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Remote teaching of Ume Sámi to young learners in Sweden

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Remote teaching of Ume Sámi to young learners in Sweden

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Abstract

This article is based on a qualitative case study of remote teaching in the endangered, indigenous language Ume Sámi. The purpose of the study is to support the revitalisation of the endangered Ume Sámi language in educational settings. Further, the aims for the study is to enhance knowledge of teaching this language. Through teacher interviews and lesson observations, the study focuses on teacher experiences in the remote teaching of young learners. The verbatim-transcribed data was analysed through a data-driven thematic analysis. The results show that remote education is necessary for teaching Ume Sámi due to the geographical distribution of the Sámi people. The challenges of teaching through remote education originate outside the digital Ume Sámi classroom. Challenges identified in this study comprise teaching time, scheduling across different schools, shortage of educational material in the Ume Sámi language and lack of commitment from the young learners' regular school. Moreover, teachers perceive that communicating Sámi culture beyond language is challenging due to a shortage of resources. The cultural aspects are crucial, especially when pupils live outside Sápmi, the core geographical area of the Sámi people. Teachers expressed a desire for conventional Swedish schools to carry their responsibility and teach about Sápmi and the Sámi people to all pupils in Sweden.

Keywords: remote teaching, Ume Sámi language, teacher experiences, young learners

Introduction

This article focuses on teaching the endangered Ume Sámi language in the Swedish context and presents an analysis of the experiences of Ume Sámi teachers in remote teaching. The Ume Sámi language is one of nine Sámi languages spoken in Sápmi, a geographical area extending across four countries: Sweden, Norway, Finland and Russia. The North Sámi as a lingua franca is the most vital and has the highest number of speakers in Sápmi (e.g., Lloyd-Smith et al., 2023). In the Swedish part of Sápmi, five of the nine languages exist - North, South, Lule, Pite and Ume Sámi - of which the last three are without almost any first language (L1) users. UNESCO's (2003) nine criteria classify all Sámi languages as endangered.

Sámi policy in Sweden

The governments in the four countries in Sápmi have exposed the Sámi people to colonisation for several centuries. The present study focuses on Sweden, where the Sámi people were assimilated and segregated simultaneously by the state (Henrysson and Flodin, 1992), which is a contributory factor of the endangerment of the Sámi languages. During the 19th century in Sweden, it became forbidden to speak any of the Sámi languages (Skutnabb-Kangas and Phillipson, 1994; Pietikäinen et al., 2010). A mixture of segregation and assimilation replaced the strict assimilation policy relatively recently at the beginning of the 20th century. The aim was, first, to segregate the reindeer-herding Sámi people who lived in the mountains and forest areas, because the Swedish state thought that the Sámi people were uncivilised and a lower standing race that would not be able to survive in a civilised society. Second, some Sámi people, mostly around the forest areas, were to be assimilated into Swedish society and become Swedish (Kvenangen, 1996; Svonni, 2016).

The Ume Sámi language was predominantly used in the forest areas targeted by assimilation, which might explain why the Ume Sámi language has been hit so hard (Barruk, 2010). In the early 21st century, the Ume Sámi language was on the verge of extinction. At that point, only 10 - 20 people used the language (Sámediggi - Sametinget, 2021). As a result, private individuals started an organisation to save the Ume Sámi language and increase the number of users. Over the past 20 years, the number of adult and child users of Ume Sámi as a second language (L2) has increased to around 100 users, while the L1 users remain few in number (Sametinget, 2020). This corresponds with earlier research emphasising that education is one of the essential tools to increase the number of language users, especially if language transmission between generations fails (Hornberger, 2008; Sumida Huaman, 2014; Hornberger and De Korne, 2018; Todal, 2018). According to Swedish law (Skollag, 2010), a school in Sweden is obliged to strengthen and nurture national minority languages by providing language education, as in Ume Sámi.

The first author of this article has her heritage in Árviesjávrrie and has lost the family language Ume Sámi. Her grandfather, born in Balkovare on the 16th of February 1900, was the last in the family who spoke Ume Sámi. He did not teach his children due to the assimilation policies imposed by the Swedish state. If the Swedish language was prioritised, and not Ume Sámi, his children would have an easier life. This idea has affected later generations, who still suffer from the stolen and lost language. Having

a mother tongue, L1, that one could never learn at school becomes a question of (linguistic) identity loss because language and identity are closely related (Busch, 2012; Liebkind and Henning-Lindblom, 2015; Ridanpää, 2018).

In the globalised world, Sámi people do not only live in the North - in Sápmi. It has been said that the capitals of Sweden, Finland and Norway are home to the largest Sámi communities of these countries. Thus, learners of Ume Sámi do not necessarily live in the area where the language was historically spoken. Presently, learners of Ume Sámi are spread all over Sweden and even abroad. This distribution is one of the factors why remote teaching has such a crucial role for Ume Sámi (cf. Määttä and Uusiautti, 2019), as well as the only possibility to provide tuition in the Ume Sámi language (cf. Todal, 2018).

Teaching of Sámi languages

Earlier research shows that Sámi languages are poorly integrated into ordinary classroom-based education (Hermansen and Olsen, 2020). In their study of Sámi language in Norway, pupils experienced the prioritisation of the Norwegian language over the Sámi language. For example, teachers did not show interest in the pupils' education and educational progress in the Sámi languages. Moreover, several pupils decided to withdraw from their education in the Sámi language, partly due to the verbal insults from other pupils but also teacher attitudes.

In Sweden, it is a right to receive education in the Sámi languages, as well as in any other of the five national minority languages, even if there is only one pupil at a school that requests learning their language. This is different in relation to other, newer, minority language education (Skolverket, 2023). Consequently, remote teaching has been an accepted educational form in Sweden since 2015 and is relatively common for Sámi languages in Swedish elementary schools. However, the administrative authority with responsibility for education in Sámi languages does not provide support for remote teaching in Ume Sámi (Parfa Koskinen, 2020).

It is up to the individual education provider to decide how much time or how many lessons are dedicated to teaching minority languages such as Ume Sámi. The administrative authority for education in Sámi languages is not mandated to decide how many hours of education the Sámi language pupils will receive although, it recommends at least two, one-hour lessons per week (Parfa Koskinen, 2020). According to other research (e.g., Lightbow and Spada, 2020; Muñoz, 2008), this is not enough where the recommendations are for more hours over several years. Children attending classes twice a week and without contact with the language outside these lessons are unlikely to develop to an advanced level (Hornberger and De Korne, 2018). Remote teaching is not cost-effective as it always requires two adults to be present, regardless of how many pupils attend. This obligation originates in Swedish law; no pupils are allowed to be left alone, without an adult, in a physical room when remote teaching occurs with young learners (Skollag, 2010).

Aim and research question

This study presents an analysis of the experiences of teaching young learners the Ume Sámi language remotely. Consequently, the aim is to enhance knowledge of teaching and learning the indigenous,

endangered language of Ume Sámi through remote teaching. This article answers the question: what are the experiences of Ume Sámi teachers when remote teaching in the Ume Sámi language?

Remote teaching of endangered languages

One of the most effective methods for learning and revitalising a language, after unsuccessful transmission between generations, is language immersion and its various forms (Fishman, 1991). To learn a language, there must be as many learning opportunities as possible (Takala, 1996). Immersion and language nests have proved to be effective with indigenous languages: the Māori language in New Zealand and Inari Sámi in Finland have gained from this pedagogical method (Keskitalo, Määttä and Uusiautti, 2014; Pasanen, 2015; Olthuis et al., 2021).

It is possible to apply language immersion in several ways, from including the immersion language only in everyday situations (e.g. greetings) to total immersion, where teachers use only the immersion language in their communication with children. Language nests aim explicitly to revitalise an endangered minority language especially in early childhood education, whereas immersion aims more at bilingualism and strengthening language equality (e.g. Olthuis et al., 2013). Content and Language Integrated Learning (CLIL) is an immersion or language learning pedagogical approach schoolchildren (from six years old) where teachers use foreign or minority languages in various school subjects. However, in the Nordic context, CLIL is mainly applied to English (e.g., Mård-Miettinen, Palviainen and Palojärvi, 2016; Sylvén, 2018).

Language nests for children or CLIL may not be realistic when learners are widely spread geographically, so other avenues have to be explored such as language technologies to promote language learning in remote environments. Consequently, the power of new technologies in language learning might also benefit minority language education, even though remote teaching does not constitute a strong tuition model for revitalising a language if the minority language is not also used in other subjects in school and informal settings as well (Hermes and King, 2013; Ridanpää, 2018; Todal, 2018).

Role of new technologies

Utilising new technologies seems to be one of the promising forms of language pedagogy in the sparsely populated Sápmi and among Sámi people living outside the core Sápmi area (Todal, 2018; Määttä and Uusiautti, 2019). Using remote teaching in the context of endangered languages, such as Ume Sámi, could be successful at least at the beginner level. Further, remote teaching also creates a context where pupils can be in touch with the Sámi language. Synchronous, remote teaching enables real-time interactivity with and between pupils and each teacher is expected to use and combine several modalities during lessons. As a result, synchronous and networked learning is expected to allow for productive and interactive collaborative learning (Jewitt, 2006; Dillenbourg, Järvelä and Fischer, 2009; Bower, 2019).

In contrast, the challenges of remote teaching are related to structural problems. There are difficulties in facilitating meaningful learning experiences and an interactive social context, especially when several municipalities and schools are involved (Garrison, 2011; Delahunty et al., 2014; Parfa Koskinen, 2020).

In remote teaching, learning situations can easily become too formalised, which is a real challenge when encouraging spontaneous and natural language use by reciprocal action and meaningful interaction (e.g., Todal, 2018). Moreover, the sense of belonging, with its positive effects related to well-being and learning, seems to suffer with remote teaching.

Language proficiency is one of the factors in socio-emotional well-being connected to the sense of belonging (e.g., Baumeister and Leary, 1995; Hollebeke, Stuys and Agirdag, 2020; Barringer et al., 2023). The better the language skills are, the stronger the sense of belonging to the group becomes. The children come to belong to a specific culture, religion and language naturally as a member of a group surrounded, for example, by a specific language used by the members of this group (e.g., Habib and Ward, 2019).

Place and local attachment are other factors enabling a sense of belonging (Tomaney, 2015). For Sámi people, the place is explicit, for example, in language and clothing. The traditional costume, *gápttie*, reflects the family and local attachment. In a globalised world, neither place nor heritage language is self-evident. There is a discrepancy between learning a language outside Sápmi through remote teaching and embracing the nature and culture of the Arctic area to strengthen the idea of the wholeness of the identity (cf. Määttä et al., 2020).

Arctic pedagogy as a lens

With these facts in mind, the importance of language learning and remote teaching has a deeper meaning, not only for school and education. According to Määttä and Uusiautti (2019), increased technical skills and opportunities for new technology indeed produce participation, support equality and create learning environments. All these outcomes seem to uphold (in)formal learning of cultural heritage across generations.

One of the cornerstones of Arctic pedagogy (Uusiautti and Määttä, 2019, p.213) is the understanding of bilingual and multilingual pupils in various languages, including Sámi languages. Three levels in the Arctic pedagogy's five-level action and teaching tool (Uusiautti and Määttä, 2014) are touched on in this study: learning processes, learning environments and teacherhood. The learning processes include goals, methods, and contents of teaching; the goals focus on learning conditions that make learning possible for everyone. Methods, in turn, focus on new technology and learners' strengths and resources while contents of teaching dives into various school subjects and learning entities. Learning environments should be shaped to promote learners' positive development through inclusive and innovative pedagogy that allows, for instance, various interactive and engaging physical and virtual learning environments (Määttä and Uusiautti, 2019). Finally, Arctic pedagogy also appears in teacherhood as pedagogical, interactional and supporting skills rather than merely the mediation of scientific information about the Arctic from subject-specific perspectives (cf. Turunen et al., 2016).

Methods

This study is a qualitative case study that focuses on teacher experiences when teaching young learners of L2 Ume Sámi through remote education. In order to present a multi-faceted picture, we used two different data collection methods: interviews and observations. The primary dataset involved two

teachers of Ume Sámi, who participated in semi-structured, in-depth interviews about education, remote education and the Ume Sámi language. The secondary dataset involved unstructured, non-participatory observations of two lessons of remote teaching in Ume Sámi each with two participating pupils. To maintain anonymity, the teachers were given fictional and gender-neutral names, Kim and Eli. The reason for the gender-neutral names is because there are very few teachers of Ume Sámi. The pupils will be referred to as Pupil 1 and Pupil 2 or simply as pupils.

The first author of this article, belonging to the Ume Sámi people, collected the data through recordings using the digital platform Zoom as a part of their master's thesis (Lindelöf, 2023). At the beginning of each interview, the purpose of the study and the interview format were explained to participants. One of the interviewed teachers was the teacher who conducted the observed lessons. The two teachers, Eli and Kim, have varying levels of experience in teaching the Ume Sámi language and both are L2 Ume Sámi speakers. The two Ume Sámi lessons, with two L2 Ume Sámi pupils and a teacher, were observed consecutively, and conducted and recorded in Zoom. The pupils were six and seven years old.

Data analysis

The verbatim-transcribed data was analysed through a data-driven thematic analysis (Braun and Clarke, 2006) by using the analysis program MAXQDA 2022 (VERBI Software, 2021). Both datasets were analysed separately but in parallel. The transcribed interviews were coded either by data that were surprising, interesting and relating to previous research or something that the participant expressed as important. After the coding process, the codes were sorted into different themes (an example is given in Table 1).

The first column in Table 1 shows the freely translated and coded extracts from the interviews with one of the teachers. The second column describes the core of the data extracts, and the final column shows the theme where the codes have been placed. After the coding, two main themes were recognised from the analysing process, with four related secondary themes. The two main themes were education and language. Secondary themes connected to education were remote education, learning environment and interest/commitment. The secondary theme related to language was identity.

Table 1: example of theme formations

Data extract	Description	Theme
Ehh so therefore remote education became really a, a, a must to even make it work to, to have education in Ume Sámi.	Remote education is described as necessary to be able to conduct education in Ume Sámi.	Remote education.
Ehh and then, like I wrote to you, like I have been home with sick children for 3 weeks, but no pupil has been without education. Because we have been able to connect us.		

... Ehh so I can like take with me my
pupils through the computer or
through the phone like. Ehh it is very
rarely I cancel my classes, instead
they follow me on the other jobs.

The video files from the recorded lessons were directly transferred into the analysis program. To become familiar with the recorded lessons, the recordings were watched multiple times. While watching, interesting observations were noted, for example, if something happened, if certain behaviours were recognised and if something was surprising or connected to previous research findings.

Figure 1 shows an example of the analysing and coding process with MAXQDA 2022. First, memos were created to mark the places where interesting observations were made. This facilitated the following coding process. The codes were categorised into four themes, namely using language, challenges, education, and interest/commitment. The first category, using language, incorporates codes relating to the languages used by the teacher and pupils during the lesson and how they communicated. In the next category, challenges include technical difficulties, problems with the learning environment, the length of the lesson and how the pupils were prepared for the Ume Sámi lesson. The third category integrates the didactic choices that were made and how the teacher interacted with the pupils. In the last category, interest/commitment, codes that related to the pupil's activity during the lessons were placed.

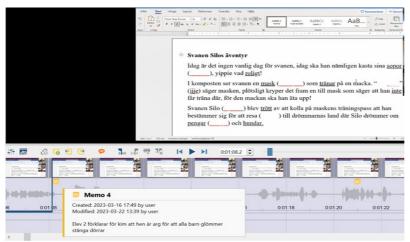


Figure 1: example from the analysing process with MAXQDA 2022 (VERBI Software, 2021)

Finally, after the analysis with MAXQDA 2022, the two datasets were brought together and related to each other. Similar themes were found in both material, such as education, interest/commitment and language. In the interviews, challenges as well as possibilities with remote education were recognised in the analysing process. These will be presented as findings and not separate themes since they related to several of the themes.

Ethical considerations

In this study, the indigenous natives are both "known" and "knowers" since the first author as well as the teachers and pupils belong to an ethnic minority, the Ume Sámi people (cf. Moreton-Robinson, 2014, p.75). The pupils are also minors. As a result, ethical considerations have been made. Further, this study could not have been conducted without an Ume Sámi researcher and co-author, who has provided an access point to cultural understanding for the whole study (cf. Kwaymullina, 2016). The first author and data collector shares the same ethnic background as the participants of this study. This fact is of relevance due to the sensitivity of the gathered data (Johansson, 2013).

All participants were informed about the aim of this study, how data would be collected and how the gathered data would be used. A letter was sent out with this information to the Ume Sámi teachers as well as the guardians of the pupils. In the letter, the participants were given information about the researchers' own backgrounds and identity, to create security and relation. The teachers, pupils and the pupils' guardians gave their consent before data collection. At the time of the observations, the teachers were again informed that they could withdraw their consent at any time if they wished to.

In the following section, the teachers' experiences of remote teaching in the Ume Sámi language will be presented. The data excerpts are translated by the authors, and the original Swedish quote is included for reliability. The sign [...] stands for anonymised or irrelevant parts of the quote or translated explanation of a concept in Swedish.

The design of remote education in Ume Sámi

While observing the Ume Sámi lesson, it was noticed that the two pupils did not have a designated classroom for their lesson. Pupil 1 was situated in a library with a window facing the corridor during both lessons (figure 2). During the lessons, it was possible to see other pupils passing by. Pupil 2 was in a rather messy room full of numerous things that took the focus from Pupil 2. The objects were not tools fitted for the Ume Sámi lesson (figure 3).



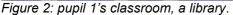




Figure 3: Pupil 2's classroom.

During the interview with the two teachers, it was discovered that remote education presents a challenge for pupils taking Ume Sámi due to their learning environment. Kim provided several examples of this, including classrooms with distracting windows facing the corridor and unstable internet connection. Additionally, during observation it was noted that these 6- and 7-year-old pupils, outside their own classroom and without an adult present, needed help finding paper and a pen for an exercise. Pupil 2 could find the necessary tools, while Pupil 1 could not find the tools needed for the lesson.

During the observation, it was noted that pupils were left unsupervised in the physical classroom after a school staff member allowed them to join the online class. Kim confirmed that only one of their pupils

had an adult present in the physical classroom during the remote Ume Sámi lesson. Eli had a similar situation, with some pupils having an adult present during the Ume Sámi lesson while others were left alone in the physical classroom. However, the pupils left alone had their regular teacher nearby the physical classroom.

According to data gathered in the interviews, both teachers employed diverse educational methods and activities during their Ume Sámi lessons. The activities mentioned by Kim and Eli were play memory and quizzes, creating stories, dance, reading books, listening to radio programs, dialogue in Ume Sámi, watching Sámi programs, painting, play, work with self-made materials, games, writing and various outside activities, for example, related to reindeer husbandry.

The use of different activities during the lessons was also confirmed in the observations as Kim used several of the listed activities. Both Kim and Eli expressed that remote teaching is not only necessary but also works as an educational tool, even though there are challenges. Eli, who has more experience of remote teaching Ume Sámi than Kim, has witnessed how pupils of Ume Sámi develop as L2 speakers. The pupils reach the goals mentioned in the Swedish curriculum (Skolverket, 2022) if the conditions are right.

It was observed that pupils mainly spoke Swedish during the lessons. An exception was made when they were doing different exercises or greeting each other at the beginning of the lesson. Kim initially used the Ume Sámi language but switched to Swedish by translating. When interviewed, Kim expressed a desire to use more Ume Sámi and gestures during lessons instead of always relying on translation. In fact, this is how Kim taught Ume Sámi, using many gestures to help students understand individual words. During the first lesson, when a pupil asked Kim what the Ume Sámi word "sïjluos" meant, Kim used gestures while saying the sentence "Åh månna leäb sïjluos" [I am tired] (figure 4).



Figure 4: Kim shows with gestures what the Ume Sámi word sïjluos means.

In Figure 4, a gesture was used to convey the meaning of the word "sijluos" to Pupil 1. During the second lesson, Kim incorporated gestures into the Ume Sámi language. Pupil 1 helped Pupil 2 during the various activities throughout the lesson. Pupil 1 was linguistically confident and often led the way during quizzes. Pupil 2 gained confidence and was able to say the Ume Sámi words for body parts, seasons and numbers by the end of the lesson.

Ume Sámi teachers' experience of remote teaching

Data shows that Eli and Kim discussed the potential benefits and obstacles of teaching the endangered Ume Sámi language through remote teaching. They acknowledged that remote teaching could make Ume Sámi education more accessible to all pupils who desire it. According to Eli, Ume Sámi lessons are offered to students all over Sweden but there are only a few Ume Sámi teachers. Without remote teaching, it would not be possible to provide education in the Ume Sámi language (data excerpt 1).

Data excerpt 1:

Eli: The thing is that the Ume Sámi area is quite large. Eh, or not that large, or yes. It is large concerning the number of people in the same area [...] I have pupils that are very spread out, and it is not only within the Ume Sámi area. Some pupils wish to learn the Ume Sámi language [...] Ehh, so because of that, remote education is actually a must to even make it work to have education in Ume Sámi. (translation)

Eli: Grejen är ju så här att de, umesamiska området är ju ganska stort. Eh eller det är inte stort eller jo. Det är stort i förhållande till antalet personer på samma ort [...] Jag har ju ehh elever som är väldigt spridda och sen är det inte bara inom det umesamiska området, de e elever som vill lära sig umesamiska. [...] Ehh så därför blev fjärrundervisningen egentligen ett. Ett ett måste för att de ens skulle fungera att få få undervisning i umesamiska.

In data excerpt 1, Eli explains that remote teaching is necessary to be able to provide an Ume Sámi education. The Ume Sámi language is no longer bound to a specific area since families and pupils live all over Sweden.

Kim pointed out that pupils have varying degrees of connection to Sámi culture. Some of Kim's pupils do not live in the traditional Sámi areas, which means that they are further away from the Sámi culture. Kim also expressed a desire for conventional Swedish schools to carry their responsibility and teach about Sápmi and the Sámi people to all pupils (data excerpt 2).

Data excerpt 2:

Kim: So, partly I see a responsibility that, that the Swedish school ehh is not taking. They should educate our pupils about our country's indigenous people and national minorities. It is like so poorly informed about it, such a big responsibility is put on us Sámi people to tell Swedish people about ourselves. (translation)

Kim: Alltså delvis så ehh ja ser ju ett ansvar som. Alltså svenska skolan ehh, inte tar. Det är ju att undervisa våra elever. Allmänt om vårat lands urbefolkning och nationella minoriteter. Alltså, de e ju det är ju så. Dåligt informerat det, de läggs ju ett stort ansvar på oss samer att informera svenskar om oss själva.

Kim explains in data excerpt 2 about the double responsibility that Sámi people have - to not only inform Swedes but also their own people who have had their Sámi language and culture taken away. However, since this education is lacking, teachers of Ume Sámi and other Sámi languages must incorporate cultural education alongside language teaching, producing learning and teaching material (see data excerpt 3) as well as lesson planning.

Both Eli and Kim highlighted the advantages for pupils in having digital classmates. Collaborating with peers and learning together would be beneficial, as well as making it clear that others of the same age are also learning Ume Sámi. However, many pupils are currently taught without any digital classmates, making it difficult to connect with others. Eli suggested that schools offering remote teaching in Ume Sámi should prioritise mutual communication and collaboration to ensure every pupil has a digital classmate.

The challenges expressed by both teachers of Ume Sámi mainly concerned external influence and not remote teaching as a method. During the interview, the lack of official teaching material was brought up (see data excerpt 3).

Data excerpt 3:

Researcher: But do you need to make all the materials yourself?

Kim: Yeah.

Researcher: So there is no...

Kim: No, nothing I can get from colleagues that I can get, but there is no official material accessible. I sit and translate some myself from Skolverket's [Swedish National Agency for Education] material,

ehh, from the Lule Sámi material. (translation)

Forskaren: Mm. Men behöver du göra allt material själv?

Kim: Ahh,

Forskaren: Det finns inget...

Kim: Nej inget, jag kan ju, jag kan ju få av kolleger, det kan ja ju få, ehh men det finns inget som är, inget så här officiellt material som finns tillgängligt. Jag sitter och översätter en del själv. Från typ Skolverkets material, ehh lulesamiska material.

According to Kim, teachers of Ume Sámi must design their materials, which is time-consuming and could have been spent on lesson planning and other preliminary tasks. The translation from one Sámi language to another is, of course, more accessible than from a language belonging to another language family. However, it might also be demanding to keep the languages apart, for example, orthographically. Nevertheless, translating is time-consuming. Eli suggested that having official teaching material would improve the conditions for remote teaching in Ume Sámi (see data excerpt 4).

Data excerpt 4:

Eli: More material in Ume Sámi so our pupils also get a workbook, which also would entail less workload on us teachers. More planned Sámi lessons during ordinary scheduling so the pupils do not need to have lessons after the school day. (translation)

Eli: Mera material på umesamiska så våra elever också får en arbetsbok, vilket också medför mindre arbetsbelastning på oss som lärare. Mer planerad samiska inom ordinarie schemaläggning så eleverna slipper sitta efter skoltid.

As Eli implies in data excerpt 4, both participants also mentioned that scheduling was a challenge, as Ume Sámi lessons often took place outside of regular school hours, which could be difficult for their pupils. During their interviews, Kim and Eli mentioned a difference in the pupils' motivation depending on the scheduling of these lessons.

Ume Sámi got an approved orthography in 2016, which affects how it is taught and written (Sámien giällagálddije, 2016). Eli emphasised the importance of giving enough time for teaching Ume Sámi, suggesting that at least 120 minutes per week is required for pupils to reach their learning goals expressed in the curriculum for the Ume Sámi language. Kim reported that their pupils could have 30 to 180 minutes of Ume Sámi per week. Eli mentioned that the municipality where they work currently has a standard of 120 minutes of Ume Sámi per week, but this was not always the case. The time set for Ume Sámi was increased after pressure from pupils' guardians. As a result, Ume Sámi pupils in Swedish elementary schools do not receive the equivalent teaching time.

Both teachers brought up identity in relation to the Ume Sámi language. Eli explained that the Ume Sámi language should be brought into the everyday classroom instead of being something that is taken out (see data excerpt 5).

Data excerpt 5:

Eli: [...] And there you can also think, if you strengthen the language, you also might strengthen an identity, as a Swedish teacher, if you bring the language into the classroom. [...] Those pupils or the pupil learning Sámi will also have their identity positively reinforced, so the identity will also be strengthened by showing as a teacher that the Sámi language is important. We bring it into the classroom instead of taking it out. (translation)

Eli: [...] Å där kan man ju också om man då tänker att man ska stärka språket så stärker man ju kanske en identitet som svensklärare ifall man faktiskt lyfter samiskan i klassrummet också. [...] Dom elever eller den eleven som läser samiska bli ju också lyft, så identiteten stärks ju också. Av att man som lärare visa att samiskan är viktig, vi tar in den i klassrummet i stället för att ta ut den.

In data excerpt 5, Eli stresses the importance that Swedish elementary schools should include the Sámi languages in regular classrooms to show that the Sámi languages are important and to strengthen pupils' cultural identity. Kim also argues that the Swedish school has an essential role in making Ume Sámi, and other national minority languages, visible in everyday schooling. It is important to show that the language has a use in multiple arenas and not only in the Ume Sámi classroom.

Discussion and conclusion

This study aims to enhance knowledge about the experiences of Ume Sámi teachers when teaching this indigenous and endangered language through remote education. The findings indicate that the main issues concerning remote education in the Ume Sámi language, are due to external factors rather than remote teaching itself.

One of the study's main results is the recognised inequality in teaching time provided. Both teachers explained that the education could vary a lot depending on the school and the municipality where the school is located. Availability of teaching hours is highly variable from 30 minutes to three hours for the same goals and syllabus. From this perspective, scheduling is a problem, and it would be even more challenging with an ever-increasing number of pupils. Therefore, the (national) guidelines concerning

teaching hours and structural collaboration between schools with pupils participating in Ume Sámi lessons are challenges to be urgently solved. The content, as well as the material and methods used in remote teaching, become increasingly important to guarantee language learning even though it is challenging to reach the goals in the curriculum. One possibility could be to follow the ideas within Arctic pedagogy more precisely and include, for instance, themes and vocabulary from various school subjects in Ume Sámi education. This would require naturally active teacher cooperation across disciplines towards a common goal, the pupil's development in Sámi languages.

Moreover, the results show an urgent need to produce official learning materials for Ume Sámi as a language and in Ume Sámi for various school subjects. As the teachers in this study emphasise, much of their time goes into producing and creating suitable material for pupils of various ages and classes. The lack of suitable material is a common problem for all teachers in national minority languages in Sweden (cf. Lainio and Pesonen, 2020).

However, young learners as digital natives are familiar with new technology and communicating by several modalities is common for them. Remote teaching is a functioning alternative if the fundamentals for content and methods, including learning material, serve the teachers and their teaching according to actual needs. The Swedish curriculum (Skolverket, 2022) clearly states that all pupils should receive an equivalent education. The results of the study show that this is not the case when it comes to minority education in the Ume Sámi language. The whole educational system, from teacher education to single schools and lessons, not only fails to provide an equal education but also fails in responsibility with remote education in Ume Sámi. A missing and non-present adult is not only against the law, but it is also an incomplete learning environment. Swedish school law states that an adult should be present in the physical room where the pupil has her/his remote education (Skollag, 2010). The results of the study indicate that this is not always the case.

When the Ume Sámi teachers were asked if their pupils had an adult present in the room during their lessons Kim answered that only one of their pupils had an adult present in the room during the whole lesson. This study only included two observed lessons and only two of Kim's pupils. Eli did not specifically say how many pupils had or did not have an adult present, only that both situations occur. During observations of Kim's lessons, it became obvious that there was a real need for a present adult on several occasions. These occasions concerned technical assistance, lack of help to hand out teaching supplies and ensuring that the learning environment was safe and the best it could be. During the second observed lesson, a group of other pupils opened the door to the room where Pupil 2 had their Ume Sámi lesson and disturbed the pupil. The pupil clearly showed that the incident affected them negatively.

With regard to remote teaching, the learning environment consists of both the virtual, remote environment and the physical room in each school. Physical learning environments as described, without adult support and proper teaching supplies, are not shaped to promote pupils' positive development. Therefore, to achieve and offer pedagogical, interactional and supportive teacherhood that Arctic pedagogy also requires, efforts within teacher education are crucial. As in all language

education, it includes much more than words, phrases and grammatical structures. Languages are all bound to different social contexts, cultural phenomena and circumstances. To avoid a mediation of facts on various linguistic details to Ume Sámi pupils living outside the core areas of Ume Sámi people, the mediation of richness about the specific Sámi culture and connection to nature becomes even more crucial. The question is how to refrain from merely communicating scientific facts about the Arctic in remote teaching (Turunen et al., 2016; Määttä et al., 2020). As the participants in this study point out, they are obligated to incorporate cultural education as well because pupils are not familiar with it. The situation resonates with the teaching of a foreign language. Culture is, alongside language, one of the most potent forces in developing and maintaining a sense of belonging when the physical place is unavailable but visible in, for example, traditional, familiar costume, *gápttie*.

Further, the importance of a social context, classmates and, more explicitly, Ume Sámi classmates are also crucial for the future. Määttä and Uusiautti (2019) stress that increased opportunities to participate in various digital groups and forums produce participation and exposure to informal language learning. Similar interests also strengthen belonging - despite age. Informal online exposure is undoubtedly one of the forms of language learning, even for Ume Sámi people. Concerning the situation of the Ume Sámi language as a minority within a minority, the situation for the Ume Sámi people is that they have a connection to the Sámi culture without having the language. The situation can also be that individuals neither have the language nor a close relation to the Sámi culture. Interviews with Kim and Eli show that this is common for their pupils learning Ume Sámi. In these cases, the language is undoubtedly a way to come closer to their culture.

Proficiency in a minority language incorporating cultural knowledge and skills is essential for well-being, a sense of belonging and collectiveness (cf. Hollebeke et al., 2020). To strengthen the endangered Ume Sámi language, an increased sense of belonging and collectiveness are fundamental. Revitalisation is possible with goal-oriented language pedagogy, even in endangered languages, such as the Sámi languages. Moreover, a realistic educational strategy is needed because the generation learning Ume Sámi in the 2020s in formal education is somewhat ,or entirely, unfamiliar with the language and even the traditional culture and environment (cf. Todal, 2018). However, the language learning path from early childhood to adulthood must be guaranteed, including in teacher education and engaging parents and families and, of course, effective bilingual education as underlined by Arctic pedagogy.

Language education is also needed among adults to educate new adult speakers in the Ume Sámi language (cf. Hornberger, 2008; Sumida Huaman, 2014; Hornberger and De Korne, 2018; Todal, 2018). The Sámi folk high school, Samernas, provides courses in Ume Sámi for adult learners. However, Swedish universities do not have any language courses in Ume Sámi. The two northernmost universities in Sweden, Umeå University and Luleå University, do not have any exclusive program to educate Sámi teachers in any of the Sámi languages explicitly. Undoubtedly, this contributes to the dearth of teachers in all Sámi languages. At Umeå University, it is possible to take classes in South, North and Lule Sámi in addition to teacher education to become a legitimised teacher in those Sámi languages. The same possibility does not exist in the Ume Sámi language, which makes it difficult to

find educated teachers in Ume Sámi. Even the shortage of official customised and suitable (digital) learning materials for various age groups suffer from non-existing teacher education in Sámi languages in Sweden. Recruiting teachers and teacher students is challenging because the language is no longer commonly used as a first language.

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