researchers gave expert lectures for teachers and project actors based on the ideas presented of the teacher and the Sami language distance teaching project. Teachers asked for help with distance teaching, so there were expert lectures on this theme. Workshop was held in the same time as the Post-it session. We realise that the cultural identities of the researchers may have played a role in how the intervention unfolded. All the key researchers and teachers were Sami, so relevant support was provided that fit the context of the participants as insiders. It was a case study describing and studying a phenomenon from the inside. This study approach resonates very well with this study's interest in changing current practice with the help of teachers, researchers and students.

In addition to the ADVOST research project, the first author of this article works as a project manager for the *Pilot project on distance education in the Sami languages*, the second author works as a distance teacher for the pilot project, the third author works as a university researcher, and fourth as a professor at the University of Lapland. The aim was not to reduce the distance teacher's involvement in the research but to bring out her ownership of the knowledge she has been producing (Kuokkanen, 2002). Therefore, the teacher who designed and implemented the pedagogical experiment is one of the writers of this article. The double positions of the authors may cause blind spots, but, on the other hand, they provide a lot of tacit information about the practices of distance teaching of the Sami languages. The first and third authors designed the study, collected and analysed the data and wrote the article as part of the ADVOST research project. The second author designed and implemented the pedagogical experiment in her teaching. The fourth author contributed to the analysis and writing process but was not involved in the actual research.

## **Traditional Sami Knowledge and Land-based Pedagogy**

Traditional knowledge refers to the collective wisdom and skills of the Sami people that have been maintained in the forms of oral traditions, work skills and practical experiences, all of which have been preserved from generation to generation and used to enhance their livelihood for centuries. This traditional knowledge is the key to a sustainable future, especially as it applies to the Sami theory of knowledge, perceptions of the world and value systems; this culminates in a method that enables schools to create educational practices for sustainable development in diverse contexts and, thus, is context- and time-specific and locally constructed (Porsanger & Guttorm, 2011). Traditional knowledge is based on the traditional ecological thinking of Indigenous and local people gained over hundreds of years of connecting with their environment. These experiences comprise a holistic worldview (Bourque et al.,



1993). Specifically, for the Sami people, constant adaptation to changing conditions is the core coping strategy (Mathiesen et al., 2018).

Indigenous education has been a response to cultural colonialism and assimilation practices that have been forced on Indigenous peoples globally for hundreds of years. Indigenous education is a hypernym to a variety of Indigenous pedagogies in which Sami education and pedagogy belong. Sami pedagogy involves recognising the teaching and learning practices found in the Sami educational context; this pedagogy started to develop when Sami teacher education was established in Norway as an answer to the demands for Sami language education and education in the Sami language (Keskitalo et al., 2014). In addition, Sami pedagogy is based on traditional parenting practices that are applied in educational settings. These practices are characterised by positive learning experiences, which are achieved through, for example, play, storytelling and a learning environment appropriate to the cultural context (Balto, 2005).

The growing recognition and use of Indigenous education methods have been a recent response to the erosion and loss of Indigenous knowledge that occurred through the processes of colonialism, globalisation and modernity (May & Aikman, 2003). Balto (2005) studied the Sami way of thinking in pedagogical terms. For the Sami, as a minority and as an Indigenous people, the use of Sami pedagogy in modern life encourages and strengthens their identity and cultural values. It can be recognised as part of the culturally bound epistemology and cosmology of life. Balto (2005) points out that Sami parenting has its own logic, and the main goal is to prepare children to be independent individuals who can survive in any given environment. This kind of parenting gives children self-esteem and a zest for life and joy. The strategies are often indirect, avoiding confrontations between the two involved parties. This model of learning is conducted with the support of an extended network of adults around the children who are involved in raising them.

Land-based pedagogies develop decolonised approaches to learning (Smith, 1999). Because colonisation removed Indigenous people from their land, decolonisation must involve forms of education that reconnect Indigenous people with their land, social relationships, knowledge and languages. Land-based pedagogy offers a way of fostering individual and collective empowerment for students by re-embedding them in land connected to social relationships (Wildcat et al., 2014). Experiential learning engages students intellectually and emotionally and physically promotes their lifelong wellbeing by providing experiences of interrelatedness with the land and community (Luig et al., 2011). Land-based pedagogical approaches are closely connected to education for sustainable development. They create fairer, more ethical pedagogies and decolonising ways of practising and researching education for sustainable development and have the potential to increase environmental justice (Bengtson & Östman, 2016; Whitehouse et al., 2014). In the field of Indigenous education, the debate about environmental justice is as important as the concepts of resisting injustices, misrecognition and the devaluing of particular social forms and cultural worldviews (Haluza-DeLay, 2013). Using these terms, regarding the learning of one's local place, decolonisation is an important topic for critical pedagogy (Gruenewald, 2003).

Because land, traditions and languages are crucial to Indigenous peoples' wellbeing (van Beek, 2016), implementing education via an online format requires special attention. This is especially important because the quality of online teaching and learning has been a constant concern of researchers (Brown, 2012). Outakoski (2018) noted that when establishing online and virtual learning spaces for language maintenance and development to take place, proximity to other speakers is as important as closeness to cultural arenas and connection to the past. In this case, land-based education offers a place for students to be included in teaching based on their premises and interests, while offering a decolonial place for connecting to the land physically and spiritually (Arellano et al., 2019).

## **FINDINGS**

### **Planning Process of the Pedagogical Experiment**

The difficulty of going to nature and how it should be carried out (Wildcat et al., 2014) emerged as a downside of online teaching in the first interview in the spring of 2020, as expressed in the following:

*I: What things do you, as a teacher, find difficult or challenging in this distance education of the Sami language?*

*T: Well, it's boring when you can't go out with the kids, out to nature, to cultural events, it's a big drawback.*

The teacher stated in the interview in the autumn of 2020 that the transformation of teaching has been a long-term goal for her: 'I have dreamed of developing education towards land-based pedagogy so that it fits the Sami cultural values better than the current educational system does'. This indicates that the research provided a place and time for the teacher to develop a land-based approach. For her, choosing nature was self-evident. She also pointed out that she would have ended up with such a creative experiment by herself, but the research project's support helped her facilitate the execution of the idea.

*T: I realise that this kind of idea was already emerging. I would have started working with it sooner or later, but now I have a chance to think about it in a supportive way and within a specific timeframe.*

The extracts above indicate the teacher's existing interests. The research project needed to provide a place for her ideas to flourish, specifically through the pedagogical experimentation process. Inputs and processes like this have the potential to encourage teachers to participate in professional communities to develop their teaching practices (Brown, 2012).

In the experiment planning workshop in autumn 2020, the teacher started structuring the online education method to support connections with land and nature in a meaningful way. In the workshop, the teacher got an idea for a nature bingo in which children could explore and photograph nature nearby. The idea arose from a colleague's suggested camera pen pedagogy, where the camera acts as a pen—a tool for structuring thinking and knowledge. In pedagogically designed photographing tasks, the pupil is challenged to think, act and interact purposefully. (Kiesiläinen, 2017). The teacher described the nature bingo idea in the interview as follows:

*T: The idea was that sometimes in a lesson, pupils can go out with their phones and take pictures. Taking a picture can be a homework assignment: 'Go photographing or do some outdoor activity, and then take a selfie demonstrating that you climbed on top of the rock'.*

Although the nature bingo experiment was the teacher's idea, the children had the opportunity to participate in the planning of the experiment. The teacher introduced the experiment to the children, telling them that because the group would not be able to go on nature trips together, the children would get to explore nearby nature themselves and photograph by their phones their observations for others. The children were excited about the new way of working and they were encouraged to suggest which objects and activities should be photographed.

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However, during the planning phase, the teacher reflected in her logbook that nature bingo may not prove to be a functional activity for an online setting:

*T: 'On the other hand, the bingo might take a lot of time away from the lessons since even dressing in outwear may take a long time for young children'.*

This would reduce the variety of lessons, which was an important starting point for her when organising her lessons in a new way. Therefore, some of the tasks were designed to be homework.

### **Structure and Purpose of the Pedagogical Experiment**

In nature bingo, the bingo grid served as an assignment for the pupils. The teacher implemented the bingo using the Bingo Baker online generator. The teacher added tips in the form of pictures of the objects and activities to be photographed to the 5 × 5 bingo grid. Photographed objects, such as plants and colours, or activities, such as climbing rocks, were chosen by the children. The teacher drew the object to be photographed and the pupils tried to get five images in a straight line on the bingo grid. (Tip pictures require creative thinking by the pupils. For example, a tip picture included yellow flowers. The pupils could photograph flowers or something yellow according to their own interpretations.)

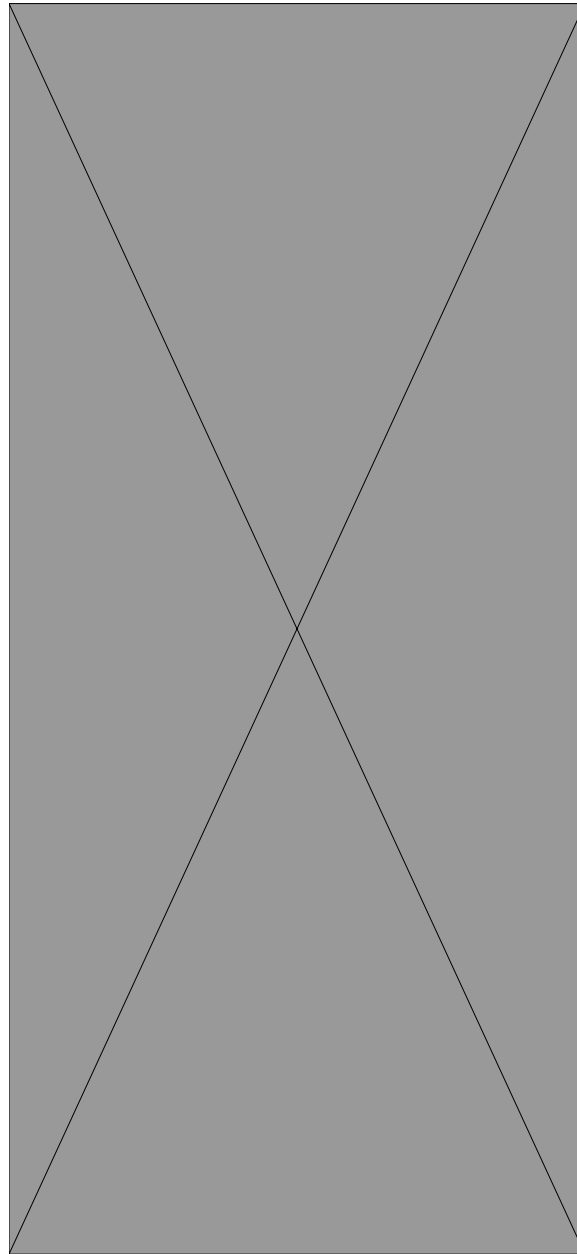
The purpose of the nature observation and photography tasks was to give children the opportunity to calm down, interact with nature and experience it with all their senses as opposed to the hectic nature of the school world and the static state of sitting in front of a computer 'so that pupils will be activated, they have to move away from the computers by going outside to study the nature concepts practically and explore the natures. And that the nature concepts are studied practically and to explore atunre.' The teacher wanted to combine the learning of words with the experience of them. According to the Sami way of thinking, one can only know what a snowstorm is after experiencing it. The tasks also led the children to a Sami conception of time that follows the variation of the seasons: 'This innovation imitates the traditional Sami way of living in a natural relationship with the environment.' The teacher planned nature bingo for the entire school year, although it was not played in every lesson. Keskitalo (2010) has suggested that an understanding of time, space and knowledge of the essence of Sami culture should be generated.

### **Defining and Listening to Children's Voice and Agency**

The starting point of the land-based pedagogy experiment was to promote children's voice and agency. Taking photos was a concretised way to interact with the land and nature while allowing for physical movement outside the classroom and a moment to calm down in nature. The interaction with nature turned out to be play, as one might assume from the tasks designed by the children themselves. In the tasks designed by the children, they jumped in a pile of leaves, sheltered from the rain under a tree, spun a snowball and smelled of grass. The idea of listening to children's voices and agency can be found both in strengthening their connection with land and nature and in the opportunity to participate in the planning of tasks.

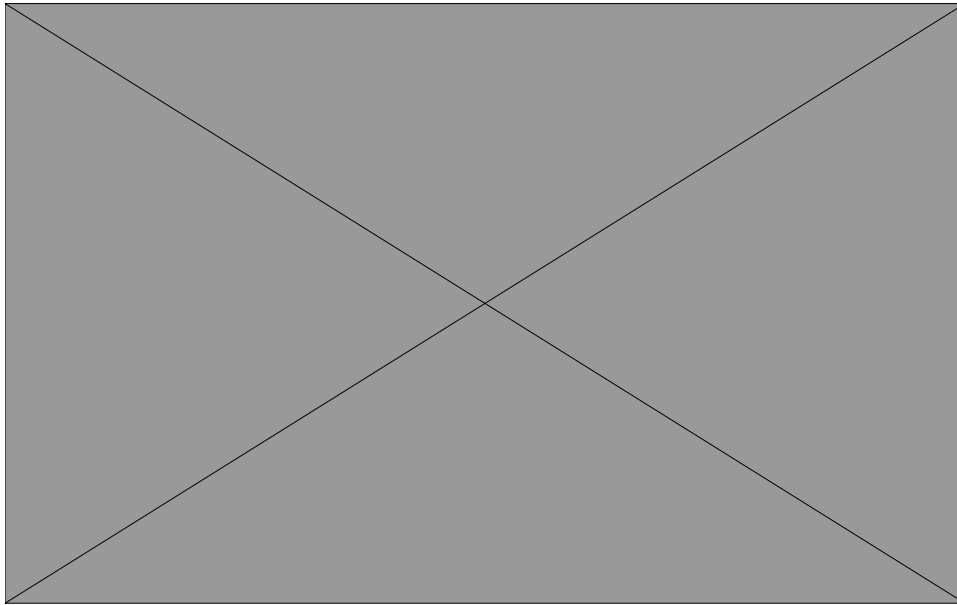
After photographing, the teacher asked the children to present the pictures and name the things photographed. The presentation of the pictures slowly turned into small storytelling situations as the children shared their experiences. Stories support the construction of identity and make teaching meaningful

*Figure 4. Nature bingo with Sami language and cultural connections*



(Kinossalo, 2020, p. 11). Although the children could not tell their entire stories in Sami, they learned new vocabulary with the help of self-taken pictures in a meaningful way. At the same time, the children got to know each other and their living environments. The stories told in the pictures also increased the group's interaction. Instead of just photographing and learning words, nature bingo became an important group-building factor. In addition to their own stories, the children built a story about them as a group and nature (Yrjänäinen & Ropo, 2013).

*Figure 5. Example of a photo taken by a child*



After the photos were presented, they were transferred to OneNote for later use. The teacher's idea was to create learning material from the pictures together with the children: 'For example, now that we have learned or repeated the colours, then we can go back to those nature bingo pictures, that well, now you can write here that the cone is brown—or a brown cone.'

*T: Utilising self-taken photographs in the practice of vocabulary and grammar increases the relevance of learning, as the pictures are part of the child's story in which the child interacts with nature.*

The teacher also had in mind many other ways to utilise the pictures. For example, children could choose three of their own pictures and write a story about them. During the interview, the idea arose that instead of writing, children could record their own voices, as many of them do not yet know how to write. Because there was an atmosphere of trust in the group, these materials could also be utilised as common learning materials for the whole group. These kinds of material are meaningful for the children and the group, and the children's motivation to learn is strengthened through their own voice and agency. The teacher planned that nature bingo would culminate in a photo exhibition on the website of the pilot project at the end of the school year, for which each child could choose their best photos. The use of mobile phones offered a child-centred way of working while improving the children's level of engagement, which is a core value in Sami's pedagogy. Younger pupils often use their mobile phones or school tablets because they are easier than computers and they can be taken outside for different activities, as the results show. This is important also from a material perspective, as digital and mobile devices promote situated pedagogies, such as the one suggested in this study. This presumes a certain socioeconomic status of the children so that they have smart phones available in teaching.

Teaching the Sami language is complex and demanding. The teacher needs to find ways to work and promote children's diverse language skills in an environment in which the necessary learning materials are lacking.

Children's voices and agency materialised through the teachers' practical measures, which aimed to put children at the core of learning. In nature bingo, children are active actors who explore and interact with nearby nature by taking photographs, after which they share their experiences with the group, building both their own and their group's stories concerning nature. From the pictures taken by the children, common learning material is created that makes teaching meaningful to them. As an earlier study indicates, the strength of Sami language online education is rooted in its child-centredness (Helander et al., 2022).

### **Inclusion and Empowerment of Children's Voice and Agency**

Nature bingo served as a natural tool for inclusion, as each child was able to perform the task based on his or her own interests and skills through a physical and mental connection to nature (Arellano et al., 2019). Because the children were young and not all of them could write, the teacher tried to provide the children with a variety of ways to express themselves. Instead of writing a story, the teacher planned for the children to record their own speech. This also allowed for the participation of shy children who did not yet want to speak Sami with others. Art-based methods can be understood as a path to inclusion and empowerment (Blaisdell et al., 2019).

Inclusion and empowerment were evident in the pedagogical practices that promoted the children's connection to the land and their heritage language. An important part of this pedagogical experiment was to provide children with a place where they could experience belonging to the language community, which in turn would help them build stronger relationships with the land and nature. Since it was not possible to do all the bingo tasks in the lessons, the children also received them as homework. With the homework, the teachers aimed to strengthen the parents' inclusion in the children's Sami studies: 'I hope that such tasks would increase the family's outdoor activities and the parents' commitment to their child's Sami studies'. When some of the families travelled to Northern Finland, the Sami domicile area, the teacher offered the parents an opportunity to be involved in strengthening their children's inclusion in the Sami community and the Sami land.

*T: During the autumn holidays, some pupils went to visit the north. I encouraged those who were going there to photograph things that they could not photograph in southern Finland in their home villages or towns. So, for example, thanks to these trips, pictures of reindeer were taken. One pupil managed to photograph a lemming.*

According to sociocultural theory, an individual's identity changes with language learning. Äärelä indicated that Indigenous language learning is also about building an identity concerning the language community, the environment in which the language originates and its nature and animals (2016, p. 40).

Taking pictures is linked to the perception of nature and the traditional Sami relationship with nature in a transformed way. For children living in cities in the southern parts of Finland, the connection to the Sami domicile area was strong, and this was further promoted by the teacher: 'When children are doing with things that have a connection to [the] north and [the] Sami domicile area, they have special motivation.' This kind of motivation should be preserved and shown as a benefit to children. Accord-

ing to Todal (2002), the very heart of teaching is reached when pupils have an integral motivation and connection with their heritage language and background.

## **Teacher's Approach to Challenges**

The *approach* perspective is understood as the teacher's skills that support children's voices and agency and allow unexpected events to occur (Blaisdell et al., 2019). For children's voices and agency to be strengthened, the teacher must tolerate uncertainty. In the lessons, uncertainty was caused by learning new technical skills. The teacher explained this intermittent chaos in the interview as follows:

*Especially in the beginning, it was pretty awkward when five students asked at the same time where to press now and where to go now. But then when I did it [guiding the children] in small groups of two, I provided the others with a link to play a game.*

The learning platform used for distance education did not facilitate the teaching of new technical skills to young children.

*T: No kidding. The Teams [software] is not child friendly. It is apparent that basically it is planned for business usage, not for [a] learning platform. It is surprisingly stiff.' She also noted that support for their use of the digital devices and the learning platform was important: 'If they get adult support in the beginning, then it's not too challenging.*

This statement is in line with a previous study in which technical issues and pedagogy were outlined as important elements for learners' experiences when developing quality distance education (McBrien et al., 2009). In the current study, the teacher's awareness of the children's slow progress in the online environment, slower than in a normal classroom environment, indicated her ability to listen to and understand the children's multiple chat messages during the lesson.

The teacher assumed that the kids were adept at using cell phones. The teacher estimated that with young children, it would have been easier to use a paper bingo grid and send the pictures directly to the teacher via smartphones. Despite the challenges, the teacher was committed to using the platform for Sami language distance education because it helped increase the children's technological skills. This ensured that they would be well equipped for further studies and their work lives, helping them navigate the complex world around them (Roschelle et al., 2000).

In addition to technical skills, some of the challenges the teacher faced were related to technology and technical devices. The children used their own phones to take their pictures. It is customary for 6–7-year-olds to have their own cell phones in Finland. During the implementation phase, the teacher described the challenges in her logbook as follows:

*Some may have run out of battery, or the phone may be in a different location, some may not have [the software] installed even though I had requested it in advance by email, and the application cannot be installed without parental approval, etc. (Teacher's logbook entry)*

The distance learning equipment and the installation of the software for the equipment should be carried out by the school offering distance education. High-quality online learning requires a tablet or

smartphone in addition to a computer. Despite these challenges, according to the teacher's logbook, the children seemed to be excited to take pictures and learn nature vocabulary, which came easily through their own pictures.

As the popularity of online teaching and learning increases, it proves to be an increasingly attractive option for teaching organisers to combine pupil learning with new technology (Brown, 2012). Furthermore, new technology can be beneficial in a traditional-based cultural setting, as recent research on creating virtual learning spaces indicates (Outakoski, 2018). However, experimental solutions are needed in general and in Indigenous pedagogy (Wildcat et al., 2014).

The land-based bingo pedagogical experiment showed how it is possible to have children-centred pedagogical practices with six-to seven-year-old children in online teaching. This bingo experiment brought in basic curriculum goals, which state that language education is meant to increase students' understanding of the importance of linguistic and cultural backgrounds for the individual, the community and society, and guide students to appreciate the Sami language as well as other languages. The children were regarded as active actors, meaning that their language skills and other competencies were utilised. Additionally, they could develop their language skills outside of the school environment. In this situation, learning and using the Sami language supported the adoption of different contents (Finnish National Board of Education, 2016). During the experiment, it was evident that using a variety of activities was important for the children's cognitive processes (Helander, 2016). In this regard, working with photos allowed the children to develop their conceptual knowledge and language awareness both broadly and inclusively.

## **CONCLUSION**

The current article is based on rich data on Sami language pedagogy and an experiment in online education. The land-based education bingo experiment provides an example of transforming online teaching in a culturally and linguistically responsive way. Using a case study format, the present article shows how to facilitate land-based, culturally relevant Sami education in an online environment. This educational experiment showcases that environmental justice is connected to Indigenous education and decolonising Indigenous communities (Gruenewald, 2003).

The results indicate that highlighting the children's connection to their roots and culture provides a well-established basis for learning the Sami language. According to the United Nations Committee on the Rights of the Child, adults are responsible for creating opportunities for children to express their views (Lansdown, 2011). This requires special attention in the context of Indigenous languages and children's rights to learn their heritage languages. Online lessons provide one solution, but culturally responsible pedagogies, especially for young children in an online environment, require problem solving and innovations from teachers. These innovations can be supported by experiments in which an outsider supports teachers by inventing new pedagogical practices. In this sense, interventions refer to modifying the learning environment in such a way that pedagogical practices and learning are influenced in a preplanned way (Jimerson et al., 2007).

Besides the development of Sami language pedagogies, the present study contributes to every teacher's development of their pedagogies to adapt to online education in general and specifically in Indigenous education contexts. This also contributes to the educational challenges of COVID-19. The results prove that it is possible to build a pedagogical child-centred scene in land-based online education in a culturally



and linguistically innovative way. The study is based on a teacher-study approach, in which the teacher is actively involved in the development of their pedagogy. Outside of this setting, the results may have been different. The purpose of a teacher-led study is to increase the wellbeing of those involved in the teaching environment and to identify new ways to listen to children and their many voices. More research contributions on land-based pedagogy in online and face-to-face teaching situations for children and youth, from their points of view, are also welcome to serve and sustain Indigenous education.

From a distance education perspective, it is important to consider pupils' situatedness and embeddedness (backgrounds, cultures and contexts) better than we have done before. The teacher is key to this process. This study takes on a relevant task to reconsider the role of the pupil, the teacher, the community and the culture of the pupil. One way to bring teaching even closer to nature and culture is to include the family/parents of the pupil in different ways. If the teacher cannot be online with the pupils outside, then perhaps the family can support the children (as the homework assignments in the Results section show). Research on distance teaching could support the academic discussion and perhaps reveal areas to study in the future. A closeness to nature is important for pupils for many different reasons and can be supported through pedagogy, digital systems and devices, which is why this study's implications are interesting to other communities. Indigenous pedagogy is the oldest pedagogy we have, and we can all learn many things from it—perhaps by remembering that we are all keen to become closer to nature and land. There is a lot to learn from Sami's pedagogical thinking.

Limitations of this study consists of small sample size in a specific geographical context with specific children's ages. The case study-related article aims to give ideas for teachers working with endangered languages in similar situations to cope with diverse linguistic and cultural premises.

## **Data Availability Statement**

For ethical reasons, the data are not in an open-access format.

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## **REFERENCES**

- Aithal, P. S. (2016). Innovations in experimental learning—A study of world top business schools. *International Journal of Scientific Research and Modern Education*, 1, 360–375.
- Arellano, A., Friis, J., & Stuart, S. (2019). Pathways to reconciliation: The Kitcisakik land-based education initiative. *Leisure/Loisir*, 43(3), 389–417. doi:10.1080/14927713.2019.1629832

Balto, A. (1997). *Sámi mánáid bajásgeassin nuppástuvvá* [Sami childrearing practices in change]. Ad Notam Gyldendal.

Balto, A. (2005). Traditional Sámi child rearing in transition: Shaping a new pedagogical platform. *AlterNative: An International Journal of Indigenous Peoples*, 1(1), 85–105. doi:10.1177/117718010500100106

Bengtson, S., & Östman, L. (2016). Globalisation and education for sustainable development: Exploring the global in motion. *Environmental Education Research*, 22(1), 1–20. <https://doi.org/10.1080/13504622.2014.989960>

Berliner, D. (2001). Learning about and learning from expert teachers. *International Journal of Educational Research*, 35(5), 463–482. [https://doi.org/10.1016/S0883-0355\(02\)00004-6](https://doi.org/10.1016/S0883-0355(02)00004-6)

Blaisdell, C., Arnott, L., Wall, K., & Robinson, C. (2019). Look who's talking: Using creative, playful arts-based methods in research with young children. *Journal of Early Childhood Research*, 17(1), 14–31. <https://doi.org/10.1177/1476718X18808816>

Bourque, J., Inglis, J. T., & LeBlanc, P. (1993). Preface. In J. Inglis (Ed.), *Traditional ecological knowledge: Concepts and cases* (pp. vi–vii). International Program on Traditional Ecological Knowledge/International Development Research Centre.

Brown, J. L. (2012). Online learning: A comparison of web-based and land-based courses. *Quarterly Review of Distance Education*, 13(1), 39–49.

Bybee, R. W. (2009). *The BSCS 5E instructional model and 21st century skills*. BSCS.

Cui, W., Wu, Y., Liu, S., Wei, F., Zhou, M. X., & Qu, H. (2010, March). Context preserving dynamic word cloud visualization. In *2010 IEEE Pacific Visualization Symposium (PacificVis)* (pp. 121–128). IEEE.

Duran, L. B., & Duran, E. (2004). The 5E instructional model: A learning cycle approach for enquiry-based science teaching. *Science Education Review*, 3(2), 49–58.

Finnish National Board of Education. (2016). *Perusopetuksen opetussuunnitelman perusteet 2014* [National core curriculum for basic education 2014]. [https://www.oph.fi/sites/default/files/documents/perusopetuksen\\_opetussuunnitelman\\_perusteet\\_2014.pdf](https://www.oph.fi/sites/default/files/documents/perusopetuksen_opetussuunnitelman_perusteet_2014.pdf)

Gruenewald, D. A. (2003). Foundations of place: A multidisciplinary framework for place-conscious education. *American Educational Research Journal*, 40(3), 619–654.

Guttorm, G. (2011). Árbiediehtu (Sámi traditional knowledge) – As a concept and in practice. In *Working with traditional knowledge: Communities, institutions, information systems, law and ethics*. Writings from the Árbiediehtu pilot project on documentation and protection of Sámi traditional knowledge (pp. 59–76). Dieđut 1/2011. Sámi allaskuvla/Sámi University College.

Hagood, T. K. (2007). Values and voice in dance education: The merit of fostering traditional, experiment, diversity, and change in our pedagogy. *Arts Education Policy Review*, 108(2), 33–39.

Hall, L. (2013). The 'come and go' syndrome of teachers in remote Indigenous schools: Listening to the perspective of Indigenous teachers about what helps teachers to stay and what makes them go. *Australian Journal of Indigenous Education*, 41(2), 187–195. <https://doi.org/10.1017/jie.2012.13>

### **Land-Based Participatory Pedagogical Experiment in Sami Language Distance Teaching**

- Haluza-DeLay, R. (2013). Educating for environmental justice. In R. Stevenson, M. Brody, J. Dillon & A. Wals (Eds.), *International handbook of research on environmental education* (pp. 394–403). Routledge.
- Helander, H., Keskitalo, P., Sanila, S., & Moshnikoff, S. (2022). Saamelaiskulttuurilähtöinen tarinan-kerrontainnovaatio vahvistamassa lapsen osallisuutta omaan kulttuuriin saamen kielen etäopetuksessa [Sámi culture-based storytelling innovation strengthening the child's participation in their own culture in Sámi language distance teaching]. *Dutkansearvvi dieđalaš áigečála*, 6(1), 50-71.
- Helander, N. Ø. (2016). *Ohppojuvvon ja sohppojuvvon giella. Gielladiđolašvuohta, čálamáhttu ja guovttegielatvuohta* [Learnt and agreed language. Language awareness, writing skills and bilingualism]. *Dieđut* 1/2016. Sámi allaskuvla.
- Jimerson, S., Burns, M., & VanDerHeyden, A. (2007). Response to intervention at school: The science and practice of assessment and intervention. In S. Jimerson, M. Burns, & A. VanDerHeyden (Eds.), *Handbook of response to intervention: The science and practice of assessment and intervention* (pp. 3–9). Springer Business Media. [https://doi.org/10.1007/978-0-387-49053-3\\_1](https://doi.org/10.1007/978-0-387-49053-3_1).
- Juutilainen, S., & Heikkilä, L. (2016). Moving forward with Sámi research ethics: How the dialogical process to policy development in Canada supports the course of action for the Nordic countries. In A.-L. Drugge (Ed.), *Ethics in Indigenous research past experiences - Future challenges* (pp. 81–104). Vaartoe. Umeå University. <http://umu.diva-portal.org/smash/get/diva2:943266/FULLTEXT03.pdf>
- Keskitalo, J., Nystad, K., & Pettersen, T. (2014). *Sámi allaskuvla. 20. jagi ávvugirji* [Sámi University of Applied Sciences. 20th Anniversary Book]. Sámi allaskuvla.
- Keskitalo, P. (2010). *Saamelaiskoulun kulttuurisensitiivisyyttä etsimässä kasvatusantropologian keinoin* [Seeking for Sami School cultural sensitivity through educational anthropology]. *Dieđut* 1. Sámi allaskuvla.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development* (Vol. 1). Prentice-Hall.
- Kuokkanen, R. (2000). Towards an 'Indigenous paradigm' from a Sámi perspective. *The Canadian Journal of Native Studies*, 20(2), 411–436.
- Lansdown, G. (2011). *Every child's right to be heard. A resource guide on the UN committee on the rights of the child general comment no. 12*. UNICEF. [https://www.unicef.org/files/Every\\_Childs\\_Right\\_to\\_be\\_Heard.pdf](https://www.unicef.org/files/Every_Childs_Right_to_be_Heard.pdf)
- Lehtola, V.-P. (2012). *Saamelaiset suomalaiset. Kohtaamisia 1896–1955* [The Sami Finns. Encounters 1896–1955]. SKS.
- Li, Z. G., & Song, M. Y. (2007). The relationship between traditional English grammar teaching and communicative language teaching. *US-China Education Review*, 4(1), 62–65.
- Luig, T., Ballantyne, F., & Scott, K. (2011). Promoting well-being through land-based pedagogy. *The International Journal of Health, Wellness & Society*, 1(3), 13–26.

Mathiesen, S., Bongo, M., Burgess, P., Corell, R., Degteva, A., Eira, I., Hanssen-Bauer, I., Ivanoff, A., Magga, O., Maynard, N., Oskal, A., Pogodaev, M., Sara, M., Turi, E., & Vikmahar-Schuler, D. (2018). Indigenous reindeer herding and adaptation to new hazards in the Arctic. In D. Nakashima, I. Krupnik, & J. Rubis (Eds.), *Indigenous knowledge for climate change assessment and adaptation* (pp. 198–213). Cambridge University Press. <https://doi.org/10.1017/9781316481066.015>.

May, S., & Aikman, S. (2003). Indigenous education: Addressing current issues and developments. *Comparative Education*, 39(2), 139–145.

McBrien, J., Cheng, R., & Jones, P. (2009). Virtual spaces: Employing a synchronous online classroom to facilitate student engagement in online learning. *International Review of Research in Open and Distributed Learning*, 10(3). <https://doi.org/10.19173/irrodl.v10i3.605><https://doi.org/10.19173/irrodl.v10i3.605>

McCarty, T., & Lee, T. (2014). Critical culturally sustaining/revitalizing pedagogy and Indigenous education sovereignty. *Harvard Educational Review*, 84(1), 101–124.

Moseley, C. (2010). *Atlas of the world's languages in danger* (3rd ed.). UNESCO Publishing. <http://www.unesco.org/culture/en/endangeredlanguages/atlas>

Naukkarinen, H., & Tiermas, A. (2019). Integraatiota ja inklusiota – valmistavan opetuksen hyvät käytänteet [Integration and inclusion - Good practice in preparatory education]. *Kieli, koulutus ja yhteiskunta*, 10(7). <https://www.kieliverkosto.fi/fi/journals/kielikoulutus-ja-yhteiskunta-joulukuu-2019/integraatiota-ja-inklusiota-valmistavan-opetuksen-hyvatkaytantteet>

Olsen, T. (2016). Responsibility, reciprocity and respect. On the ethics of (self-) representation and advocacy in Indigenous studies. In A.-L. Drugge (Ed.), *Ethics in Indigenous research past experiences - Future challenges* (pp. 25–43). Umeå University. <http://umu.diva-portal.org/smash/get/diva2:943266/FULLTEXT03.pdf>

Outakoski, H. (2018). In search of virtual learning spaces for Sámi languages. In G. Roche, M. Hiroshi, & Å. Viridi Kroik (Eds.), *Indigenous efflorescence: Beyond revitalisation in Sapmi and Ainu Mosir* (pp. 89–94). ANU Press. <https://doi.org/10.22459/IE.2018.08>.

Porsanger, J. (2011). The problematisation of the dichotomy of modernity and tradition in Indigenous and Sámi contexts. In J. Porsanger & G. Guttorm (Eds.), *Working with traditional knowledge: Communities, institutions, information systems, law and ethics. Writings from the Árbodiehtu Pilot Project on Documentation and Protection of Sámi Traditional Knowledge* (pp. 225–252). Sámi allaskuvla.

Porsanger, J., & Gunvorn, G. (2011). Building up the field of study and research on Sámi traditional knowledge (árbediehtu). In J. Porsanger & G. Guttorm (Eds.), *Working with traditional knowledge: Communities, institutions, information systems, law and ethics. Writings from the Árbodiehtu Pilot Project on Documentation and Protection of Sámi Traditional Knowledge* (pp. 13–57) Sámi allaskuvla.

Roschelle, J., Pea, R., Hoadley, C., Gordin, D., & Means, B. (2000). Changing how and what children learn in school with computer-based technologies. *The Future of Children*, 10(2), 76–101. <https://doi.org/10.2307/1602690>

Salminen, T. (2007). Europe and North Asia. In C. Moseley (Ed.), *Encyclopedia of the world's endangered languages* (pp. 211–280). Routledge.

## **Land-Based Participatory Pedagogical Experiment in Sami Language Distance Teaching**

Sami Parliament. (2019). *Saamelaiskäräjien koulutus- ja oppimateriaalilautakunnan koulutuspoliittinen tiedonanto 2019* [Education policy report of the Sami Parliamentary Board of Education and Learning Materials 2019]. Liite 1 [Appendix 1]. Author.

Schepens, A., Aelterman, A., & Van Keer, H. (2007). Studying learning processes of student teachers with stimulated recall interviews through changes in interactive cognitions. *Teaching and Teacher Education*, 23(4), 457–472. doi:10.1016/j.tate.2006.12.014

Smith, L. (1999). *Decolonizing methodologies: Research and Indigenous peoples*. Zed Books.

Todal, J. (2002). “... jos fal gáhttet gollegielat.” *Vitalisering av samisk språk i Noreg i 1990-talet* [“... if you maintain your golden language.” Vitalization of the Sami language in Norway in the 1990s] [Doctoral dissertation]. Det humanistiske fakultet, Universitetet i Tromsø.

Tomasik, M. J., Helbling, L. A., & Moser, U. (2021). Educational gains of in-person vs. distance learning in primary and secondary schools: A natural experiment during the COVID-19 pandemic school closures in Switzerland. *International Journal of Psychology*, 56(4), 566–576.

van Beek, S. (2016). Intersections: Indigenous language, health and wellness. First Peoples’ Cultural Council Deliverable for FNIS UBC Practicum 2016: First Nations and Indigenous Studies 400. *Health & Wellbeing*. [https://www.fpcc.ca/files/PDF/Language/Intersections\\_Indigenous\\_Language\\_Health\\_and\\_Wellness\\_WebVersion.pdf](https://www.fpcc.ca/files/PDF/Language/Intersections_Indigenous_Language_Health_and_Wellness_WebVersion.pdf)

Wall, K., Arnott, L., Cassidy, C., Beaton, M., Christensen, P., Dockett, S., Hall, E., l’Anson, J., Kanyal, M., McKernan, G., Pramling, I., & Robinson, C. (2017). Look who’s talking: Eliciting the voices of children from birth to seven. *International Journal of Student Voice*, 2(1). <https://ijsv.psu.edu>

Westra, L. (2012). *Environmental justice and the rights of Indigenous peoples: International and domestic legal perspectives*. Earthscan.

Whitehouse, H., Watkin Lui, F., Sellwood, J., Barrett, M. J., & Chigeza, P. (2014). Sea country: Navigating Indigenous and colonial ontologies in Australian environmental education. *Environmental Education Research*, 20(1), 56–69. <https://doi.org/10.1080/13504622.2013.852655>

Wildcat, M., McDonald, M., Irlbacher-Fox, S., & Coulthard, G. (2014). Learning from the land: Indigenous land based pedagogy and decolonization. *Education & Society*, 3(3), I–XV.

Wulf, C. (2008). Producing the social in rituals. Education and learning, mimesis and performativity. In P. Siljander & A. Kivelä (Eds.), *Kasvatustieteen tila ja tutkimuskäytännöt: Paradigmat katosivat, mitä jäljellä?* [The state of education and research practices: Paradigms disappeared, what’s left?] (pp. 51–71). Suomen kasvatustieteellinen seura.

Yin, R. (2013). *Case study research: Design and methods* (5th ed.). Sage Publications.

## **ENDNOTES**

- <sup>1</sup> In this article, the written form of the Sami language is used. Sámi and Saami are also known.
- <sup>2</sup> See more about teachers struggling when working in Indigenous education contexts in Hall (2013).