Multilingual literacy among young learners of North Sámi: Contexts, complexity and writing in Sápmi

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# Table of Contents

Table of Contents  v  
Abstract  vii  
List of Papers  ix  
Tables, Figures and other illustrations  xi  
Acknowledgements  xiii  

1 Introduction  1  
  1.1 Aims and research questions  2  
  1.2 Outline  3  

2 Context and background  5  
  2.1 Speakers of North Sámi in present day Sápmi  6  
  2.2 Weakened ties to Sámi cultural heritage  9  
  2.3 Three countries - three paths to Sámi education  11  
    2.3.1 Curricula and teacher training  12  
    2.3.2 School programs for Sámi learners  14  
  2.4 Earlier studies in Sápmi  17  

3 Conceptual framework  21  
  3.1 Bilingualism  21  
  3.2 Continua of Biliteracy  24  
  3.3 Writing  28  

4 Materials and methods  31  
  4.1 Methodology and ethics  31  
    4.1.1 Summary of Paper I  32  
  4.2 Participants  34  
  4.3 Data collection and methods  36  
  4.4 Challenges of the study  40  
  4.5 The author's contribution to research  41  
  4.6 Note on researcher positionality  42  

5 Literacy contexts and instances in Sápmi  43  
  5.1 Summary of Paper II  43  
  5.2 Summary of Paper III  46  
  5.1 Summary of Paper IV  48  
  5.2 Summary of Paper V  50  
  5.3 Summary of Paper VI  54  
  5.4 Complex contextual and linguistic relations  56
6 Implications for language revitalization and Sámi literacy development

6.1 Resisting language shift by supporting Indigenous literacy 61
6.2 Future studies 65
6.3 Final thoughts 66

Summary in North Sámi 69

Summary in Swedish 72

References 75
  Literature 75
  Other sources 89

Appendices 93
  APPENDIX 1 - Procedures for text collection 93
  APPENDIX 2 - Topics for the writing tasks 95
  APPENDIX 3 - Summaries of questionnaire questions 96

Papers I-VI

Umeå Studies in Language and Literature
Abstract
This thesis presents an investigation of the complexities of the immediate, ideological, educational, and societal contexts for literacy development among North Sámi learners between the ages of 9 and 15 who live in Northern Finland, Norway and Sweden in the central regions of Sápmi. Further, this thesis focuses on one area of literacy, namely writing. It examines these children’s writing, its phases and peculiarities, writing strategies, and the nature of transitions that these multilingual writers experience in switching between North Sámi, English and their respective national majority language. The main body of the collected materials consists of computer mediated pupil texts that the author gathered at 10 schools that arranged compulsory schooling in Central Sápmi during the school year 2012-2013. The texts were collected using keytroke logging methodology that not only records the final written product but also keeps track of changes and other writing activity during the writing session. Other materials collected and analyzed in this study include questionnaires addressed to the pupils, their parents, and to their language teachers. The materials also include detailed interviews with with 24 teachers from the participating schools. This study consists of six individual papers that focus at 1) research methodological aspects that concern studying Indigenous populations, 2) language attitudes, ideologies and available language arenas that have an impact on biliteracy emergence in North Sámi speaking Sápmi, or 3) the qualities and characteristics of multilingual pupil's writing and texts. The implications of the six individual papers are analyzed with respect to language revitalization and biliteracy emergence using the Hornbergian Continua of Biliteracy as the overarching theoretical framework. North Sámi, English and the national majority languages in the respective countries are constantly present in the lives of Sámi learners. Young Sámi learners grow up to be multilingual citizens of the global north through this extensive exposure to many languages and cultures from multiple sources such as popular culture, literature, media, community, tourism, and school. In their writing, multilingual Sámi learners show a wide spectrum of strategies and knowledge that carries over from one language to another. Nevertheless, most young Sámi learners cannot draw on equally many points on their Continua of Biliteracy in all their languages. Due to factors such as scarcity of adequate teaching materials, lack of popular culture and media content in Sámi languages, and language compartmentalizing language ideologies, the scales on the continua of biliteracy are in severe imbalance for many Sámi learners. Many Sámi learners risk losing their indigenous heritage language because the non-indigenous languages are prevalent in school as well as out of school contexts.
List of Papers
This thesis is based on the following papers (reprinted with the permission by the publishers):


II Outakoski, Hanna. (Submitted). Davvisámegielat čálamáhtu konteaksta [The context of North Sámi literacy].

III Hornberger, Nancy H., and Outakoski, Hanna. (in Press). Sámi time, space and place: Exploring teachers' metapragmatic statements on Sámi language use, teaching and revitalization in Sápmi. (To appear in Confero)


Other papers by the author mentioned in the thesis:

Tables, Figures and other illustrations

TABLES:
Table 1: Contemporary statistics for Central Sápmi - population and languages. p. 7
Table 2: Baker's (2006, p. 7) table over language abilities. p. 22
Table 3: The distribution of participants according to country. p. 35
Table 4: The distribution of pupil and parent questionnaire answers according to country and age in Paper II. p. 44
Table 5: Background information of the three young writers whose writing is examined in detail in Paper V. p. 51
Table 6: The length and the paragraph structure of the pupil texts analyzed in Paper V. p. 53
Table 7: Examples of alternating core consonant clusters in North Sámi and in Finnish in Paper VI. p. 55

FIGURES:
Figure 1: Organization of the individual papers in Sections 4 and 5, and the discussing section 6. p. 3
Figure 2: Nested relationships among the continua of biliteracy. Reprinted with permission from: Hornberger, N. H. and Skilton-Sylvester, E.: 2000, 'Revisiting the continua of biliteracy: International and critical perspectives', Language and Education: An International Journal 14(2), 96-122. p. 25
Figure 5: A chart from the project information package explaining the writing set-up. p. 37
Figure 6: Teachers' deictic markers for space in Paper III. p. 47
Figure 7: Teachers' deictics for time in Paper III. p. 47
Figure 8: Three literacy context scenarios for language X exemplified on the continua of biliterate contexts. p. 63
OTHER ILLUSTRATIONS:

Map 1: Sápmi and the three core North Sámi speaking municipalities in each country. p. 6

Photo 1: Example of the writing set-up at one of the schools. (Outakoski 2012) p. 37

Extract 1: Finished argumentative English text by 15-year old writer. p. 38

Extract 2: Log file of an argumentative English text showing pauses ({pause length in ms}), editing and revisions (e.g. erasure #), and other activity. p. 39
Acknowledgements

I had always imagined that writing a doctoral thesis is lonely work with days, weeks and months spent in total isolation from the rest of the world. That imagined picture of a becoming researcher’s life has always scared me since I enjoy teaching, interaction, and communication, and embrace isolation only if it involves mushroom picking in the woods. I am glad that in my case this sort of negative scenario never materialized. My time as a doctoral student in a project financed by the Swedish Research Council (Vetenskapsrådet, project 2011-6153, contract B0615301) has been characterized by team efforts, collaboration, and fruitful and never ceasing discussions with my supervisors and other colleagues from the Literacy in Sápmi: multilingualism, revitalization and literacy development in the global north project. I am thankful for the opportunity for me to join an interesting project like ours, and I am thankful for the generous grant from Swedish Research Council that has made the whole project possible. Most of all I want to thank all the children and young, their parents, their schools and teachers for participating in this study; without you, this thesis would be unwritten.

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GIITU!
1 Introduction

According to many researchers, popular children’s literature, such as the Harry Potter series, invites young readers and writers to expand on the themes known from these books, to discuss the plots and the characters, and to rewrite the stories thereby supporting their literacy development (Ashton, 2005; Dyson, 1997, 2003; Marsh, 2005; Marsh & Millard, 2000). One important area of literacy is writing. Writing is a complex literacy skill that requires a context that can cue cognition, and that also requires cognitive skills to mediate the context (Flower, 1989). Somewhere in between comes language, the instrument of the cognitive process and the tailor of the context.

Writing and reading in one’s own language is a privilege that many Indigenous peoples and minorities have not had or are just starting to enjoy (e.g. Gudhlanga & Makaudze, 2007; Watahomigie & McCarty, 1997). Heiss (2003) notes that “[w]riting for entertainment and education has increasingly become an important aspect of reviving and maintaining Indigenous history and culture, and a logical and necessary move in the development of Indigenous expression” (p. vi). For Indigenous peoples, being literate in one’s own language, and not only in the dominating language, is a step forward in acquiring basic human rights.

On 1st December 2011, the United Nations Special Rapporteur on the situation of human rights and fundamental freedoms of Indigenous people recommended, “that the Nordic States and the Sami parliaments cooperate to redouble efforts to revitalize Sami languages and strengthen programs for education in Sami languages and culture” (Anaya, 2011, p. 21). In February 2012, NRK Sápmi (the Sámi section of the Norwegian Broadcasting Corporation) published an article on the importance of increasing the funding of and efforts in translation of popular children's literature to Sámi languages (Niittyvuopio & Ballovaara, 2012, February 13). The two people interviewed in the piece, a well-known Sámi politician and a director of a Norwegian publishing company, both emphasized that children's books should be translated into Sámi immediately.
In September 2012 during the data collection when I met the writer of the above quote, Harry Potter was not translated into any Sámi language, and it still is not in 2015 when this thesis is defended. Many popular children's works are not available in Sámi languages, and contextualized and traditional stories are rarely published in Sámi. This implies that the worlds that open to the young learners of Sámi as they acquaint themselves with contemporary popular culture are those of other languages. Thus, languages other than Sámi easily become the engines of their imagination, the source of their creativity in writing, and the medium of their storytelling and role-play.

1.1 Aims and research questions
In this thesis, I investigate the complexities of the immediate, ideological, educational, and societal contexts for literacy development among North Sámi learners between the ages of 9 and 15. The participants were living in the central regions of Sápmi in Finland, Norway and Sweden. This cross-sectional study views the emergence of literacy from different perspectives through a mixed-method approach. I examine teachers’ experiences, parental attitudes and children’s writing.

The overarching theoretical framework that the study draws from is that of Hornberger’s (1989) Continua of Biliteracy. This framework applies a multi-dimensional model on the complexities of bi- and multilingual literacy emergence as viewed from the interdependent perspectives of biliteracy contexts, contents, media and development divided further into 12 interrelated sub-continua.

Four research questions are posed:

- How does globalization interact with North Sámi learning children’s literacy development and usage?
- How does the linguistic and cultural landscape interact with North Sámi learners’ writing processes and products in the three languages when writing in the school context?

---

1 In this thesis, I am looking at the writing and literacy development of young Sámi and non-Sámi who are still learning those languages that they use in their daily lives, one of the languages being North Sámi. Here, young refers specifically to children and adolescents between the ages of 9 and 16 years. Language learning is here understood as in Blommaert and Backus (2013) who “use the term [...] for broad range of tactics, technologies and mechanisms by means of which specific language resources become part of someone’s repertoire” (p. 14).

2 Contemporary literature refers to Sámi, Sami or Saami when speaking about the people and their language, formerly known by their pejorative names Lapps and Lappish. I have chosen to use the term Sámi in this thesis. Northern Sámi themselves use Sápmi to refer to their ancestral land, the traditional settlement area of Sámi people that runs across the Kola Peninsula in Russia to northern Finland and further to the mountain regions and coastal areas of central and northern Norway and Sweden, see Map 1 in section 2. Russia is not included in this study since North Sámi is not spoken there.

3 This framework was first presented at the Modern Language Association’s Right to Literacy Conference in Columbus, Ohio, September 1988, and later revised in 2000 in association with Ellen Skilton-Sylvester (Hornberger & Skilton-Sylvester, 2000). For consultation of the latest versions of the framework see Hornberger (2003) and (2008).
What impact do the extralinguistic variables and ideologies emplaced in the complex multilingual contexts of Sápmi have on North Sámi learners' writing and literacy development?

What writing procedural differences can be identified in the texts written in different languages in the school context?

1.2 Outline
This thesis is organized as follows: section 2 presents the demographic and educational contexts for the study before overviewing earlier studies. Section 3 presents the core conceptual framework of the study and the central concepts. Thereafter, sections 4 to 5 are organized around the individual papers before the final section discusses the findings.

Figure 1 illustrates how the papers are organized. Section 4 presents the main methodologies used in this study and discusses the methodological challenges that transnational studies face when undertaken in indigenous settings. Paper I is summarized in section 4. Section 5 summarizes the individual papers II-VI.

Papers II and III discuss the ideological and implementational literacy contexts that inform educational praxis, that steer language choices of the home, and that influence the language use of the individual North Sámi learners in Central Sápmi. Specifically, Paper II presents literacy contexts and language attitudes that become visible through careful analysis of the pupils' and their parents' questionnaire answers, and Paper III highlights the language teachers' metapragmatic interpretations of language use, teaching and revitalization in Sápmi.

Figure 1: Organization of the individual papers in Sections 4 and 5, and the discussing section 6.

4 The list of papers is found on page ix.
Papers IV, V and VI present case studies that illustrate instances of complex literacy development among Sámi learners. The first case study, Paper IV, examines the English writing of the participating Sámi learners, and the presence of global English and the traces of global world in their writings. The second case study, Paper V, looks at the meaning making processes and transitions between and within the languages in which three 15-year old Sámi learners write. The last case study, Paper VI, analyses word internal pausing and gradation in North Sámi and Finnish.

Finally, Section 6 summarizes and discusses the findings of this thesis and their implications for Sámi language revitalization in the light of the Continua of Biliteracy conceptual framework.
2 Context and background

Research on the Sámi falls within the larger context of Indigenous studies. Global challenges today involve issues such as how to support Indigenous literacy, and what pedagogical and didactic models to use in Indigenous multilingual contexts. To mention some matters that international research on Indigenous literacy development has dealt with, we find for instance the following:

- policies (e.g. Albury, 2014; Cabau, 2014; Hornberger & McCarty, 2012; King & Ennsner-Kananen, 2013; McCarty, et al., 2012),
- immersion contexts (e.g. Cummins, 1998; Hopewell & Escamilla, 2014; Keskitalo, et al., 2014),
- educational approaches and practices (e.g. Aikman & King, 2012; Ball, 2012; Chodkiewicz, et al., 2008; Gayman, 2011; Huss, 2008; Lea, et al., 2011),
- language ideologies and ideological discourses (e.g. Dorian, 1998; Hambye & Richards, 2012; Irvine & Gal, 2000; Razfar, 2012),
- the reality of the multilingual classroom (e.g. Creese & Martin, 2003; Gort, 2006; Hornberger & Link, 2012; Kovach, 2013).

In this thesis, I concentrate on the present day literacy situation in Central Sápmi. Central Sápmi comprises some of the northernmost municipalities in Finland, Norway, and Sweden, see Map 1, most of which are represented in this study. The general situation in this region is complex. There are three nation states with distinct educational policies. The Sámi people experienced the onslaught of colonization throughout history. In the present, the Sámi communities are facing the global challenges of modern society. Indeed, the complexity of the context in Sápmi hides the future trajectories of literacy development in this region.

This section provides a short overview of the present demographic situation in Sápmi. I will then provide some comments on Sámi education and its development. Finally, I provide a brief, and in no way exhaustive, overview of some of the earlier Sámi research broadly set in sociolinguistics and education. The purpose of this section is to provide an understanding of some of the basic premises that are at work in shaping the linguistic and educational diversity in Sápmi region.
2.1 Speakers of North Sámi in present day Sápmi

There is no comprehensive statistic information available regarding the Sámi and the Sámi languages in the world. As can be gleaned out from Table 1 below, one cannot find all crucial data on Sámi demographics in the official contemporary statistics. The missing data includes for example the number of Sámi speakers, and the size of the Sámi population in the nine municipalities that make up the North Sámi core area (see Map 1). The lack of numbers is particularly striking in Norway and Sweden. Numbers of Sámi speakers in specific municipalities are missing, and so are the total national numbers of people identifying themselves as ethnic Sámi and/or as speakers of Sámi.

Pettersen (2011) states that “[...] it is not possible to provide precise answers to any questions about the number, distribution or composition of the Sámi people either totally or in smaller areas” (p. 187). This is due to the fact that “[...] at the present time no institution is responsible for collecting Sámi demographic data or for producing official Sámi statistics in a systematic and regular manner [...]” (Pettersen, 2011, p. 187). Sköld (2008, p. 22) reminds us that the official numbers over the Sámi people and the number of people with “roots” or “connection through the family” to the Sámi culture do not converge, and the official numbers could therefore be much higher in reality, than what is usually assumed.
<table>
<thead>
<tr>
<th></th>
<th>Norway (Municipalities: Tana, Karasjok, Kautokeino)</th>
<th>Sweden (Municipalities: Kiruna, Gällivare, Jokkmokk)</th>
<th>Finland (Municipalities: Utsjoki, Inari, Sodankylä)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total municipal population (Sámi and non-Sámi)</td>
<td>8512 (Statistics Norway, 2014)</td>
<td>46 656 (Regionfakta, 2014)</td>
<td>16 939 (OSF, 2014a)</td>
</tr>
<tr>
<td>No. Sámi speakers in these municipalities</td>
<td>n/a</td>
<td>n/a</td>
<td>46.6%, 5.9%, 1.3% (OSF, 2014b)</td>
</tr>
<tr>
<td></td>
<td>Karasjok reports that around 80% of 2698 people were Sámi in 2014 = 2158 (Karasjok kommune, 2014)</td>
<td></td>
<td>= 1109 people (Finnish Sámi parliament, 2009)</td>
</tr>
<tr>
<td>Total No. of Sámi in the country*</td>
<td>n/a</td>
<td>n/a</td>
<td>9919 (Finnish Sámi Parliament, 2011)</td>
</tr>
<tr>
<td>No. of people that registered Sámi language as L1</td>
<td>n/a</td>
<td>n/a</td>
<td>1930 (OSF, 2014c)</td>
</tr>
<tr>
<td>Estimated total nr of Sámi</td>
<td>50 000 - 100 000 Sámi in total</td>
<td>15 000 - 30 000 North Sámi (heritage) speakers</td>
<td></td>
</tr>
</tbody>
</table>

* All Sámi in the country, also those living abroad but with maintained citizenship, with no criteria on active language skills.

Table 1: Contemporary statistics for Central Sápmi - population and languages.

In Sweden, researchers have remarked on the invisibility of the Sámi people in official statistics and on the national political scene (Sjölin, 1981; Sköld, 2008). Part of the unwillingness to produce ethnic demographic data pertaining to the Sámi can plausibly be traced back to the discredited race biological research era, which prospered from the beginning of the 1920s until the beginning of the 1950s. Race biology classified the physical and mental characteristics of Sámi people as inferior in comparison to the Germanic races (Lundmark, 2002, 2007; Sköld & Axelsson, 2005). Pettersen (2006, p. 4) has also suggested that social stigmatization and the fear of being listed in ethnic registers were some of the reasons why the Norwegian Sámi were not willing to give any information about their Sámi affiliation to outsiders.
Furthermore, the Sámi have been and are still facing discrimination and are subject to prejudice from the representatives of the majority culture (Hansen & Sørlie, 2012; Hansen et al., 2008). Omma (2012, pp. 180–181) also points out that many young Sámi report that they have experienced discrimination by teachers and other pupils/students at school. Omma also found that bullying on ethnic grounds is often ignored in the schools. Racist views and opinions are frequently expressed in media (Lönn, 2014) and in private (e.g. Ramqvist, 2011, December 1). Such constant pressure on individuals and the collective have led to widespread reluctance to acknowledge one’s Sámi heritage and to openly admit and act on being a member of the Sámi community. As a result, many parents have avoided speaking Sámi to their children, thus making it “unlikely that the language would be transmitted to the next generation” (Seurujärvi-Kari, 2011, p. 52). It is therefore difficult to gain information from the current statistics about the Sámi language skills and proficiency in the Sámi population.

The official statistics in Table 1 show that the total number of Sámi that are registered as having Sámi as their first language is rather low (numbers available only in Finland). This is also true of the number of registered members on the voting list for Sámi parliament in all three countries. Finland had 9919 officially registered Sámi in 2011. Of these, 1930 had registered some Sámi language as their first language. Since Norway and Sweden do not allow the gathering of ethnic information in official statistics, the only official figures are those provided by the Sámi parliaments and their electoral registers. In 2013, the Norwegian Sámi parliament had approximately 14,000 people on the voting list, and the number for Sweden was around 8,000. Pettersen (2011) notes that the approximations of the total number of Sámi living in Norway, Sweden, Finland and Russia is between 50,000 and 100,000 people. These figures are based on “previous, rather outdated censuses” or the numbers recovered from the Sámi parliaments (Pettersen, 2011, p. 187). As the numbers are in many cases based on voting lists for people over 18 years of age, it is also difficult to estimate the total number of young Sámi between the ages of 0 and 18 years.

There are no estimations of the total number of speakers of North Sámi, but when we consider the data available in Table 1, one can assume that the number of speakers is much lower than the total number of people with a North Sámi heritage. This holds for all three countries. This assumption is further strengthened by Pettersen and Brustad (2013), whose study is one of the most recent attempts to gather quantitative data on the Sámi people in Norway. Data was collected in the area of 17 Norwegian municipalities with varying large Sámi populations including the three largest North Sámi municipalities mentioned in Table 1 and shown on Map 1. The study on the Sámi statistical inclusion criteria points out that the different criteria have far-reaching consequences on defining the size and distribution of the
population. According to the study, 5249 people (of the total 14 797 participants) had some linguistic connection to some Sámi language\(^5\). Furthermore, 2614 people reported themselves as active users Sámi (Pettersen & Brustad 2013, p. 5 [Table 1]). In Pettersen and Brustad’s study it is not defined which Sámi language these active language users speak or know. However, in all contemporary Sámi sources, the North Sámi group is assumed to be the largest group, and Aikio-Puoskari (2001, p. 74) estimates that 75-90% of all Sámi speakers are speakers of North Sámi. Seurujärvi-Kari (2012, p. 16 [Map 1]) makes a cautious estimation that slightly over 50% of the North Sámi group members are active speakers of the language. The rough estimation of the total number of North Sámi is then estimated to between 15 000 - 30 000 people in whole Sápmi, and according to the most positive estimations 7500 - 15 000 are speakers of or have some linguistic connection to North Sámi.

In my study, I perceive a positive change in attitudes. In many areas of Sápmi, the younger generations are more eager to show openly that they belong to the Sámi community, and that they are willing to become the bearers of tradition and language\(^6\). The same tendencies are also reported in Rasmussen (2013) who investigated the vitality of Sámi in Northern Norway and Finland, and in Skum (2013, p. 34), who studied language shift process among the Sámi in southern mountain regions of Sápmi. Rasmussen (2013, p. 89) found that there have never been so many Sámi children attending North Sámi medium education as there are today. A complicated situation has therefore arisen from the fact that there were more Sámi speakers in the past, but that the chances of attending school in Sámi are better today.

2.2 Weakened ties to Sámi cultural heritage

North Sámi communities have relatively small populations and the speaker density is low. North Sámi inhabit some of the geographically largest municipalities in the north (see Map 1). Nowadays, many North Sámi live in urban areas. If a person resides outside the core area of Central Sápmi, there are usually fewer opportunities to use the language daily in comparison to what the case is in his/her home community. The demographic situation of the Sámi exemplifies many of the demographic and social factors that encourage language shift and loss\(^7\).

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5 Sámi languages are spoken in the entire area of Sápmi in four different countries as seen on Map 1. Sámi languages can also be further divided to the western and eastern Sámi languages (Sammallahti, 1998), or southern, central and eastern language groups. The number of living Sámi languages is 9, but of these languages at least one southern language (Ume Sámi) and one eastern language (Ter Sámi) are severely endangered with only a handful of speakers. North Sámi is spoken in the central area of Sápmi in three countries but not in Russia.


7 For a good general overview of factors that are involved in encouraging or slowing down language shift, consult Baker 2006, p. 76 [adapted from Conklin and Lourie (1983)]. See Hyltenstam & Stroud (1991) for an overview of factors found in the Sámi context.
In the Norwegian municipalities Kautokeino, Karasjok, and Tana, the Sámi population is, or has been considered to be in majority (see Map 1). This is also where Sámi language use is spread to most communal service areas, commerce and for example media and communications. In Finland, Utsjoki municipality together with Inari, Sodankylä and Enontekiö8 are the major North Sámi municipalities, although the Sámi have been in majority as municipal residents only in Utsjoki in recent decades. In Sweden, Kiruna municipality is perhaps the community with most surviving cultural and linguistic pockets for North Sámi. The towns and villages in Kiruna municipality have, however, a very diverse residential composition partly because mining and other industries have attracted people from the Nordic countries as well from outside Scandinavia.

Outside Sápmi it is mainly the local Sámi associations that have taken the role of culture and language revitalization agents by arranging various cultural and language activities for their members (Seurujärvi-Kari, 2010). In some municipalities, in or outside Sápmi, the role of the school or the daycare center is important in bringing together and engaging Sámi families in collective language and culture revitalization efforts (Olthuis et al., 2013; Pasanen, 2003; Todal, 2007). In some areas of Sápmi, and in cities where the Sámi are active in associations, it is sometimes easier to maintain cultural unity than practical language skills. This is because the members of the association may speak several different Sámi languages, and there may be members that no longer have any connection to their heritage language9.

Many Sámi leave their home communities, for example, in search of work and schooling/education. This is due to urbanization, shifts in local labor markets, and changing and unpredictable conditions for traditional livelihoods, such as reindeer herding. Often, the Sámi generations that grow up in urban areas may miss out on important language arenas and practices. Nevertheless, they can still get a strong sense of connection to the Sámi society and their heritage community by visiting relatives and participating in Sámi community traditions. With out-movement there is at the same time a constant flow of non-Sámi moving into Sápmi for instance through intermarriage. Some areas withstand the demographic pressures better (core inland areas of Norwegian Central Sápmi) while in other areas (e.g. the coastal areas in northernmost Norway) both family and the community

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8 Enontekiö municipality is not marked on Map 1. This municipality is located between the Swedish and Norwegian North Sámi speaking municipalities on the Finnish side of Sápmi.
9 The first use of the notion heritage language originates from the Canadian context where other languages than English and French, and especially the Indigenous languages were gathered under this term. The term was first used by Cummins (1991, pp. 601–602). Fishman (2001, pp. 82–87) further develops the definition and divides the heritage languages to those of Indigenous, colonial and immigrant heritage languages. In the Sámi context, Sámi language is the ancestral heritage language of many Sámi learners, but not always their home language due to far advanced language shift processes among the Sámi. See King & Ennser-Kananen (2013) for an overview of the definitions used in the literature elsewhere.
contexts are more vulnerable to the pressures that have impact on the identity and self-image of the young Sámi (Kvernmo & Heyerdal, 1996).

A weakened connection to the cultural heritage is no longer only a problem experienced by the Sámi that for some reason or another have moved outside their ancestral areas, or of those living in the periphery of Sápmi. The same phenomenon was in our study reported by the teachers living in the core areas of Sápmi (Paper III). They view the systematic changes in Nordic and Sámi lifestyle as one of the main reasons why the younger Sámi generations are not sufficiently involved in the traditional language practices so as to maintain rich, versatile and living Sámi language. The teachers also commented on how the intergenerational relations and activities are becoming increasingly restricted to involve shorter periods. Should the experiences of the teachers mirror the reality in detail, then the current situation is sharp contrast to the way people used to spend their spare time only couple of decades ago. Back then, community members shared more time with the extended family, relatives or the local collective, and there was a larger community involvement in child raising and schooling (Balto, 1997; Stordahl, 1996).

This picture of a changed context is further supported by the self-biographical descriptive texts written by the Sámi learning pupils in our study. They concede that most leisure time is dedicated to computers or TV, rather than the family or community activities (Papers II and III; Outakoski, 2014). According to the language teachers that participated in our study, it is easy to discern which children still have a close affinity to the collective, traditions and vital language domains. Overall, they are the ones that take pride in maintaining and developing their heritage language, and they struggle the least in matters concerning the lexical and grammatical details of the language (Paper III).

2.3 Three countries - three paths to Sámi education

The Central Sápmi region has a similar history in the three countries, and there are considerable similarities with respect to the political systems as well as the general educational systems. In lieu of these similarities, each country has approached Sámi education quite differently, which is clearly reflected in the present situation.

The three countries have in common that there was a period between the late 1940s and 1970s when use of Sámi in school was discouraged and penalized. It was often the case that the language was not even tolerated as means of communication between Sámi children that had little knowledge in the national majority language (Minde, 2003; Persen, 2008; Rasmus, 2008). This era of assimilation, which ended so late as in the beginning of 1970s, is often referred to as the time of Norwegianization (with respective terms used in Finland and Sweden). A great many representatives of the grandparent’s
generation have experienced the silencing of their mother tongue as part of the official state policy in the Nordic countries. A turning point came in the 1970s when the official assimilation policies ended. With this, an official debate about language shift among the Sámi emerged. This was further spurred by new threats to the endangered Indigenous Sámi culture such as the industrial, technological and infrastructural development that happened in Sápmi from 60’s and onwards. Seurujärvi-Kari (2011) has called 1970s the Sámi “[l]inguistic and cultural renaissance” (p. 56) period, during which Sámi became accepted as school subject and a means of instruction.

The three countries have had three different takes on Sámi education from 1970’s and onwards which I will summarize shortly here. In this study, I am primarily concerned with compulsory schooling. Preschool and upper secondary school fall outside the scope of this thesis. Nevertheless, both represent urgent matters that need to be solved in all three countries. I will also not deal with the situation of those Sámi learners that live outside Sápmi, or North Sámi speakers who live outside the North Sámi speaking regions of Sápmi.

Before we delve into the details of Sámi education, it is worthwhile to mention that all Sámi learners must study the national majority language and English at school. In Finland some learners of Sámi and Finnish may choose to start with English later than pupils that only study Finnish, but in the final national exams they must meet the same learning goals as the monolingual Finnish pupils. Also in Norway the pupils learning Sámi must meet national goals in English similar to those of monolingual Norwegian pupils. In Sweden the pupils have often more teaching hours in English and in Swedish than they have in Sámi, especially if they live in regions where there are no Sámi schools. Consequently, a Sámi learner in compulsory school in Sweden, Norway and Finland is also a learner of at least two additional languages.

### 2.3.1 Curricula and teacher training

According to Aikio-Puoskari (2001, p. 291), Norway is the Nordic country that has come furthest in supporting the revitalization process of Sámi languages and the rights of the Sámi people. Neither Finland nor Sweden have acknowledged Sámi rights to land and water by ratifying the International Labor Organization convention Nr. 169 (ILO 169, 1989). Norway has not only done so, but has also based the former national Sámi curriculum (O97S, 1997) partly on this convention (Hirvonen, 2008, p. 21). The most recent Sámi curriculum from year 2006, LK06-s, is an extension of the former curriculum, and continues to focus on contents of the subjects in

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10 For an extensive overview and comparison of Sámi education in Sweden, Norway and Finland, see Aikio-Puoskari (2001, 2005, 2006).
Norwegian compulsory education that require a parallel curriculum for the needs of Sámi schools. Recent work by Hirvonen suggests, nevertheless, that Sámi language education is still under harsh debate also in Norway as:

[t]he main forms of bilingual education used by Sámi schools [in Norway] which teach the Sámi language only as a subject are non-forms or weak forms of bilingual education. The first prerequisite for the schools to contribute to language revitalization, then, is for the schools, together, to agree on and adopt plans on how to work for the realization of bilingualism among the students who study Sámi as first or second language. This means that Sámi teaching must not be confined only to the language lessons, but that other subjects must also be taught in Sámi. This, in turn, requires an increase in the number of Sámi speaking teachers in schools. (Hirvonen, 2008, p. 36–37)

The Norwegian state has financially supported the Sámi University College (Sámi Allaskuvla) in Kautokeino (see Map 1) in setting up and developing a Sámi primary school teacher-training program. This program is one of its kind and consequently it provides teachers not only to Norway, but also to Finland and Sweden.

In Finland, there is no separate Sámi curriculum and therefore the Sámi teachers are required to follow the general Finnish national curriculum11 (POPS, 2004). Teachers may also opt to follow a local municipal curriculum that puts emphasis on Sámi culture. Many schools in Finland, often promote a weaker form of bilingual education. This means that Sámi is taught as a language subject, rather than being used as the primary language of instruction for Sámi speaking children (so called Sámi classes). This kind of weak form of bilingual education has been criticized in Hirvonen (2008) because the language is not integrated into the school curriculum. A further compromising factor is that the Sámi educational institutions do not require Sámi skills from all the teachers that are teaching the Sámi speaking children. This was significant for the part of this study that took place in Finland. The teachers of Finnish, and in most cases the teachers of foreign languages, were speakers of Finnish with little or no proficiency in Sámi (Paper III). This contrasted with the fact that most of the language teachers teaching Sámi learning children at the participating Sámi schools in Norway and Sweden mastered North Sámi (or some other Sámi language). However, also in most non-Sámi municipal schools in Norway and Sweden the situation is the same as in Finland, and only some of the personnel may have skills in Sámi.

Finland has a teacher-training program for the Sámi subject for primary and secondary school. According to Rasmus (2010, p. 65), the shortage of Sámi language teachers and teachers that speak Sámi language is one of the

11 A new national curriculum, OPS 2016, will be used from 2016 and onwards in Finland, but the contents of the new curriculum are not discussed here.
most imminent threats to the survival of Sámi language in Finland. Rasmus further asserts that teacher training and in-service training for in-duty teachers should be the priority of the Giellagas Institute at University of Oulu, which has the responsibility of organizing Sámi subject teacher training in Finland. Rasmus also points out that training programs should be provided in the settlement area for the Sámi in addition to courses given in Oulu (Finland), a town that is located far south of Sápmi (see map 1).

In Sweden, the Sámi School arranges education mainly for Sámi pupils. Its history is connected to social Darwinist ideology and the division of Swedish Sámi into two groups, i.e. the reindeer herding Sámi and all other groups of Sámi (Svonni, 2007). Nowadays, Sámi schools in Sweden mainly follow the Swedish national curriculum (LGR, 2011) but include an additional subject called Samiska (Sámi). This additional subject is what differentiates the Sámi schools from municipal schools, and the national curriculum (LGR 11) from the Sámi school curriculum (LSA, 2011), along with the fact that some other subjects can be taught partially in Sámi. The additional Sámi subject includes not only language but also aspects of Sámi history, music, handicraft, society, environment and traditional knowledge.

The Council of Europe monitors the implementation of the European Charter for Regional or Minority Language (ECRML) in Europe. It has repeatedly criticized Sweden for neither providing teacher training in Sámi nor arranging adequate in-service training for teachers of Sámi (ECRML 2003, p. 19; 2006, p. 21; 2008, pp. 18-19; 2011, pp. 11-12). In June 2014, the Swedish Higher Education Authority (Universitetskanslersämbetet) approved Umeå University’s application to host a teacher-training program for secondary education (school years 7-9) and upper secondary education in Sámi language subject. The program for North Sámi is expected to commence in the autumn of 2015.

The three countries have also chosen different solutions regarding teaching materials. The Norwegian state finances production of school materials suited for the Sámi schools, and distributes these for free to the schools that have Sámi language learners. In Finland, school materials are at least partly funded by the state and produced by a special unit located under the Finnish Sámi Parliament. In Sweden, there is no organized system for either funding or producing school materials for Sámi learners or Sámi schools

2.3.2 School programs for Sámi learners

Hirvonen (2008, p. 24–28) identifies three main types of school programs in Norway that offer Sámi education. Firstly, there are Sámi speaking schools where education is through Sámi, and the majority language is taught as L2 or foreign language. Secondly, there are Sámi and Norwegian–speaking schools that have all education in both Sámi and Norwegian, and the pupils
get to choose the primary medium of instruction. Thirdly, there are schools where Sámi is taught merely as language subject. According to Hirvonen, the strong forms of bilingual education (a and b) ideally lead to high competency in both languages. The third school form is, according to Hirvonen (2008), a weak- or a non-form of bilingual education leading to misbalanced or subtractive bilingualism\(^\text{12}\) and only partial skills in the heritage language (p. 29–32).

Hirvonen (2008) and Huss (2008) are critical to the fact that Sámi is still taught only as a single language subject in many schools in Norwegian Sápmi, and in most schools with Sámi learners outside Sápmi. They also criticize that teachers without any Sámi background or interest in Sámi culture fail to support the Sámi pupils in identity building and language maintenance. Keskitalo (2010) points her critique toward the curriculum and the way Western school systems ignore the importance of cultural sensitivity as the starting point in modelling Indigenous education -- a situation that leads to effective integration or assimilation to the main culture but ineffective “enculturation” into the heritage culture. Helander (2012), in turn, recognizes that the goals given in the former Norwegian Sámi school curriculum (O97S, 1997) are the goals of an additive bilingual model, but that the vagueness of the concept functional bilingualism blurs the interpretations of the curriculum. Helander points out that the curriculum also sets very high expectations on children that are Sámi speakers or learning the language. These children have to attain language in both Sámi and Norwegian. It is presupposed that they have the same knowledge as a monolingual person since monolingualism sets the norm for assessment (Helander, 2012, p. 59).

Finland has a long history of bilingual education (Finnish and Swedish), and treats Sámi medium education as an alternative to Finnish medium education. The same basic learning goals, national curricula (POPS, 2004) and teacher training programs are shared. The language of instruction in the traditional Sámi settlement area (Fi. kotiseutualue - home region area) can be partly or mainly in Sámi depending on which solution the individual school has chosen. Teachers that have been interviewed for the purposes of this study (Paper III) report that there are serious shortcomings in the national teacher training programs that do not mention Indigenous perspective or Sámi culture. They also feel that these programs fail to prepare the teachers for multi-grade models that are common at most small schools. Another problem that the teachers commented on was translated

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\(^{12}\) According to Baker (2011), subtractive bilingualism can occur in individuals when there is a pressure to “replace or demote” one of the languages and that this can relate to “less positive self-concept, loss of cultural or ethnic identity, with possible alienation and marginalization” (p.72). Subtractive bilingualism can also refer to “negative affective and cognitive effects of bilingualism (e.g. where both languages are 'under developed')”, or it could relate to the loss of a minority language at a societal level (Baker, 2011, p. 72).
school materials. Sometimes it is the quality of the translation that is viewed as the major problem. Other times the content is problematic, since the materials that concern for example Finnish history or geography do not mention the Sámi and their situation. To summarize the situation in the words of the participating teachers, the Sámi learners in Finland are learning the contents of the Finnish schools, and they have few opportunities to learn more about their own culture from other sources than their teachers.

The Swedish bilingual model dictated for regular compulsory schooling in the Swedish School Ordinance (Skolförordning, 2011) allows teaching in another language besides Swedish only up to a maximum of 50% of the school time. The ordinance also states that teaching in the other language should diminish gradually toward the end of the 6th school year (Skolförordning, 2011, Ch9:§12-13). The Swedish School Ordinance thus forbids full immersion programs in Sámi language elsewhere than in Sámi schools. For Sámi schools (pre-school year 0 to the 6th school year) the same ordinance allows for a less restricted view on how much of the teaching is allowed in Sámi. The ordinance simply states that teaching must be in Swedish and in Sámi, and that the Sámi subject should be taught for all grades (Skolförordning, 2011, Ch12:§4-5). In the later years of the compulsory education (in Sweden through school years 7-9) Sámi can be taught only as language subject. Schools with Sámi pupils may apply for a permit to have so called integrated Sámi teaching, which in many cases means that some hours from music, handicap or arts are (or could be) taught partially in Sámi. This educational model has assimilative goals as the amount of Swedish mediated instruction increases during the first six grades. Swedish is then expected to take over in school years 7-9 of the compulsory schooling. In Sweden, Sámi pupils must also leave the Sámi school environment when they move on to secondary education. Sámi culture is often invisible and only restricted to Sámi language classes in municipal schools and institutions for secondary level education.

It is difficult to estimate how much Sámi medium instruction pupils get in Sámi schools in Sweden. The teachers in our study have reported that the changed dynamics of Sámi classes (there being more and more L2 pupils in L1 classes) tend to lead to a situation where Sámi is somewhat marginalized also in Sámi schools. Immersion programs and similar takes on Sámi education in school are rare in Sweden and elsewhere in Central Sápmi. In Sweden, this is partly due to fact that the pupil groups have very varying skills in Sámi language. The in-take area is also geographically out-spread leading to increased heterogeneity. Setting up parallel classes for L1 and L2 speakers is of course also a question of resources. Often these reasons lead to a situation where Swedish as the common language for all pupils is used as the main language of instruction, or in parallel with Sámi. This and other matters that in present steer Sámi education in Sweden indicate that
Swedish educational system continues on assimilative rather than integrative path when it comes to the schooling of Sámi children.

Aikio-Puoskari (2001, p. 291) concluded in her extensive research report that the general attitudes and the way in which Nordic countries have regarded Sámi education in and on Sámi languages got more positive during 1990s. However, according to the same report, schools as an institution were not doing enough to support the cultural identity of the Sámi pupils. Keskitalo (2010, p. 235) concludes that, in order for the Sámi educational institutions to meet the real needs of the Sámi learners, it is crucial that the Sámi schools can evolve independently of the national institutions, and that they have as their pedagogical starting point the cultural knowledge that springs from the Sámi peoples own culture.

Hornberger (1991) discusses typologies of bilingual education where three models with different outcomes can be identified. These are the transitional, the maintenance and the enrichments models (p. 223). Sámi schooling and bilingual education in Sápmi can many times be characterized as belonging to the transitional model, which is an assimilative model where the minority language is replaced or pushed aside (more common on Swedish side). It can also resemble the maintenance model, in which the cultural identity of the learners can be strengthened without necessary bilingual development (more common in Finland and in Norway). The enrichment model is adapted to some Sámi schools in Norway, where language development in the Indigenous heritage language and Sámi cultural autonomy are promoted.

2.4 Earlier studies in Sápmi

No study has earlier focused specifically on literacy emergence and writing practices among Sámi learners in the transnational context of Sweden, Finland and Norway. However, Pietikäinen and Pietikäinen-Huhta (2013) have looked at multimodal literacy practices among Sámi children on the Finnish side of Sápmi. They examine the creative process of making picture books in a Sámi language class. These multilingual children’s picture books emit reflections of a complex multilingual context. At the same time the picture books also highlight personal choices, preferences, strategies and individual creativity that enables for “different kinds of new literacy practices to emerge” (p. 245).

Pietikäinen and Pietikäinen-Huhta (2013) see literacy as “a social practice” that is closely connected to “the cultural and social practices of communities” (p. 232), a view that is shared in this study. They describe the general literacy situation in the Sámi community in the following way: “[t]he

13 See also Pietikäinen & Pietikäinen-Huhta (2014), Pietikäinen (2012), and Pietikäinen & Dufva (2014) for other approaches to multimodal practices and multilingualism in Sámi classrooms in Finland.
strong oral tradition gives priority to spoken resources, while written skills are relatively rare and typically found among the younger generation” (p. 231). Multilingual Sámi children’s linguistic repertoires and the choices they make when they approach literacy and multimodal literacy tasks reflect the complexity of the context in which Sámi children grow up:

The Sámi children in focus [in their study] have rich multilingual repertoires, and when they engage in this multimodal literacy practice they need to navigate across a complex linguistic, cultural, and historical terrain, which involves making multiple choices in appropriating available resources. These choices often carry a heavy language ideological load and, therefore, the children’s emerging literacy practices are bound to the surrounding multilingual context in complex and multilayered ways. (Pietikäinen & Pitkänen-Huhta, 2013, p. 244)

Besides the multimodal approach to Sámi literacy, there have been several sociolinguistic and language sociological studies in Sápmi. These have for example focused on:

- the language choices and language use among multilingual Sámi (Helander-Renvall, 1984),
- language shift processes among the Sámi population in a certain area of Sápmi (Aikio, 1988; Skum, 2013),
- Sámi speakers’ and learners’ language skills and proficiency (Antonsen, 2007; Hyltenstam & Svonni, 1990; Svonni, 1993),
- revitalization efforts in one or more Sámi languages (Å. M. Johansen, 2013; I. Johansen, 2006; Scheller, 2011; Steinfjell, 2014; Todal, 2002).

Common to these studies is that they all acknowledge far advanced language shift processes in different areas of Sápmi or in the individual speakers/learners of Sámi languages. These studies have also reported on far-reaching consequences of language shift processes for Sámi language use and proficiency among young speakers. All earlier studies have also pointed out the urgent need for revitalization efforts on all fronts from the individual level up to the local, municipal and educational levels, and all the way up to the national/international and political levels.

Rasmussen (2013) provides a novel study on ethnolinguistic vitality. The study examines the North Sámi situation in two neighboring municipalities, Utsjoki in Finland and Tana in Norway. Rasmussen’s study focuses on language use and the ways that language is transferred between generations, that is, the ethnolinguistic vitality. Rasmussen defines ethnolinguistic vitality saying that “[g]illii čadnojuvvon stáhtusfáktorat, demográfálalas ovddasteamit ja ásahuslaš doarjaga struktuvrralaš iešvuodat dahket vehádatgiela
etnolingvisttalaš ceavzinnávccaid” [factors having to do with the status of the language, demographic issues and the structural properties of institutional support constitute ethnolinguistic vitality (author’s translation)] (Rasmussen, 2013, p. 14 [referring to the definition in Giles et al., 1977, p. 307]).

Rasmussen’s (2013) population study is based on the experiences, attitudes and descriptions obtained from the participants of the study through a multimethod approach that utilizes population surveys, interviews, observations and document analysis. This study provides a detailed and important analysis of the factors that are crucial for the maintenance and future vitality of Sámi in the two Sámi communities and elsewhere in Sápmi. Rasmussen shows that there are notable differences in where the two municipalities are on their way on the scale of ethnolinguistic vitality. Rasmussen found that Sámi has gained a stronger position in Norway/Tana, than in Finland/Utsjoki. The Sámi school model with all instruction in Sámi is seen as a supporting factor on the Norwegian side of the border. In contrast, the bilingual school with parallel language classes in Finland is viewed as having a negative impact on the future of Sámi language in Utsjoki. According to Rasmussen (2013, p. 263), it is important that all linguistic resources are being used if the community is to see a new generation of Sámi speakers.

Besides the sociolinguistic and language sociological studies conducted in Sápmi, there are also studies that have looked at the Sámi schools and their role in the enculturation of the Sámi learners. Keskitalo’s doctoral thesis (2010) is the most recent and most comprehensive study that looks at the present day situation of the Sámi schools, mainly in Norway. Keskitalo approaches the subject through the lens of cultural anthropology and against the complex historical background that I have already touched upon shortly in this background section. The most important finding in Keskitalo’s thesis is the urgent need to find solutions for the implementation of cultural sensitivity in Sámi schools and schools that are responsible for the schooling of Sámi children and Sámi learners. Although Keskitalo did not focus specifically on literacy in her thesis, her observational study implied that “oppilaat työskentelivät hyvin vähän omien kirjoitustehävien, lukutehtävien ja näitä taitoja kehittävien toimien parissa” [the pupils did work very little on their own writing tasks, reading tasks and on other exercises that strengthen these [literacy] skills, (author’s translation)] (p. 243).

The works of Keskitalo (2010) and Aikio-Puoskari (2001, 2005, 2006) have been of pivotal importance in the making of this thesis. Aikio-Puoskari’s detailed reports and recommendations concerning the structures of education in Sámi languages and through the medium of Sámi have shown how differently Sweden, Norway and Finland have approached Sámi education. They also show how the models continue to lead Sámi education
to different paths and future trajectories in these three countries. These works have offered those dimensions of Sámi educational context and the contents of Sámi literacy emergence that I have not been able to include in this study, namely the analysis of the national level of language policy and the contents of Sámi education in Sámi schools and other institutions that offer education in and on Sámi.

Works by Keskitalo, Määttä and Uusiautti give a rich picture of the practices in Sámi schooling (Keskitalo & Määttä, 2011; Keskitalo, et al., 2011, 2012a, 2012b, 2014; Määttä, et al., 2013). They describe the premises for finding pedagogical solutions that suit the Sámi schools in particular. These works also describe the difficulties experienced in implementing Sámi views and perspectives, traditional knowledge and worldviews in the schools that follow the pedagogical models designed for majority culture education.

All of the works mentioned in this background section have influenced this study. Their roles have varied from being an important support and source for methodological considerations, to being important tools in theoretical problem solving and establishment of interesting research questions.
3 Conceptual framework

Literacy, the ability to read and write, is recognized not only as a right per se but also as a mechanism for the pursuit of other human rights and participation in the society (UNESCO, 2005, p. 136). Literacy can thus be defined as the ability to read and write. Such a definition is already made of parts that raise the need for further definitions and descriptions. When is someone literate? What do we mean by language ability? Can we call someone literate if she can read but not write? Are there levels or scales on which abilities can be measured or assessed? In that case, what is the validity of such assessments? These questions can be answered in many ways depending on the perspectives and views taken by the researchers.

This thesis focuses on the premises and contexts of writing and writing abilities in Sápmi. It analyzes the mechanisms and strategies that multilingual Sámi learners utilize when they use their different languages for the written expression of thought, ideas, attitudes and voice. In doing that, it is necessary to deal with some of the central concepts and terminology used in this thesis. Even here, it is impossible to give a comprehensive account of all the definitions and views available in the present, and therefore only the core concepts of bilingualism, biliteracy and writing are discussed briefly.

This section is organized as follows. Section 3.1 discusses the terms and concepts of bilingualism and language ability in the way that they can be interpreted and used in the context of Sápmi. Section 3.2 presents the main conceptual framework used in shaping of this thesis, that is, the Continua of Biliteracy theoretical framework by Nancy Hornberger (1989). Finally, section 3.3 presents the writing theoretical grounds and models used in the design of this study. The individual papers in this thesis also each have their own set of conceptual frames that are used to get as versatile picture of the literacy emergence as possible. The conceptual frames of each individual paper are presented in section 5 in connection to the paper summaries.

3.1 Bilingualism

In indigenous contexts, the question of literacy and being literate often, if not always, comes with additional queries about bilingualism. Bilingualism amounts to having two or more languages in a person's daily language repertoire. What kind of bilingualism can we talk about in the Sámi context?

When we think of bilingualism, we might first think of the things that we can do in different languages or that we can use our languages for, that is,

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14 See Baker (2011) for a comprehensive and updated overview of bilingualism and bilingual education for further definitions and detailed articles on different aspects of bilingualism.

15 That is, "the complexes of [linguistic] resources people actually possess and deploy" (Blommaert 2010, p. 102).
language abilities or skills that enable communication in one or two languages. Baker (2006, p. 7) illustrates the four basic language abilities that include listening, speaking, reading, and writing. These are further categorized into receptive or productive abilities, and divided between oracy and literacy, as shown in Table 2.

Baker (2006) reminds the reader that “the four basic abilities can be further refined into sub-scales and dimensions” (p. 7). This means that a bilingual/multilingual individual can have more or less developed language abilities in the set, or repertoire, of languages she possesses. There are also several language ability combinations enabled by the Table 2. Thus there can be people who only possess some of the language abilities in one language, and who possess another set of abilities in the other language(s). There are also several sub-scales within the four basic abilities that an individual can move between, or reach at a certain point in time. It is quite rare to find people who master the full set of language abilities, and have reached excellent proficiency in all of the abilities in more than one language at the same time. Rather, it is often the case that one of the languages is more dominant than the others even if the differences would be subtle (Grosjean, 2010).

People also find themselves in different places and language environments throughout their lives, which means that the languages one knows are often not used simultaneously or in similar situations. Some bilingual people get to acquire two (or more) languages from childhood (i.e. simultaneously); while other people might learn them in sequences so that one language is learned to some degree before the other language(s) (i.e. successively). Our life trajectories decide whether the first learned language will be more used in our lives, or if other languages will be used more often (e.g. if a person moves from one country to another having to use a new language in most everyday occasions). Young language learners are often better listeners and speakers than writers and readers of natural developmental reasons. Older language learners that have (or have had) the chance to train all their basic abilities in some language are on their way to both oracy and literacy in that language. In some way we are all language learners as long as we live, making it thus difficult to really compare the linguistic resources that we possess at different times under the scope of our

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Table 2: Baker’s (2006, p. 7) table over language abilities.
lives because they “closely follow the biography of the person” and “do not develop in a linear fashion” (Blommaert & Backus, 2013, p. 15).

In Sápmi, it is common that the generations born before the 1970s may have good oracy skills (speaking and understanding speech) in Sámi, but can in addition to such skills also read and write in their national majority language. If the older generations have already undergone personal or family-internal language shift processes, then their relation to the language could rather be connected to cultural identity than to actual language abilities (e.g. Aikio-Puoskari, 2006, p. 111). In contrast, many Sámi children and Sámi learners that are only in contact with Sámi language at school may have somewhat developed literacy skills but lack abilities that would make it possible for them to participate in conversations in Sámi. During my data collection, I have met participants, children as well as adults, who all have their individual and unique combinations and levels of language abilities in Sámi and in the other languages they know. Even within a family, the siblings may show differences that are not easy to explain. All the participating pupils in this study had, however, some initial level of literacy in Sámi (even if it for some pupils only meant the ability to produce a written list of nouns, verbs and adjectives in North Sámi).

Due to the differences that I have spotted in our bilingual Sámi learners, the view taken in this thesis on what a bilingual individual is concurs with Grosjean (2010). Grosjean takes a holistic view on bilingualism and sees a bilingual as “an integrated whole, a unique and specific speaker-hearer, and not the sum of two complete or incomplete monolinguals” (p. 24). This is a view that has not been visible in earlier research on bilingual Sámi. That this view has not been visible does not mean that it is completely missing, or that the opposite monolingual view is preferred. The simple explanation to the invisibility lies in the methodology used in the earlier studies. Most Sámi studies on language use among bilinguals in Sápmi are interested in Sámi skills and not skills in other languages. Very little is said about the overall language skills and abilities of bi- and multilingual Sámi learners. Similar tendencies in connection to studies on literacy development in different kinds of multilingual contexts have been noticed and reported elsewhere in the world by Hopewell and Escamilla (2014). Hopewell and Escamilla point out that, for example, many U.S. based studies are interested in the emerging literacy skills in English rather than in the “extent to which students are becoming biliterate or multiliterate” (p. 182). Based on my personal experiences as a member of the Sámi community, a part of the reason why this could be so in Sápmi is that often the Sámi educators, Sámi parents, and

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16 Educational institutions, teachers and politicians often adapt monolingual view on bilingualism when assessing language skills and designing curricular content. It sees the bilingual individual as “two monolinguals in one person” (Baker 2006, p. 10). See also Helander (2012) for a discussion of the monolingual view at work in the Sámi educational context.
speaker/learners of Sámi would prefer a situation where Sámi was the dominant language of the bilinguals. This view may render the benefits of multilingualism invisible\textsuperscript{17} and often springs from the experienced and well-established threat posed to one's heritage language.

### 3.2 Continua of Biliteracy

Since the levels and scales of bilingualism do not really guarantee that there is ongoing literacy development in the two languages of the bilingual speaker, we need another dimension in addition to bilingualism. In Sámi schools and in schools that provide teaching in the Sámi language subject, literacy skills are part of the learning goals of the educational program in all languages taught at these schools. Therefore, we need a framework that can combine the complexities of bilingualism and literacy. What we are looking at in Sápmi is, thus, the emergence of biliteracy or multiliteracy. Hornberger (1990) defines biliteracy as communication in “two (or more) languages in or around writing” (p. 213). Such a definition includes reading as well as writing, but allows for a deeper analysis of the writing or the productive component of literacy.

The overarching theoretical approach used in this thesis is Hornberger’s (1989) *Continua of Biliteracy* framework. This framework looks at biliteracy through careful and multifaceted analyses of the resources, contexts, and contents that make up the environment for biliteracy development in individuals and/or in language communities. Continua of Biliteracy “uses the notion of intersecting and nested continua to demonstrate the multiple and complex interrelationships between bilingualism and literacy and the importance of the contexts, media, and content through which biliteracy develops” (Hornberger, 2004, p. 156). According to Hornberger (2004), the purpose of using the notion of continua is “to break down the binary oppositions so characteristic of the fields of bilingualism and literacy and instead draw attention to the continuity of experiences, skills, practices, and knowledge stretching from one end of any particular continuum to the other” (p. 156). Figure 2 shows the nested nature of the model in which the different continua are interrelated and interdependent. This model was revised to the current form in Hornberger and Skilton-Sylvester (2000).

Each of the four main continua (Context, Media, Content and Development) is structured around three intersecting relationships located under them. In Figure 3 we see the twelve underlying continua of the model, and the traditional power relationships connected to the opposite ends of each continuum. For example in Figure 3, we can see that the *Context of*

\textsuperscript{17} Paper III has looked closer to similar phenomena in the teachers' metapragmatic comments that in Irvine and Gal’s (2000) terms is called erasure. With erasure is meant that certain facts, situations, states or ideas are left unmentioned and unanalyzed more or less consciously, and that this behavior can become an ideological strategy.
Biliteracy continua is divided into three intersecting sub-continua or scales. The continuum between the micro and the macro contexts, the continuum between the oral and literate contexts, and the continuum between the bilingual/multilingual and monolingual context make up the intersecting relationships crucial for understanding the contextual factors of biliteracy emergence and development in multilingual settings. On the ideational level, Contexts of Biliteracy also deals with policies, ideologies and attitudes. The three remaining continua are divided into three sub-continua that are crucial for understanding the factors that relate to the content and the media of biliteracy and the development of biliteracy, as shown in Figure 3.

Figure 4 illustrates the way each sub-continuum can be placed in intersecting relationship with the other two continua. Every position on one continuum is related to other positions on the same continuum. Individuals, communities, and societies can occupy single positions as well as large portions of the scale. They are also in constant fluctuation along these scales, as would be expected of language users and language communities in the dynamic and ever changing world. The better the chances are for the individual and her language community “to draw on all points of the continua” (Hornberger 1989, p. 289), the better are the chances of full biliterate development in that individual and for that community.


Continua of Biliteracy framework is used, cited and applied world widely to different contexts where bilingual education, language policies and literacy issues are under debate. For example, it has been used:

- to analyze legislation-based language and educational policies from the content point of view (Skilton-Sylvester, 2011),
- to promote bilingual schooling models that move from experimentation and project-based approach to full-fledged implementation on several levels (Benson, 2005),
- to identify and question hegemonic literacy practices of the school in Indigenous education setting among Quechua speakers (de la Piedra, 2006),
- to highlight the teachers' role in the micro level language planning (Baldauf Jr, 2006),
- to analyze classroom discursive practices and literacy contents of multilingual classrooms in Haiti (Jean-Pierre, 2013),
- to welcome translanguaging in the majority language classroom where minority languages and Indigenous languages traditionally are silenced or made invisible (Hornberger & Link, 2012).

García et al. (2007) state that Continua of Biliteracy framework has its power in that it “captures the complexity of biliteracy” (p. 214). García et al. also pointed out that although the model has been successful in many areas, its potential in the modelling of practical solutions is still to be recognized by pedagogical institutions.

In this thesis, the Continua of Biliteracy framework is used as the main theoretical framework in the discussion of the emergence of literacy among young Sámi learners in relation to the results and implications of the individual papers, in Section 6. The discussion in this thesis is the first attempt to inform the Sámi educational field of the potential of the Hornbergian theoretical model in finding areas of improvement that require attention. In this way, literacy skills in Sámi can be highlighted in the process of acquiring multiliterate competence. This framework has also provided the thesis with the structure that concentrates on the premises for the emergence of biliteracy (Papers II and III), the instances of development of biliteracy among individual Sámi learners (Papers IV and V), and the media of biliteracy through which the Sámi learners express their thoughts and ideas (Papers IV, V and VI).

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18 “The notion of translanguaging refers broadly to how bilingual students communicate and make meaning by drawing on and intermingling linguistic features from different languages” (Hornberger & Link, 2012, p. 240).
3.3 Writing

There is a wide range of external factors (environment, language contacts, educational models, etc.) that together with individual and internal aspects of writing (individual writer’s interests, literacy skills, development of the language faculty, personality, identity issues etc.) complicate the study of writing activities, contexts and processes. When one adds the dimensions of bilingualism, indigenous context, and culture to the already complicated equation, what emerges is a fascinating web of dependencies and interdependencies, connections and causalities between contextual and linguistic/cognitive perspectives on biliteracy and writing. The writing theoretical approach to understanding the relationships between context, cognition and cultural conventions in writing that is advocated in this thesis is that of the Interactive Theory suggested by Linda Flower (1989). This approach to writing research values theoretical models that are inductive, observation-based and data-driven, and that acknowledge the interaction of cognition and context.

When we think of writing as something that can mirror cognitive processes, we must acknowledge that writing requires the writer’s attention to and understanding of the writing task, and maturity to plan and execute such an activity. The writers also need skills and genre knowledge that helps them to organize thoughts into a coherent form suited for the task or the goal of writing. Writers must also control several aspects of the language faculty and activate numerous other cognitive and memory based processes. In addition, advanced motoric skills are needed for transcription of the message. (Alamargot & Chanquoy, 2001; Chenoweth & Hayes, 2001; Hayes, 1996; Hayes & Flower, 1980; Kellogg, 1996).

When analyzing writing from the cognitive point of view, several writing models have been suggested19. Deane et al. (2008) identify cognitive writing models that focus on the idea of planned and conscious generation of text (e.g. Bereiter & Scardamalia, 1987; Hayes, 1996; Hayes & Flower, 1980), or see writing as creation of new ideas (e.g. Galbraith, 1999). However, common to most cognitive writing models is that they identify different subprocesses and sublevels of the overall writing process, without “forgetting that these dimensions belong to a complex system” (Alamargot & Chanquoy, 2001, p. 3). In this thesis, it is the modularity of these global cognitive writing models that is of greatest interest as it allows a take on writing that can be narrowed down to an analysis of a specific aspect or aspects of the overall writing process. Such an approach is taken in Paper VI where the writing process and textual products of four pupils are analyzed in detail with respect to word internal pausing and linguistic phenomenon called gradation. I have drawn on aspects from different global models when

19 See Alamargot and Chanquoy (2001) for detailed description of cognitive writing models.
planning the writing tasks and in choosing the analytical methods through which I approach the writing of the young Sámi learners, but there is no specific global writing model that is preferred over the others in this thesis.

Writing research can take a theoretical starting point, like in the global writing models described above, but there are also inductive approaches to writing that focus on the data and different measures that can be used to interpret such data. A number of measures and approaches for understanding cognitive and operational dimensions of bilingual writing have been developed since the first global writing models were introduced 30-40 years ago ranging from writing protocols to introspection, and to more advanced measures and technical measure instruments\(^{20}\). In this thesis computer mediated writing, as opposed to hand written texts, is in focus and the methodological approach of keystroke-logging has been used (Lindgren, 2005; Spelman Miller & Sullivan, 2006; Sullivan & Lindgren, 2006a; Sullivan & Lindgren, 2006b). Central to this approach to writing is that, during writing, a computer program creates a detailed log file of the writing activities (e.g. keyboard activity, mouse movements, revisions, pauses, and scrolling movements within the already produced text). This allows researchers to choose whether to examine the phases of writing, the final written products, or whether to compare the final product and the intermediate texts and structures composed during the writing process. In this thesis, I have looked at the final products as well as some aspects of the writing processes. Papers IV and V take a discourse analytical and thematic approach to the final texts written by young Sámi learners. Paper VI studies details of individual bilingual Sámi/Finnish writers' transcription and text production, which is part of the translation module in Hayes and Flower (1980)\(^{21}\).

As I am already touching the methodological considerations of this thesis it time to move on to the next section that concerns the methods and materials of this thesis.

\(^{20}\) See Wolfe-Quitero et al. (1998) for an extensive summary of early approaches to different measures.

\(^{21}\) A module that is later subsumed under the text production processes in Hayes (1996), and further developed in Chenoweth and Hayes (2003).
4 Materials and methods
The papers presented in this thesis are a part of a large Sámi literacy research project\textsuperscript{22}. This is a cross-sectional empirical study, where the collected materials and data encourage inductive reasoning and a multi-method approach to biliteracy emergence among Sámi learners. This section is organized as follows. Section 4.1 is concerned with the main methodology of the study. It presents a summary of Paper I, which describes the methodological challenges faced and experienced in designing a literacy research project, and a data collection procedure that had to adapt to various ethical and practical issues related to research on Indigenous populations. Section 4.2 presents the selection criteria, and the sample of schools and participants distributed over countries. Section 4.3 presents the research methods used in this thesis, the outline of the empirical study, and the materials collected. Section 4.4 acknowledges potential limitations of this study, and section 4.5 aims at clarifying the role of the author in carrying out the study and in writing the individual papers. The final section of this section offers a short note on researcher positionality.

4.1 Methodology and ethics
Research on literacy acquisition and writing development in a multilingual, Indigenous and geographically remote context calls for use of a methodology that combines several research methods and approaches to the data. Thus, the overall design of this cross-sectional research project is a mixed-method take on empirical qualitative research with interpretive theoretical perspective on the collected data. In the search of wider understanding of the Sámi learners' literacy practices, I have used research methods and research tools that are common to the sociocultural research field. Such methods are a combination of empirical data collection (in this case computer mediated pupil texts and writing logs), interview methods, questionnaire based survey methods, and observations in the school environment. The analysis of the collected pupil texts is a combination of linguistic and discourse analytical methods from the cognitive and functional perspectives.

The choice of this mixed research methodology is based on the fact that writing is such a complex activity governed by micro-level (e.g. individual writing skills and technical skills in computer typing, age and other background factors, writing situation) and macro-level factors (e.g. ideologies, policies, traditions, practices). It must therefore be scrutinized

\textsuperscript{22} The larger cross-national research project, \textit{Literacy in Sápmi: multilingualism, revitalization and literacy development in the global north}, is based at Umeå University and is funded by the Swedish Research Council (Vetenskapsrådet, B0615301). The larger literacy project has also looked at the writing of upper secondary pupils. In Paper V in this thesis the writing from one pupil from this age group is part of the analysis, but since this age group is otherwise not one of the focus groups of this thesis, it is not included here or in the materials.
from many different perspectives. Our methodology allows for an iterative take on the research subject, as the final and analyzing part of the project is informed by the earlier phases. This brings new insights of Sámi language teaching into the debate and discussion of appropriate and culturally sensitive approaches on Sámi education in general.

Studying writing in a complex Indigenous and multicultural context and among learners of an Indigenous language in a remote geographical context comes with both expected and unexpected challenges that involve ethical, practical and emotional issues. Paper I, summarized in 4.1.1, suggests a number of methodological principles to be considered when designing and implementing a complex transnational writing study in the Sámi context.

### 4.1.1 Summary of Paper I

Paper I, *Researching writing development to support language maintenance and revitalization: design and methodological challenges*, narrates the challenges of designing a transnational literacy study that is expected to comply with the limitations set up by the Indigenous research paradigm with the accompanying ethical considerations (Hart, 2010; Kuokkanen, 2000; Wilson, 2001). Furthermore, the paper examines the experienced practical and ideological challenges faced and the opportunities offered when implementing the design in the school environment in Central Sápmi, and when analyzing the data.

Paper I recognizes the importance of two major aspects or factors that have shaped the design of the initial research project. The first factor concerns the importance of including a member of the Indigenous community\(^{23}\) in the research team early in the design phase. The insider perspective lead to better understanding of multiple aspects of the context, provided quick access to a multilayered social network of connections in the local school communities, and brought in linguistic competence (North Sámi and Finnish). This has been crucial for the transnational design aspect of the study. The second insight gained from the analysis of the methodological start up process of this literacy study is of a different type. It concerns the ethics involved in the research on children in general, and on children belonging to ethnic and Indigenous minorities in particular. The learning curve in this second aspect of the design has been steep and sometimes problematic. Especially problematic have been the considerations about the inclusion criteria of the writing study. Following the recommendations of the Regional Ethic Committee (Etikprövningsnämnden – EPN, Umeå), the criteria had to be altered to focus on language use and language repertoires of the participants rather than on their ethnic affiliation. These ethical considerations, together with the insider perspective, have resulted in an

\(^{23}\) In this case, the author of this thesis.
ever evolving project internal dialogue about the ways research in the Sámi school context is to be conducted so that it is in line with the principles of Indigenous research methodology (Nordin Jonsson, 2011; Porsanger, 2004; Sefa Dei, 2013; Smith, 2008).

According to Paper I, the intersection between schools, the context of Sápmi, and Indigenous research sometimes makes it difficult to assess the implementational challenges experienced in navigating this transnational literacy project. There are ethical and ideological challenges that face the design of the study. There are purely practical challenges that are connected to physical distances between schools, unexpected changes in the plans, and to technical issues having to do with research equipment (such as computers, back-up equipment, and software). There are also challenges having to do with the choice of the theoretical applications with which one can approach the collected data. In other words, it is difficult to say which challenges are purely due to research in an Indigenous language context, and which challenges are due to other factors. This writing study poses questions that can be asked of any multi-lingual superdiverse community or research conducted in such community, be it then Indigenous, mixed or otherwise.

While the challenges and opportunities highlighted in Paper I are unique to the case study’s context, they can contribute to any research conducted in similar contexts. Based on the insights gained from the methodological analysis in Paper I, this summary offers a basic set of strategies that are useful in designing a writing study of the sort described in this thesis. Thus, Paper I suggests that in order to meet the necessary requisites for conducting literacy research in the indigenous Sámi context, or in similar context elsewhere, the designer of the study should:

- have a detailed grand plan, and clear and easily accessible information about the project available when the first contacts with potential partners and participants is made,
- see the participants (schools, principal/teachers, pupils, parents) as important partners in setting up and executing the study, which conforms with accepting changes in the original research plan according to the needs of, or resources of the local context,
- make the information materials and other materials addressed to the participants available in the local (Indigenous) language as well as in the national majority language(s),
- have project staff with language skills in the local variety/language as well as in national majority language(s) involved in the design of the study and available during visits to the schools and during the data analysis phase,
• provide multiple means of securing the anonymity of the participants (if they should so wish) so that the complex personal networks between the members of the local community will not risk getting damaged, and so that personal and sometimes sensitive perspectives on life in that particular region can be protected and examined at the same time,

• find ways and strategies to feed back to the community that has participated in the study - during the visits and along the process of publishing the results.

4.2 Participants
As the recommendations given in Paper I suggest, participants are the most important element of the project and ought to be seen as partners in research.

The initial selection and invitation to this particular study involved such schools in Central Sápmi where North Sámi was taught as a language subject, and where Sámi to varying degrees was a medium of instruction. All together 25 primary and upper secondary schools were invited to participate in the study. Finally, 2 schools from Norway, 4 schools from Sweden, and 4 schools from Finland participated in the study. In order to respect the wishes of the teachers and the schools to stay anonymous, I will not name the schools in our study. All schools are located in the Central Sápmi region of those North Sámi speaking communities that are highlighted on Map 1. Kautokeino and Gällivare municipalities are not represented in this study (see section 4.4).

Table 3 shows the distribution of participants according to country. Our purposive sample was a mix of predefined criterion sampling and convenience sampling. The main criterion for selection of the participating school children and young was that all participating writers had studied North Sámi language at school at some point of their education, either as L1 (first language, weaker L1 or mother tongue) or as L2 (foreign language, beginner language or heritage language). Apart from the North Sámi language criterion, I wanted to test certain age groups for comparison of different aspects of maturity in writing. The ages 9, 12, and 15 were chosen in advance before the data collection.

24 Apart from these 10 schools for primary and secondary education, one upper secondary school from Finland and one from Sweden also participated in the wider study. The oldest group of the grand literacy study, upper secondary school pupils, is not included in this study mainly because the project lacks data from the Norwegian side of Central Sápmi. 11 upper secondary school pupils from Sweden and 12 upper secondary pupils from Finland participated in the larger literacy research project. The writing of one pupil from this age group is included in the analysis in Paper V, but the significance is of such low degree that I have chosen to leave the oldest age group outside this thesis.

25 For upper secondary school, the chosen age was 18 but it had to be adjusted to include all upper secondary pupils (16-19 years old). Upper secondary pupils and their writing are unfortunately beyond the scope of this thesis.
During the data collection phase it became clear that some degree of convenience sampling had to apply in the study since the data collection lasted from September 2012 until February 2013 adding up to a time span of 6 months. This time span meant that some of the children were of the chosen ages during the data collection period, but not necessarily during the particular week during which the research team visited just their school. There were also smaller schools that had very few pupils in some of the chosen age groups at the time of our visit but that had more pupils in very close ages. Therefore, in the final sample, the ages of the participating children were 9, 12 and 15 (see Table 3), or the participants attended school years 3, 6 and 9 (in Finland and Sweden) or school years 4, 7 and 10 (in Norway).26

Of all teachers at the schools only language teachers, that is, the teachers of North Sámi, the national majority language and English were selected to participate in this study. All and all 38 language teachers participated in the study answering to the questionnaire and/or through participation in interviews. The number of participating teachers is higher in Finland because language subject teaching was more often divided between different teachers there than in Norway and Sweden, where North Sámi teachers could also teach the national majority language and/or English. Seven principals participated in the study.

Consent forms and information about the project were sent in advance to the schools in order to reach the chosen age groups. The information packages were distributed by language teachers or principals at the schools. At some schools, the information of the project had not been handed to the pupils before our arrival, which meant that the first day at the school was spent on making sure that the pupils and their families received appropriate information about the study before starting the data collection at the school. All participating pupils and their families could also at any time prior to,

<table>
<thead>
<tr>
<th></th>
<th>Norway</th>
<th>Sweden</th>
<th>Finland</th>
<th>SUMS</th>
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<td>10</td>
<td>5</td>
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<td>1</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 3: The distribution of participants according to country.

26 Finland and Sweden treat the first school year after daycare as a pre-school class or school year 0 (zero), while the same level in Norway is the first school year level, “trinn 1”. This is why I rather chose age as criterion than certain school years at school.
during, or after the data collection contact the researchers in order to withdraw from the project, or to place questions about the project to the researchers.

4.3 Data collection and methods
The empirical part of the study involved setting up a data collection procedure in the school context. The purpose of the data collection was to record the phases and progression in bi-/multilingual children's computer mediated writing process. The pupils wrote in three different languages and in two different text types or writing genres (descriptive and argumentative).

Keystroke logging (Spelman Miller & Sullivan, 2006) was the main method used in the collection of pupils' texts and recording of their writing process. The technical software application or keystroke logging tool used in this particular study was Inputlog27 (Leijten, et al., 2012; Leijten & Van Waes, 2012, 2013; Van Waes & Leijten, 2006). The nature of the empirical data collection procedure is mainly descriptive rather than explanatory, offering a detailed account of mechanisms and processes involved in computer mediated writing in the physical context of the school.

For the purpose of data collection, the research team brought 20 laptop computers to the schools (see Photo 1). The Inputlog program was installed on each of the computers. On the computers used for writing in North Sámi, I had also installed North Sámi characters that were indicated on the keyboard with large white letters. The keyboards used in respective country were installed on the computers that were used for writing in Finnish, Swedish and/or Norwegian so as to make the keyboard more familiar to the pupils. Spell checkers were not allowed for any of the tested languages. Inputlog was used together with another program, namely Camstudio28 screen recorder, on which the audio recording was switched off. Camstudio was used to back up the playback function of Inputlog that allows the researcher to examine the writing process visually in real time.

Figure 5 shows a chart taken from the information materials send out to schools and families that explains the writing set-up during the data collection at each school. Every participating pupil was introduced to the writing tasks according to a procedure plan for text 1 or for the texts 2-6 (Appendix 1). The pupils were asked to imagine that they were writing their texts for other children and young living in a city somewhere south in the country (the so called peer-audience-oriented contextual frame, cf. Rajlaarsdam & van den Bergh 2006, p. 41).

27 http://www.inputlog.net/ [Date of access 3rd July 2014]
28 http://camstudio.org/ [Date of access 13th August 2014]
The writing tasks (Appendix 2) in our study included three descriptive text tasks that asked the writer to describe what they or people in their age in general did together with their friends and families or when they were alone. Another set of questions was designed for the argumentative writing task.
asking questions about the importance of having access to modern technology, the importance of environment, and the importance of people choosing to live in the countryside.

The time for one writing session was limited to a maximum of 45 minutes and approximately half an A4 page. The pupils were then told that they could stop writing when they felt that they were ready, or that they could also continue writing if they needed more time. In case that a pupil felt that (s)he could not answer the question in the language of the task, then (s)he was first asked to write any text or story in the language of the task, and if that did not work, then the pupil was asked to write words or anything in the language of the task. In case that the pupils were unable to write in the language of the task, they could choose a language they felt at ease with. They could, then, either try to answer the question or write a text about a topic they chose themselves. Writing sessions were scheduled so that the writers would not write twice in the same language in one day. This meant that, depending on the size of the school, the team would stay between 3-5 days at each school.

The data obtained from the writing sessions consists of the final written products (pupils' texts) and of the detailed log files showing for example pausing, revisions, cursor movements and editing of the text during writing (text or writing logs). Each pupil wrote two texts, one argumentative and one descriptive text, in their three languages (North Sámi, English and respective national majority language).

Extract 1 shows a final computer typed argumentative English text by a 15-year old writer, and Extract 2 shows the log file of the same text. The log file shown in Extract 2 is modified and simplified to only show some of the activities during writing in order to save space here.

A3 EN

It's important to live in the countryside because, if nobody lives there the place isn't going to improve or get bigger. This means that there are no small villages in the countrysides, and more people have to move to bigger places. When the bigger places are full, people have no where to live. If people settle down in country sides, there are going to be societies created and they have a good chance of grow bigger with the time, and in the end big cities are going to pop up from nowhere. Many contries are trying to reduce the importe of food from other contries, with trying to get more people in to the farming job so that they can make their own food. And countrysides are perfect for this.

Extract 1: A finished argumentative English text by 15-year old writer.
Eight hundred and twenty three (823) pieces of pupil writing were collected in total. Approximately 1/3 was written in North Sámi, another 1/3 was written in English and the rest of the texts were evenly distributed between the national languages Finnish, Swedish and Norwegian. This number also includes 131 texts written by the 23 upper secondary pupils who wrote in the larger Literacy in Sápmi project, and corresponds to a total word mass of 67,000 words. Six hundred and ninety two (692) pieces of writing by pupils in the ages of 9-15 years form the main material used in this thesis. Some texts have been chosen for the more detailed case studies presented in papers IV, V and VI. Pupils’ texts vary in length and in complexity between a simple list of words to longer and more complicated narratives. Log files also include text that has been left out of the final text (letters, words, clauses and sentences that were erased during the writing process) making the log files much longer than the final texts.

The experimental part of the project was accompanied by a survey addressed to pupils, parents, language teachers and principals. The questionnaires were based on the questionnaires used in the Progress in International Reading Literacy Study from year 2006 (PIRLS, 2006). The original questionnaires that focused on reading literacy have been adjusted to include in-depth questions about writing literacy in the Nordic context. See Appendix 3 for a summary of the questions posed in pupil, parent and teacher questionnaires used in this study. Pupils participated in this study by writing texts, OR by writing texts and by answering questionnaires, OR by

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29 The fact that the writers were allowed to choose the language if they felt that the task was too demanding means that some, often younger, writers wrote more in some language than planned. There were also writers who mixed the languages to such an extent that their texts could not be counted as monolingual products.
writing texts, language diaries and answering questionnaires\textsuperscript{30}. Little more than half (75/126) of the writing pupils also answered the pupil questionnaire. 74 parents answered the parent questionnaire, see Table 3.

Of the 38 participating language teachers, 27 answered the questionnaire. Teacher questionnaires included questions about language attitudes, and specific teaching methods that are related to literacy development and acquisition. 24 language teachers were also interviewed. The interviews were semi-structured and directed toward questions and themes about writing in the school context. The teachers were encouraged to give their personal interpretations of the state or situation of the different languages in the area where they lived, and to give examples of different language arenas that they were aware of. The interviews lasted from approximately 30 minutes up to almost two hours depending on the schedule and workload at the school. Interviews were conducted in the language chosen by the interviewee. Principal interviews and questionnaires were of a more general character and involved details and descriptions about the local school context\textsuperscript{31}.

I felt that the participating teachers had been encouraged to join the study and to participate in the interviews by their headmasters, which has been very positive and important for my ambition to get an as accurate description as possible of literacy practices in and outside school in Central Sápmi. Without the engagement and welcoming attitude of the school staff, it would have been very difficult to carry out this project.

### 4.4 Challenges of the study
The area where the challenges limiting the current study are seen best is the area of statistics and adequate quantitative data available for across-the-board comparisons. It is difficult to estimate the representativeness of the 126 participants with the regard to their age and location.

The issue of representativeness is partly related to the fact that not all North Sámi speaking areas of Central Sápmi participated in the study. Although participating schools in the study have not been identified, it must be noted here that Gällivare municipality in Sweden and Kautokeino municipality in Norway have not participated in the study at all. In Sweden, the size of the schools in Gällivare and some school internal reason hindered the schools from participating in the study. In Kautokeino in Norway, some of the schools were difficult to reach, and at other schools the teachers were against participation in the study due to increased workload. In the upper secondary school the students decided not to participate due to the increased

\textsuperscript{30} I have not looked at the language diaries in this thesis.
\textsuperscript{31} I have not included the general questions posed to principals about the size of the school and similar information since I only received 5 filled questionnaires and have therefore not been able to analyze this material for the purposes of this thesis. Appendix 3 comprises therefore only of the summary of questions from the pupils', parents' and teachers' questionnaires.
workload resulted by eventual extracurricular activities. One of the schools in this particular municipality informed me that they were already involved in so many local research projects that they could not think of participating in yet another one.

Since the potential in-take numbers from Gällivare were low, I do not see a great impact on the study and results in leaving this municipality out of this study. However, the drop-out of these municipalities is discussed at length here because Kautokeino municipality is, in the Sámi context, seen as the most important cultural, academic and linguistic center of the Sápmi region. That the municipality that by many is seen as the most vital North Sámi region is not included in the study may have various impacts on the results of this study. In the present, I am not able to control such potential impacts. It is a matter for future research to ensure a detailed and comprehensive picture of literacy emergence in all areas of North Sámi speaking Sápmi.

The selection, the sample, and the range of the study are also to some degree limited by the fact that writing in the study has been voluntary, and has not been included in the regular compulsory writing activities at the schools. However, the questionnaire answers that were gathered from the participating pupils and their parents do not indicate that the free choice of participation would have resulted in a notably positive or favorable final selection. From the self-reports it is clear that the selection includes both children with and without writing difficulties, and children who like and dislike writing in general.

I have been able to gather quantitative data in form of writing logs and questionnaires, but the study is still to be classified mainly as a qualitative study that can shed light on some but not all aspects that steer the literacy emergence among young Sámi learners.

4.5 The author's contribution to research
The proportion of work, analysis and writing done by the author of this thesis with respect to each of the co-authored papers has been substantial. The work on the co-authored papers has been characterized by strong collaborative spirit in which all authors have had a prominent role in the shaping and forming of the analytical as well as the theoretical perspectives that form the core of this thesis.

I, the author of this thesis, have also been responsible for the production and translation of information materials (i.e. questionnaires and consent forms), and of establishing all contacts with the participating schools and school districts. I have been responsible for collecting and capturing data, and for analyzing, organizing, transcribing and translating the collected data.

Thus, my role in the study has been central in formulating the salient research questions, in designing and carrying out the data collection phase of
the study, in designing research methods, in the analysis of data, and in the interpretation of the findings of the study.

4.6 Note on researcher positionality
I, the author of this thesis, am a member of the Sámi community originating from a little village of Outakoski in Northern Finland. I moved 700 kilometers away from my home town and my home community already at the age of 16 years in order to attend upper secondary school where English was the medium instruction. In the present I live outside Sápmi in an urban center in North Sweden. I work in the academic context of Scandinavian higher education after having worked a year as teacher in one of the Sámi schools in the Central Sápmi region. I am speaker of North Sámi and Finnish and have along the life trajectory also gained good command of Swedish and English. I have self-witnessed the consequences of national language policies and out-migration of Sápmi that have silenced Sámi language in my own family. I have also seen how language can be brought back when multiple efforts from school, family and the surrounding language community are taken to reach such a goal.

With this background I constantly stand at the border of two worlds. I am an insider and an outsider in both contexts at the same time. The two perspectives make me daily to consider questions of positionality. And although my research, like any other research, is to some extent formed by the background and the worldview that I have, I am confident in the choices I have made, and the perspectives I have chosen or lead to highlight or question when carrying out this research. I am grateful for the opportunities that my rootedness in the Sámi society has offered me, and also for the fact that I, during the data collection, lived outside Sápmi which gave me distance to the language situation in Sápmi that I viewed from outside and that I at times found painfully complex. When I have interviewed people for this study I have felt acceptance from both Sámi and non-Sámi participants. Through that acceptance I have been given the privilege to share personal, deeply emotional and sometimes sensitive insights of life in present Sápmi. I have also interviewed people that I knew personally from earlier, who know my family, or who know someone that is part of my personal network, thus sometimes straying off the topic, but then again finding the path back. The children and young that I have met have all gladly and willingly given me their thoughts, ideas and opinions in form of texts and discussions in the class, and it is with awe that I think of their talents, enthusiasm and courage to meet the future. I hope that I can bring out the unique and interesting aspects about literacy emergence in Sápmi. At the same time I conform to the Indigenous research ethics, research ethics of my academic community, and try to find the suitable way of expressing the voices of those that have made this research possible, that is, the children, the parents and the school staff that have participated in the study.
5 Literacy contexts and instances in Sápmi

This section summarizes the individual Papers II - VI. The first two papers are concerned with the contexts of Sámi and other literacies in Central Sápmi. Paper II, in section 5.1, reports on the results from 128 pupil and parent questionnaires focusing especially on the pupils' and parents' attitudes towards literacy, and on the Sámi literacy contexts that can be identified or that are missing in the answers. In Paper III, in section 5.2, we shift the perspective from the learners to the language teachers. This paper approaches the contexts and contents of multilingual literacy development through a detailed analysis of time and space deictics present in the teachers' metapragmatic statements about language use, language teaching, and language revitalization in Sápmi.

Papers IV-VI present instances of literacy emergence in the form of three case studies. These papers deal with the individual pupils' writing, writing strategies, transitions between languages, and writing technical and linguistic development. Paper IV investigates the English writing of Sámi learners from different regions in Central Sápmi. It focuses on how the texts evidence tri-lingual language learners' handling of the complex dimensions and diversity of their increasingly globalized local context. Paper V presents a study that examines three 15-year old pupils' writing and meaning-making processes in two text genres and in the three languages these pupils use daily. The last paper, Paper VI, presents a case study in which the medium of literacy, namely language itself, is under the loop. This last study moves a step deeper in the technical analysis of the writing process, and looks at the processing of one specific linguistic phenomenon (consonant gradation) that is attested both in Finnish and in North Sámi. The last study compares the procedural differences detected in the writing of four Sámi learners from the Finnish side of Sápmi. The last section offers a brief summary of the main points in the papers and attempts at answering the research questions posed in this thesis.

5.1 Summary of Paper II

Paper II, Davvisámegielat čálamáhtu konteaksta [The Context of North Sámi literacy], sets out to unravel the contexts of Sámi literacy that are necessarily and unavoidably intertwined with the bilingual and biliterate actuality of the Sámi learners in North Sámi speaking regions of Sápmi in Sweden, Norway and Finland.
<table>
<thead>
<tr>
<th>Questionnaires</th>
<th>9 years</th>
<th>12 years</th>
<th>Sums</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finland, pupils</td>
<td>11</td>
<td>14</td>
<td>50/Finland</td>
</tr>
<tr>
<td>Finland, parents</td>
<td>11</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Norway, pupils</td>
<td>14</td>
<td>16</td>
<td>59/Norway</td>
</tr>
<tr>
<td>Norway, parents</td>
<td>14</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Sweden, pupils</td>
<td>8</td>
<td>2</td>
<td>19/Sweden</td>
</tr>
<tr>
<td>Sweden, parents</td>
<td>8</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>All answers/age</td>
<td>66</td>
<td>62</td>
<td>128</td>
</tr>
</tbody>
</table>

Table 4: The distribution of pupil and parent questionnaire answers according to country and age in Paper II.

The primary materials analyzed in Paper II consisted of 128 questionnaires that were gathered from 9 and 12 year old North Sámi learners and their parents during the fall semester 2012 and early spring 2013. See Table 4 for the distribution of pupil and parent answers according to country and age group. Of the 9 year-old Sámi speaking and learning children, 33 answered the questionnaire; 32 answers came from 12 year old learners; and, 63 answers come from the parents of these learners. Material from five Sámi language teacher interviews from Finland, Norway and Sweden is used as secondary source for the analysis. The role of the interview extracts is to clarify or give further nuances to the picture painted by the questionnaire answers, since the parents and the pupils have not been interviewed in this study. Paper II approaches and analyzes the questionnaire data using the Hornbergian *Continua of Biliteracy* theoretical framework (Hornberger, 1989) and especially the *Contexts of Biliteracy* -continua.

The survey conducted among the young Sámi learners showed that in many cases the main connection to the heritage language is established through education or for instance daycare, rather than through natural exposure to the language at home, in the leisure time, or participation in community activities. Every third Sámi learner in the sample was in contact with Sámi language only through education. According to Rasmussen (2013, p. 34), the acquisition of Sámi is to some degree institutionalized.

One third of the pupils who answered to the questionnaires heard and spoke North Sámi at school, at home and in other out-of-school contexts. According to the survey, most young Sámi learners read and wrote very little in North Sámi, except when they were doing their homework and written assignments for school. Even those pupils who heard and spoke Sámi daily risked a situation where their literacy development in North Sámi was

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32 Note that this thesis has only studied the premises and contexts for literacy development among young Sámi learners, I have not mapped the contexts for their overall bilingual development or premises for requiring good oracy skills in Sámi.
going to be delayed. In other words, the development could be slowed down or could face a quick attrition process because other languages often dominate the language practices and contexts in which Sámi literacy could potentially have had a more protruding role.

This indicates that while the pupils received tutoring and practiced literacy skills in Sámi in the formal settings of the school, this was not the case elsewhere. The young Sámi learners were, according to themselves and their parents, exposed only to a limited amount of Sámi language content. This was particularly true of language arenas where vernacular or less formal types of Sámi literacy could potentially be found, such as popular culture and free time activities.

The findings in paper II indicate that the pupils and their parents often conceive of Sámi as a difficult language to write, and they consider it to have more value when spoken fluently. Such views, in turn, seem to have negative effects on how literacy and literacy skills in Sámi are perceived both by the pupils and by their parents. Paradoxically, when placed on the scales of the Continua of Biliteracy framework, one can see that the Sámi literacy context of many young Sámi learners is limited to the literary realm of school, and to the literate rather than to oral contexts.

The learners and their parents often convey ideological or attitudinal preferences for productive and receptive oral skills (speaking and listening) instead of productive and receptive literacy skills (writing and reading). At the same time, Sámi literacy presence in the lives of the young Sámi learners is limited to certain contexts and literacy genres. This indicates that these young cannot, in present, benefit from drawing from a wide range of points and positions on the Contexts of Biliteracy continua when it comes to Sámi language.

Our findings also implicate that there are substantial interregional differences in the state of Sámi literacy that are due to as well ideological as practical factors that arise in this complex bi- and multilingual context. Although in some regions, the Sámi learners are coping better with reaching balanced biliteracy and good Sámi literacy skills, Sámi literacy practices everywhere are in need of special attention and focused measures so that they can withstand the pressures that in the present cause considerable lack of balance in many individual Sámi learners biliteracy scales.

33 With attrition, I mean the decay, impoverishment or gradual break down of an individual’s linguistic system that can be learned as a first language or as second language. The reasons for attrition in individuals depend on many factors and surface in many different ways (e.g. diminished vocabulary, simplified morphological and syntactic structures, and difficulties with fluency). See e.g. (2013) and Granqvist and Rainò (2013) on first language attrition, Schmidt (2006) for second language attrition and various authors’ contributions in Hyltenstam and Viberg (1993) for different perspectives on language revival and regression.

34 Sámi music seems to be an exception to this trend at least for many of the young that participated in our study.
Summary of Paper III

Paper III, Sámi time, space and place: Exploring teachers' metapragmatic statements on Sámi language use, teaching, and revitalization in Sápmi, looks more closely at 18 interviews with language teachers from Finland, Norway and Sweden who either teach North Sámi at their respective schools, or who teach other languages to the Sámi learners at these schools. Approaching the teacher interviews inductively and iteratively, this paper draws out the themes of Sámi language use, language teaching, and language revitalization. These themes are interpreted and indexed by teachers along dimensions of time and space (Blommaert, 2007). The theoretically informed lens through which the paper approaches the teachers' metapragmatic statements draws on the conceptual tools of linguistic anthropology (Gumperz, 1982; Hymes, 1964; Silverstein, 1976; Wortham, 2008).

Teachers' statements are treated and seen as reflections of the teachers' experiences as members of a teacher collegium, as members of some ethnic group(s), and as users and speakers of one or more languages. The contents of the indexical statements are also always ideological interpretations of how things were, are and should be, thus allowing us to analyze language ideologies behind the meta-discoursal statements (Dorian, 1998; Irvine & Gal, 2000; Kroskrity, 2006, 2010; Schieffelin, Woolard, & Kroskrity, 1998; Silverstein, 1979).

Paper III found that, according to the interviewed teachers, the school has become one of the most important language arenas and contexts for Sámi languages in many areas of Central Sápmi. Furthermore, in some regions (North) Sámi use is to a large extent limited to the educational domain. This contrasts with the situation for Sámi described in Svonni (1998) where school, administration and media were seen as the main domains for majority language, and Sámi was the language spoken by individuals within families and among friends and relatives.

The findings in paper III further indicate that the local and regional space - the school, the community and the Sápmi region - is the common ground for indexing space for language use, language teaching and language revitalization among the language teachers in Central Sápmi, see Figure 6. The teachers did not index language use to the immediate space (for instance the classroom or their private life), thus creating a distance between the idea of language use in the community and the actual language practice in their immediate context. In contrast, language revitalization was not indexed to the national, transnational or global levels. This was also indicated by the contents of the interviews, as many of the teachers expressed that they were lacking organized transnational teachers' networks and international or Pan-Sámi guidelines and recommendations for Sámi education in general.
The teachers also often employed past experiences and situations, tested models, and personal life lessons in the interpretation of the current and the future language situation in Sápmi, see Figure 7.

Figure 6: Teachers' deictic markers for space in Paper III.

Figure 7: Teachers' deictics for time in Paper III.
Teacher comments in Paper III can be interpreted as reflecting a language ideological climate, which aligns with the more traditional\textsuperscript{35} domain and function based view on languages in society. This is in contrast with the forefront sociolinguistic theory (e.g. Blommaert, 2010) that conforms to less domain-centered views on language use, teaching and language revitalization.

According to our interviewees, languages can be seen as static entities that can be learned and taught in certain contexts or domains, and that are affected and changed by external forces (or by the lack of such forces). When teachers assess language skills, or the language performance of pupils or other speakers (e.g. parents or other teachers), they often do so by comparing the output with an ideological understanding of the language in its purest (when learned from the childhood), finest (when learned in culturally genuine settings) and most complicated (lexically rich and syntactically correct) form. The design of the educational system in this Indigenous context is also often interpreted to delimit the understanding of multilingualism so that it views languages as part of a modular and segregated system, where the different language resources in the speakers' repertoires are not complementary or to be mixed. Paper III asserts that the language ideologies that to a large extent form the everyday language practices in Sápmi are resistant to ideas that, in the minds of the practitioners, might threaten the position of one language or another in their local repertoire.

Paper III suggests that the new emerging understandings of Indigenous contexts and Indigenous language teaching call for expanded discourses on globalization. Such discourses embrace Indigenous knowledge, language policy and planning experiences, and consider more closely how Indigenous practices of “globalization from the bottom up” can be a force for dismantling local and global linguistic hierarchies (Hornberger & McCarty, 2012, p. 6). Opening up of the policies and starting with the bottom-up based practices in the Sámi context can help to make new implementational and ideological choices. Such choices can aid language revitalization and function as an engine for Sámi literacy development. Such new choices could be used strategically as reinforcements for each other (Hornberger, 2002, 2006; Hornberger & Johnson, 2007), and could bridge the experienced divide between the schools, the homes and various community actors.

5.1 Summary of Paper IV

Paper IV, \textit{Researching literacy development in the globalized North: studying tri-lingual children’s English writing in Finnish, Norwegian and Swedish Sápmi to provide a window into the superdiverse}, explores how

\textsuperscript{35} Much in the vein of the Fishmanian school of sociolinguistics (e.g. Fishman, 1972).
young Sámi learners living in different areas of the Central Sápmi region handle the super dimensions and diversity of their globalized free time and school contexts (Blommaert, 2010; Blommaert et al., 2012; Vertovec, 2006, 2007). English writing is in focus of the paper partly since English is the common school subject for all Sámi learners, and partly because the paper aims at examining how different aspects of globalization surface in the texts of these multilingual youth.

In the pupil texts analyzed in this paper, it is evident that school English and global English are blended together already in the structurally simple English texts of the youngest 9-year old writers. Traces of surrounding global youth culture in the pupil texts become more elaborate and complex as the writers' proficiency in writing English develops. The descriptive genre of writing provides the young writers a possibility to take control of the language, and to use it to voice identities (see also Outakoski, 2014). They can also use the language to describe everyday life in which global youth culture is constantly present, and to bring forward the perspectives that the writers find important in describing their heritage and cultural context.

Apart from analyzing the traces of increased global presence of English and the outside world in the pupil texts, this paper implicitly identifies a number of meta-discoursal super dimensions present in the Sámi context. The super dimensions of globalization and education identified in the Sámi context are the spatial, historic, political or policy based, network related non-human, and subjective dimensions. The spatial dimension juxtaposes the cross-national arctic countryside, or Sápmi, and the idea of the Global North. The linguistic landscape and global youth culture shape the literacy context of the young Sámi learners in that spatial super dimension. The historic dimension identified in this study is that of colonialism, and its impacts on the Sámi culture, language and literacy in the past, in the present and in the future. The political or policy-based dimensions identified in the study are those that in the present shape and encourage Indigenous political activism, that steer Indigenous language politics and teaching, and that constrain and dictate the future of the traditional livelihoods in Sápmi. Electronic networks carry a dimension that shapes the digital, physical and interpersonal contexts of Sámi learners in several different ways. All these four super dimensions affect the subjective dimension, and shape and re-shape identities, affect the choices for interpersonal meaning-making, and create the frames for literacy practices in Sápmi.

Paper IV asserts that superdiversity experienced in Sápmi, and described in this study, differs from the classical urban diversity described in Vertovec (2010) and Blommaert (2010) that is generated by escalating flows of immigrants, and that can be highly visible and audible in many urban neighborhoods. In Sápmi the dimensions of diversity are partly due to mobility of people (in- and out-movement) that affect the dynamics of the
local language communities. There is also increased diversity of language and discourse that is without physical permanent migration, and that can be traced back to many different sources, such as the increasing in-flow of global (youth) culture. Multilingualism in present Sápmi is a result of long-time contacts between different language ecologies, but it is also a result of forms of diversity of a different order than what was experienced by former generations of people living in Sápmi. Many of the aspects of recent diversity can be pinned together with increased globalization, that is, the mobility of people and therefore also languages, products and commodities, ideas and worldviews, etc. (Blommaert, 2010).

Globalization in Sápmi can be viewed in many ways, and the attitudes and perceptions of the consequences of globalization are varied within the sectors of the community that it affects. Expressions of globalization that in some way threaten the local culture, local livelihoods or language practices is viewed negatively. In contrast, globalization in form of global youth culture, that finds its way to the homes and to the school via media or social electronic networks, can be embraced at least by the younger generations that are often the target group of the new media. Young who grow up in an Indigenous context, that is constantly facing changing premises for survival, cannot avoid to experience political and ideological activism -- some may observe it from distance while others get involved personally at a very young age. Paper IV suggests that research on literacy development and texts written by multilingual pupils growing up in Sápmi provide a rich source of information about the expressions and effects of globalization, super dimensions, complexity, and diversity in the Sámi context.

5.2 Summary of Paper V

In Paper V, Meaning-making across languages: a case study of three heritage language writers, the focus shifts from global to local, and to the writing of three individual writers who daily move between three (or more) languages. Paper V examines how the three young writers Freddi, Nikki and Sammi36, when transiting between languages and text types, carry with them and utilize knowledge of various rhetorical aspects and devices. This knowledge, the individual writing strategies, and personal voice determine whether multilingual people succeed in conveying their ideas and thoughts to the intended audience through writing (Kobayashi & Rinnert, 2012, 2013). The paper also investigates what aspects of writing are not shared or dealt with in a similar way by the writers when they write in different languages.

The three young writers have different backgrounds that in many ways reflect the choices (or lack of choices) provided by the three schools systems in Norway, Sweden and Finland. Freddi, who at the time of data collection

36 These names are pseudonyms.
was 15 years old and who spoke Finnish and North Sámi and lived in Northern Finland, comes from a school system where Finnish and North Sámi are used in parallel as languages of instruction. Nikki, who is the same age as Freddi comes from Norway where she has attended a Sámi school where the main medium of instruction and language of school internal communication is North Sámi. Sammi’s situation differs somewhat from Freddi’s and Nikki’s since her main medium of instruction has been Swedish throughout the three final years of compulsory schooling, and she has only studied North Sámi, her mother tongue, as a separate language subject. Table 5 summarizes the personal information of the three writers of this case study. Although the contexts of these writers reflect the structures provided by their national school systems, these pupils were chosen randomly among the 15 year-old pupils who had filled in the questionnaire and who had written all six texts needed for this study.

The design of the case study and the different backgrounds of the pupils puts the focus on the pupils' communicative skills and not on formal aspects of their writing (e.g. syntax, morphology, command of vocabulary and writing conventions). The approach to the texts of the three young Sámi learners is that of discourse analysis adapted from the systemic functional perspective. This theoretical perspective sees language as a meaning-making resource and social semiotic (Halliday, 1978; Halliday & Webster, 2003), and asserts that it can be studied at three interrelated levels of language functions (Halliday & Matthiessen, 2014).

<table>
<thead>
<tr>
<th>Pupil</th>
<th>Country</th>
<th>Age</th>
<th>Main medium of instruction</th>
<th>Text mass (No. words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freddi</td>
<td>Finland</td>
<td>15</td>
<td>North Sámi and Finnish</td>
<td>611</td>
</tr>
<tr>
<td>Nikki</td>
<td>Norway</td>
<td>15</td>
<td>North Sámi</td>
<td>1298</td>
</tr>
<tr>
<td>Sammi</td>
<td>Sweden</td>
<td>15</td>
<td>Swedish</td>
<td>935</td>
</tr>
</tbody>
</table>

Table 5: Background information of the three young writers whose writing is examined in detail in Paper V.

37 Although we have applied a functional analysis on the meaning-making aspects in the pupil texts, we apply multi-competence (Cook, 1992; Cook and Singleton, 2014) perspective on the language systems of the three multilingual pupils. According to this model bilingual language users are fundamentally different from monolinguals in that they encompass a "compound state of mind with two [or more] grammars" (Cook, 1991, p. 103). The analysis presented in Paper IV does not include grammatical analysis, and therefore the question of which theoretical approach to grammar is preferred in this thesis is of less importance. This thesis does, however, see writing as a phenomenon that is linguistically and socially constrained and should therefore be open to theoretical approaches in which functional perspective is in some respects complementary with the more formal and syntagmatic perspective on language, much in the vein of Bavali and Sadighi (2008).
According to this discourse analytical approach, meaning-making can be studied through its ideational, interpersonal and textual functions. The ideational function relates experiences to the real world, and the interpersonal function helps us to interact with other people and express ourselves (attitudes, thoughts and ideas). The textual function brings together the other two functions, organizes the information into text, and creates discourse. According to the functional systemic approach to language, there is assumed to exist a “paradigmatic set of alternative features, of which one must be chosen if the entry condition is satisfied” (Halliday & Webster, 2003, p. 209). Such choices (not structures), that is, the knowledge of how to produce a linguistic structure to be used in a certain context, is partly inherited and partly learned by the speaker or learner from his/her community.

The findings of paper V indicate that the three writers in this case study presented themselves similarly in terms of ideas and interpersonal meaning regardless of which language they were using for the writing task. They also used some textual meaning similarly across languages. Freddi, Nikki, and Sammi presented themselves and their ideas consistently across languages reflecting the fact that their multilingualism is intertwined with their ‘minds’, their knowledge, interests, and motivation. They also used some rhetorical devices, such as listing and contrast, in similar ways across languages confirming results by Kobayashi and Rinnert (2012), and showing that rhetorical structure was one aspect of writing that writers employed similarly when writing different languages.

Although many similarities in how the writers in this study constructed meaning across languages were found, the writing of our three young writers differed between the languages with regard to the production aspect of the textual function, see Table 6. In total, all three writers were most productive, in terms of text mass, in the majority language. It was also in the majority language that the three writers showed least differences in expressing the ideational and interpersonal meaning, and best textual coherence between the two text types.

From the results, one can see that there is a complex interaction between context, content, media and development (Hornberger, 1989/2008) where issues like interest, exposure and language use seem to interact. Writers pick up different pieces of knowledge in different linguistic contexts in and outside school, which they then can apply to their writing. However, if exposure to linguistic input or some content is not present in some languages in the young learners’ context, then the development of literacy in that domain may also be restricted (see also Paper VI).
In our study, it is possible that some tasks were more challenging to write about because the children had not been exposed to such a linguistic task in that particular language, therefore either lacking the vocabulary or genre knowledge, or because they did not have personal interest in the topic. For example, Sammi’s short argumentative text in Sámi, about technology, and Freddi’s short argumentative text in Sámi about people living in the countryside could be a result of the context not providing content about technology or the environment, or about the argumentative genre, in the medium of Sámi. It could also be that these topics just failed to interest them. For Nikki, whose main medium of instruction has been North Sámi, writing an argumentative text about technology in Sámi did, however, not seem to be an obstacle. Nikki differed from the other writers in that she employed the argumentative style in all her texts, even the descriptive ones. Nikki was also all and all the most productive writer in all languages.

The findings indicate that development of multilingual writing competencies moves across languages at least if the languages are taught and learnt in the same context. From an educational perspective, these results may be understood so that what is taught about writing in one language may also be used in another one, and conscious collaboration between teachers and subjects may boost development in writing. At the same time, a discussion should be initiated about what may constitute differences between text and writing in a majority, minority or other languages, in order for minority context and content to interact to support children’s language and writing development in all their languages.

Table 6: The length and the paragraph structure of the pupil texts analyzed in Paper V.
5.3 Summary of Paper VI

The last paper, *Procedural differences in bilingual writer’s computer mediated writing: evidence from treatment of gradation in text*, shifts the focus from discourse to a more detailed and technical analysis of four multilingual Sámi learners' writing. The participating pupils in this study came all from Finnish side of Central Sápmi. Three of the writers were 15 years old during the data collection, and one pupil was 12 years old. Two of the pupils had North Sámi as their main language of instruction and spoke North Sámi to their parents. One pupil had Finnish as main language of instruction but was also taught in North Sámi in several subjects, and spoke both North Sámi and Finnish at home. One pupil had very little contact with North Sámi outside the language subject class, and she spoke only Finnish with her family.

The paper examines one specific aspect of the writing process of these four pupils, namely production, and one particular linguistic aspect, namely the textual surfacing of consonant gradation in two related languages, North Sámi and Finnish. The presence of similar linguistic phenomena in two languages provides the researchers with a unique possibility to study how potential disturbances surface in and affect the writing of the two languages. These disturbances occur during access or retrieval of adequate linguistic representations, and are experienced and faced during the transcription phase38.

Although North Sámi and Finnish have to some degree divergent scripts (somewhat different sets of graphemes), both North Sámi and Finnish attest a similar morpho-phonological phenomenon that is closely tied to the realization of syntactic structure, and that can be observed in writing, namely consonant gradation. In consonant gradation, the stem internal consonant cluster changes forms, and the alternation can be that of length (geminate-single consonant), quality (voiced-voiceless-null) or a combination of the two. Some examples of consonant alternation in North Sámi and Finnish are extracted from Paper VI, and shown in Table 7.

Paper VI presents a pausological investigation (e.g. Baaijen et al., 2012; Spellman Miller, 2006; Wengelin, 2006) of word-internal pauses with the pause threshold of 1000 ms (or more), and their relation to the gradation phenomenon in the course of text production. With pausological investigation is meant the analysis of pauses (in this case word-internal pauses) that are detected during the writing process by help of a special keytroke logging tool (Lindgren, 2005; Spelman Miller & Sullivan, 2006).

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38 With the transcription phase I mean the part of the text production process during which the words are typed or written (transcribed). Looked at from a cognitive perspective this part of the writing process would e.g. in the Hayes and Flower (1980) model be part of the translation model and is later subsumed under the text production processes (further developed in Chenoweth & Hayes, 2003; Hayes, 1996).
The keystroke logging software used in this case study was *Inputlog*[^39] (Leijten et al., 2012; Leijten & Van Waes, 2012, 2013; Van Waes & Leijten, 2006). The analysis of the linear text logs generated by Inputlog focused on word-internal pauses that were detected in the connection with grade alternation. The analysis of the final pupil texts focused on finding out how big a proportion of mistakes remaining in the final texts correlated to gradation in the two languages and in the two text genres. The pauses and the remaining errors were then analyzed as traces of awareness and internalization or adaption of the gradation phenomenon.

In earlier research on writing in North Sámi (Antonsen, 2007; Länsman, 2009; Wiechetek, 2012), gradation has proven to be a problematic area for writers from different writing and language backgrounds, such as beginners, mother tongue speaking adolescence, L1 and L2 speakers of North Sámi. Earlier research has mainly focused on final texts in North Sámi, and has thus been able to state that, in the finished written products, many spelling mistakes or mistakes related to syntactic structure are related to gradation. However, these earlier studies have not been able to say much about the pupil’s awareness of, or their attempts to handle gradation phenomena while writing. For Finnish, most studies have concentrated on length alternations in speech (and not specifically in writing). In these studies, the problems with gradation are often connected either to different kinds of impairment or L2 issues, or a combination of both (Kulju & Savinainen-Makkonen, 2008; Kunnari et al., 2001; Pennala, 2013; Saaristo-Helin et al., 2006). Word-internal pausing in general has, in writing studies on other languages, been connected with different types of writing difficulties (e.g. Wengelin, 2007).

The results in Paper IV implied that all four bilingual writers had writing difficulties in connection to the realization of the stem internal consonant alternations when they were writing in Sámi. Their Finnish writing showed no signs of such writing difficulties. Paper VI acknowledges that the consonant alternation system is more advanced in North Sámi where

[^39]: http://www.inputlog.net/ [date of access 3rd July 2014]
virtually all consonants can undergo gradation, while it in Finnish is limited to stops (in text, variants of k, p and t). This difference was also reflected in the pupils’ texts, as the alternations that did not exist in Finnish and that were less transparent (that is, when the orthographic form was not so easily retrieved from the pronunciation) seemed to cause problems when writing in Sámi.

There is no reason to assume that any of the four writers should have writing difficulties caused by, for example, dyslexia, as none of the pupils showed signs of such difficulties in their Finnish writing. Presenting grade alternations in text seemed to be automatized in Finnish to a high degree for all writers, including the youngest one. In North Sámi all the pupils showed complex writing behavior which showed awareness of gradation phenomenon and good command of it in some cases. In other cases the pupils would show hesitation or fail to produce the right written form after several attempts to find the correct form. In yet another case, the pupil might show automatization but still produce the wrong form even if she or he had already produced a similar alternation earlier in the text.

This study managed to detect a noticeable difference in the production phase of texts between two related languages that are taught in similar educational settings. If pauses, and word-internal pauses in particular, are connected to deficient processing of language, then this difference is significant. It implies that pupils, even after they have studied North Sámi for several years in primary and secondary school, still have not internalized the written form of Sámi. The same pupils show a far more advanced internalization of the writing conventions in their national majority language. Such a difference may imply that North Sámi speakers, even the fluent ones, will prefer writing in another language than North Sámi. They might feel that they are more fluent in the other language, and that writing in that language causes less cognitive effort.

As it seems, the difficulties in writing North Sámi that were detected in the study are not due to pupils’ unawareness of gradation phenomenon in general. Nor are the difficulties due to the learners’ ability to learn to command and adapt to the written form of a language that has such phenomena. The reasons for why they fail to internalize gradation system in North Sámi must have other causes. Although this paper has not looked at the reasons behind the differences, there are two areas where the present paper suggests further investigations, namely the differences in educational practices and learning environments, and early language attrition processes that can be triggered by many different factors in complex bilingual settings.

5.4 Complex contextual and linguistic relations

The individual papers summarized in this section of the thesis contribute to the understanding of the complexity of the social and linguistic landscapes of
multilingual literacy in Central Sápmi. Young learners of Sámi are becoming literate in three languages at the same time, and in many pupils' lives there are even more languages that are part of their everyday repertoire. Young Sámi learners transit between languages on everyday basis and they show evidence of knowledge transfer between languages on many different levels. High exposure to language seems to be directly connected to the efforts experienced in acquiring literacy, but even with less exposure there are good chances for the multilingual writers to develop literacy skills in Sámi, in other local languages and in English. The role of the school in literacy emergence is undoubtedly important, but which role other actors, such as the home and the wider language community, are willing and able to take is not yet defined or confirmed. The ways in which these other actors on the Sápmi literacy scene may influence the development of literacy skills in Sámi language are still to be seen.

When looked at from the perspective of the Continua of Biliteracy, papers II and III seem to suggest that the general literacy situation in the Sámi context is extremely complex. Furthermore, for some individuals the situation is critical. One third of the children that have participated in our study risk loosing their heritage language due to severe imbalance on their contextual and content continua scales between the languages they encounter in their daily lives. For these children, North Sámi use is marginalized to the literate realm of the classroom on a few occasions during a school week while other languages dominate elsewhere. There is, however, also evidence of cultural and linguistic revival among the rest of the learners, that is, those children who still have the language as part of their everyday life also outside school. For these children the support from the surrounding language community in form of, for example, meaningful free time activities and alike, is crucial for a balanced development of their two (or more) languages. Further, papers IV, V and VI suggest that the multilingual Sámi learners who participated in our study are doing progress and are developing in all their languages, perhaps not equally in all languages, but still progressing. They also learn to exploit their language knowledge, rhetorical knowledge, and other strategies in multiple and creative ways. They also seem to be able to convey such knowledge between languages. For the children and young in our study, languages themselves do not seem to be a limiting factor when describing contextualized or de-contextualized content in writing, rather, it is the lack of exposure to the languages that limits them. Limited exposure can be due to the language choices and possibilities of the home, it can also be due to the educational programs of the schools, or the experiences of the parents' generation, but what all learners have in common is that their literacy landscape is dominated by other languages than North Sámi. Although this study has not analyzed the reasons for why the continua of biliteracy shows such an imbalance among the Sámi learners, language
ideologies are identified in this study as an important factor that has an impact on language attitudes. Such ideologies also affect the views on where and how languages should be used, and ideas of why one language is experienced as more difficult than others, both among the Sámi and the representatives of the majority society. Papers V and VI have also shown that even on the continua of media and development there is imbalance among Sámi learners. The North Sámi writing of L1 as well as L2 writers is characterized by many spelling difficulties, lower production rate combined with more disturbances, linguistically less accurate products, and shorter final texts than in their writing in the majority language. Nevertheless, even here one could see that pupils who have a lot of exposure to North Sámi do well in all their languages and seem to be able to handle the challenges connected to e.g. North Sámi spelling conventions in an efficient way.

Returning now to the research questions posed in this study, the individual papers presented in this section have offered some answers to the initial problem formulation.

**What impact do the extralinguistic variables and ideologies emplaced in the complex multilingual contexts of Sápmi have on North Sámi learners writing and literacy development?** The impacts of extralinguistic variables and ideologies emplaced in the complex multilingual contexts of Sápmi are manifold. For some learners the extralinguistic factors function as supporting engines of their multilingual literacy development, while in other cases such factors can have a negative impact on the individual’s self-image thus working against the efforts of the school and/or the home. Ideologies -- because they are rooted in the history of the learners, their parents and their cultural heritage -- are in this study recognized as a powerful factor influencing the present and the future of literacy emergence in Sápmi.

**How does globalization interact with North Sámi learning children’s literacy development and usage?** Globalization interacts with North Sámi learning children’s literacy development and usage from an early age and onwards. Globalization is constantly present in the lives of the young writers in the form of popular youth culture, technical solutions that bring in the outside world to the immediate context of the Sámi learners and allow for contacts with the outside world. Globalization is also present in personal contacts with occasional or returning visitors, through politics and political decisions that let global international actors impinge on the place and space of the local people, and via the possibilities and opportunities that open to the learners as they become multilingual. At the same time, globalization can be embraced, experienced as a threat, or emplaced in the multilingual mix of everyday life in Central Sápmi.
How does the linguistic and cultural landscape interact with North Sámi children’s writing processes and products in the three languages when writing in the school context? The school context is the context in which most Sámi learners write in Sámi and in their other languages. Outside school, other languages than Sámi dominate the literacy contexts of these learners. Despite the fact that other languages are more dominant in free time literacy contexts, the writers of our study show that their linguistic and cultural landscapes, cultural knowledge, ties to the near environment and to their family and heritage interact at high level in their texts no matter in which language they write. Sámi language can be used to describe life outside Sápmi, English can convey personal thoughts about life in the remote Nordic countryside, and the pupils take control of the majority language and use it for many different rhetorical or ideological purposes.

What writing procedural differences can be identified in the texts written in different languages in the school context? When the bi- or multilingual writers write, some aspects of writing such as usage of rhetorical devices and text organizational strategies may carry over from one language to another quite successfully. Other aspects of writing differ. In this study the differences in writing were best spotted during the production of the text and with respect to the amount of produced text. Language background, attitudes, age, personal interests in the writing topics, exposure to language(s), training and writing experience, and the design of the writing task and its physical environment, i.e. classroom, all seem to have some impact on how the final written products may turn out. However, this study has shown that in all individual cases that the papers have analyzed, no matter what the background of the pupil is, literacy skills in the majority language are stronger than in Sámi. What I mean by stronger is that the pupils tend to write more in their majority language, they tend to show more automatization and, consequently, better fluency in the majority language. They also tend to show steady positive literacy development in the majority language. There is at the same time evidence and implications of a situation where Sámi literacy skills do develop during the compulsory schooling. However, Sámi literacy skills risk to stagnate or slide over to a state of gradual attrition if the possibilities to use Sámi orally as well as in writing are delimited or decrease, as the learners get older. For English the learning curve seems to be quite steep, and visible development happens during the

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40 I have not looked at the writing of the youngest pupils in the case studies from a comparative and analytically detailed perspective since many of the youngest learners (9-year olds) were unable to produce a coherent text or even sentences in writing in any of the languages that they were learning. Paper IV discusses English texts from this youngest group, but the case studies in papers V and VI are concerned with the writing of the older pupil (15 years old and one 12 year old).
compulsory schooling. It may start out as knowledge of isolated words, often nouns, but develops often into a complex linguistic system that can be used to write about virtually any subject.
6 Implications for language revitalization and Sámi literacy development

This section discusses the findings of this study with respect to the Continua of Biliteracy framework, offers a way to use the analysis for language revitalizing efforts in which Sámi literacy is highlighted, provides suggestions for future research, and presents some final thoughts.

6.1 Resisting language shift by supporting Indigenous literacy

Fishman's (1991) Graded Intergenerational Disruption Scale - GIDS ⁴¹ is one of the best known models for illustrating how threatened languages facing language shift process move through different identifiable stages from living language to near extinct language. In the Fishman’s original 1991 scales there are 8 stages. At stage 8, only some older members of the language community know the language, and at Stage 1 the language is used in most areas of the society including higher education, central government and national media.

In Sápmi, different regions mirror different stages on the scale. The core area of Central Sápmi is the Sámi region where many of the lower number stages, i.e. the more positive stages, can still be found. In the North Sámi speaking areas of Sápmi there are still many families in which Sámi language is transmitted from the older generation directly to the younger (Stage 6, see also Rasmussen 2013). However, in some areas and in many families the chain of intergenerational language transmission has been cut off and school has gotten a new role in transmission of the Indigenous heritage language (a stage yet not defined in the literature).

One stage has not attracted much attention in the earlier studies in Sápmi, namely Stage 5. This is the crucial stage between home language transmission (Stage 6) and compulsory education (Stage 4). This stage has to do with literacy in the language community’s own language, minority language, in the heritage language or Indigenous language, depending on what epithets fit the description of each community. Moreover, stage 5 is the prerequisite for homes to be able to take part in the challenge taken on by the educational sector in supporting indigenous literacy development. Lewis and Simons (2010) describe this stage saying that “[t]he language is used orally by all generations and is effectively used in written form in parts of the community” (p. 28 (Table 4 - Expanded GIDS). Baker (2006 [based on

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⁴¹ This scale is further elaborated by Lewis and Simons (2010) to take into account extinct and internationally used languages. Lewis and Simons have expanded the scale from 8 stages to 13 stages, some of which are closely related, collapsing together Fishman's original scale, UNESCO's 6-level scale of endangerment (UNESCO 2003, 7-8) and Ethnologue's (Lewis, 2009) five categories of language vitality.
Fishman (1991) describes the situation at this stage by acknowledging the “[n]eed to support literacy movements in the minority language, particularly when there is no government support” (p. 61).

The Continua of Biliteracy model (Hornberger, 1989) acknowledges the importance of materials and biliterate content for simultaneous development in language and literacy skills in several languages. The model, thus, indirectly highlights the importance of Stage 5 for bilingual education. The model sets full biliterate development in both majority and minority languages as the goal of successful bilingual education. Internationally, reaching full development in more than one language would then ideally be the best possible case scenario in a situation where the minority language has less power. In order to understand the logic of the model one has to understand that it springs from an acknowledgement of linguistic power relations. In most places around the world such power relations place the national or state bound majority language in a position where it is viewed as superior to and more important than other languages. This creates an inherent power imbalance (Hirvonen, 2008; Hornberger, 2002; Hornberger & McCarty, 2012; Martin-Jones, 1989).

The situation in Sápmi is no exception to this hierarchical language view. In Sápmi, the nation state agenda defines the goals of bilingual education, and majority language skills weigh more in official steering documents than language skills in Sámi. This results in a misbalance between majority and minority contents of Sámi education (cf. Keskitalo et al., 2012b). All schooling of Sámi learners is constrained by the goals that prioritize the acquisition of full literacy in the majority language. Monoliteracy in Sámi is not possible. Therefore, even in Sápmi, Sámi literacy development is accompanied or preceded by development in the majority language literacy. As returning to a monolingual Sámi society is implausible, we must find ways in which other literacies than the majority literacy can be promoted and strengthened, instead of fighting ideological battles. Some of the challenges faced during this process are, as discussed in this thesis, political, some are ideological and some are practical, but if they can be identified then there is also possibility to counteract them.

When we think of the role that different international, national, local and domestic actors have, or can have, it is necessary to apply the Continua of Biliteracy in praxis. A practical application of the model should be able to identify the problematic as well as the positive areas in literacy emergence in any language, and challenge the typical monoliterate agenda.
Figure 8 suggests a way in which the Continua of Biliteracy can be used to highlight areas in need of special attention with respect to the four main continua (context, content, media and development) or the entire nested model. Language communities can map the portion of the continua that the individuals in some region or area are able to draw from, and in that way identify where the most immediate reviving and revitalizing efforts ought to be directed to in that particular context. Three hypothetical but possible scenarios are illustrated in Figure 8 for the continua of context.

In the first scenario, Scenario A in Figure 8, the minority language is spoken by a handful of people in the community, and is not used as the common medium of communication in the home. Young learners of X can only use their language in one limited context, namely school (few points on the micro-macro continuum, closer to the micro end of the continuum). They only learn the language in the formal settings of the classroom as a separate subject and mostly through texts and recordings of the texts. There little time and opportunity to train oral skills in X (few points on the oral-literate continuum that are located closer to literate than oral end of the continuum). Language X is not used for communication outside the classroom. Language Y (majority language or language of higher status) is used in most contexts, in literature and orally (few points on the bilingual-monolingual continuum, closer to the monolingual end of the continuum).

This hypothetical scenario in Figure 8A describes the situation of a typical Sámi heritage learner whose family has moved outside Sápmi and whose family members are no longer active speakers of the language. Depending on the funds that are available, immediate measures can be taken to target the problem areas in school. This can be done for example by 1) rethinking the distribution of lesson content so that oral contexts are strengthened, and 2) by thinking of translanguaging as a school internal strategy for accepting

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42 Canagarajah (2011) has defined translanguaging as "the ability of multilingual speakers to shuttle between languages, treating the diverse languages that form their repertoire as an integrated system" (p. 401).
and promoting diversity. Outside school there are also several measures such as seeking possibilities to arrange or attend to intergenerational language camps. In order to support the heritage language at home it is crucial that there are various written and oral sources available for the support of language development of the whole family.

When there are only very few speakers left in the community the measures must include contacts with other communities where the situation is better (should such communities exist). Most measures and actions in scenario 8A must be directed to individuals or families. A real life example of this kind of strategy is found in Umeå municipality in Sweden. In 2015 the municipality agreed to support Sámi families of pre-school aged children to attend immersion programs or immersion environments elsewhere.

Scenario B in figure 8 illustrates a situation where the language community is able to draw on more points on the different continua thus filling a larger portion of the nested model. However, in this scenario the different continua are not utilized evenly. Scenario B describes a hypothetical situation that corresponds to much of the reality seen in the Central Sápmi region. Language X is used in parallel with language Y in many but not in all contexts. Language X might not have the same status as language Y in official situations or in local media. Language X is spoken in homes, sometimes as the sole language of the home, but often in a mix of languages. Language X is taught at school, and in many schools it is also the medium of instruction meaning that it is present in oral and in literate contexts of young X learners. In the spare time and out of school, there are some language arenas available for X but activities for multilingual youth are unusual. Languages X and Y are preferably kept separate, and monolingual contexts and ideals are protruding on most fronts and levels in the language community. In this scenario the immediate measures to support literacy emergence, language revitalization and development in X could be directed to the community of speakers and learners, and also to the local political and official levels. The school is given much responsibility for language transition in this scenario, and measures need to be taken to strengthen the role of the home and the community in language and literacy development.

The last scenario, Scenario C in Figure 8, describes a situation that in many ways is more positive, since a large number of points the continua can be utilized. When the areas of improvement are at the far ends of each individual continuum (or in the corners of the 3D model), there is best balance within the model.

In Sápmi, scenario 8C could correspond to the situation in a few restricted areas. However, the results of my thesis imply that at least the

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Hornberger and Link (2012) see translanguaging as "[...]a pedagogical strategy to foster language and literacy development" in multilingual classroom environments (p. 242).
monolingual-bilingual continuum is still imbalanced in most areas of Sápmi. As long as the speakers of the majority language are not as bilingual as the speakers of Sámi, and as long as majority language is rated as having a higher value, and as long as bilingual Sámi speakers are seen and assessed as monolingual majority language speakers, this last scenario cannot exist. Measures and actions that need to be taken to realize the last scenario are multiple and varied, and must target state level decision making as well as local politics, educational sector as a whole and all aspects of the individual speakers life.

This thesis suggests that Hornbergian Continua of Biliteracy model can be used to map the different continua for a language community in order to find actions and measures that are appropriate in different case scenarios. In this study an empirical approach to the analysis is advocated, and several perspectives on literacy and biliteracy are preferred. I have concentrated here on the Contexts of Biliteracy continua, but similar mapping can be done for the other areas of biliteracy as well. Further, this study asserts that if the GIDS stage 5 is not taken into consideration when talking about language revitalization and biliterate development in Sápmi, then there is a risk that the homes that are already struggling to provide linguistic connections to Sámi language will carry a heavy burden in the future debates on continued language shift in Sápmi. This thesis has pointed out that the out-of-school environment of young Sámi learners is overloaded with literacy content in other languages than Sámi, and that although there is a will to strengthen and (re-)emplace Sámi in the everyday life of young Sámi learners it is a very difficult task due to missing materials, literacy content, and language arenas.

### 6.2 Future studies

Sámi linguistic, cultural, political and educational contexts provide a rich and interesting setting for future literacy studies and studies in writing. This first attempt to synthetize some of the case studies and investigations done in this field has only touched the surface of this new field in Sámi studies, and the potential for future research has already been made evident in the part studies voiced in this thesis.

*Literacy in Sápmi* project, of which this thesis is only one part, has still many interesting research questions to be posed in connection to the materials collected for the project, only some of which will be presented shortly here.

Using the analysis methods developed in the case studies in this thesis, pupil texts gathered in the large literacy study deserve a deeper analysis on both discoursal and linguistic levels. In analyzing larger portions of the material, the keystroke logging tools used for collection of the texts will have a more protruding role as the writing and production process of text, thoughts, ideas and expressions of attitudes can be studied and scrutinized.
from many different angles and perspectives. A technical analysis similar to the one presented in Paper VI of a larger mass of text is planned, so that one can see how writing difficulties, fluency, accuracy and creativity in writing differ from or resemble each other in the texts of North Sámi learners from different corners of Central Sápmi. Pupil texts from L1 and L2 writers also invites to a study of how syntactic structures are built, rebuilt and edited in the texts in different languages, this being a personal interest of the author. As this study has been cross-sectional, there is an interesting research window opening for a similar study done on a longer timescale so as to present literacy emergence in Sápmi longitudinally. In a wider longitudinal study, the role of the homes and the community in literacy emergence deserves the same attention as school in the current study.

This thesis has also highlighted some important areas of study that lie beyond literacy studies but that will be directly informed of the results and implications of studies like this. Such research concerns, among other things, Sámi language didactics and teaching of writing (and reading) in the bilingual settings of Sápmi. This study has also identified the urgent need to map literacy landscape of young Sámi learners everywhere in Sápmi and outside it, too, so as to find counter measures to processes that have the shape of early language attrition processes and in which the Indigenous minority language is the one under regression.

6.3 Final thoughts
Just in the end, when I am about to finish writing my thesis, I am reminded of one meeting that I attended some time ago and which I will come back to just shortly. My reminder came in the form of a Facebook discussion that I was following. The topic of the discussion was a music festival for Sámi young that in the spring 2015 announced that a popular music artist will be attending the festival. The discussion got its momentum from the fact that this internationally known musician was not Sámi. In the discussion there were those who thought that the main attraction at a Sámi festival should be a young Sámi artist, and then there were those who think it is better that the festival attracts a wider audience.

Although the discussion itself is interesting, the reason why this particular thread caught my attention was one stray comment that did not have much to do with the initial discussion and was made by a young Sámi speaker. This person was worried that if Disney-movies were translated to Sámi then they might threaten the status of Sámi oral story-telling tradition and feed the imagination of the Sámi children with wrong kind of characters, such as princesses, which was unnecessary since it was already done in other languages. In this comment, the expansion of Sámi literacy to include non-traditional stories was connected to a threat against the culture itself or the children’s right to their own culture. In the Hornbergian sense, this
comment was about the fear of decontextualized content taking over content seen as authentically Sámi, which at least in the school context can be an issue, as we have seen in this study. However, the logic of this comment does not hold since the same content is available in other languages and is not removed from the learners’ immediate context. That results in an imbalance in the contextualized/decontextualized continuum of biliteracy content, where all contents are available in the majority language (or e.g. English) but limited to include only contextualized content in the minority language. This kind of view on authentic vs. foreign content together with the fact that very little content is produced in the minority language will eventually force the learners to consume literacy contents in languages other than one’s own heritage language.

Now, this comment brought back to me a memory from an annual reference group meeting between the Swedish Educational Broadcasting Company (Utbildningsradio - UR) and a group of Sámi representatives from different political and educational institutions and Sámi association that was held some years ago. I was representing Sámi higher education at the meeting along with other Sámi from other organizations. This time UR showed the reference group a children’s book about life on a farm that was translated to North Sámi. We were also shown the accompanying online game and online book with the recording in Sámi. My informal and quick assessment of the materials was that they were of good linguistic quality and had an appeal that would make many children want to read them. When the representative for the language department at Swedish Sámi Parliament was asked about an opinion, the comment was that this kind of book was not preferred since it was not traditional enough.

What is common to both of these opinions is that they see Sámi language as something that can be compartmentalized. That is, that language can, or should, be used in a limited range of domains, practices, situations and for limited array of descriptions, themes, characters, and literacy, and that it can only be used to mirror aspects of traditional Sámi culture. Worrying to me is that these opinions are expressed by the Sámi themselves, and not by outsiders of whom one might expect hegemonic and functional views of this kind. It is also typical to the Sámi context that similar attitudes concerning other languages are never voiced.

I know that there are many people, Sámi as well as non-Sámi, who do not share the opinions illustrated above, but it still makes me wonder where the most difficult obstacles for Sámi literacy emergence lie besides the more obvious state level issues that have been highlighted in this thesis and elsewhere. Hornbergian Continua of Biliteracy framework can be used to point out which areas of literacy development are in need of attention or improvement, and that information can be used to suggest measures and actions to achieve such development. Nevertheless, it is crucial that the
language community itself sees literacy in its own language as a human right and as an important step toward language revitalization without predefining, or having to choose, what literacy contents are preferred and what are not. The argument put forward in this thesis is that for the development of overall language skills, and linguistic and cultural knowledge, it is crucial that the multilingual speakers and learners have access to a wide range of readings and written word in all their languages. In the indigenous context, it is equally important that the learners can enrich their writing and overall literacy skills through a wide spectrum of writing and reading experiences in their own language.
Summary in North Sámi

Nuorra sámegielohppiid máŋggagielat čálamáhttu: konteavsttat, kompleksitehta ja čállin Sámis


Dutkanvuogit Dát dutkamuš lea dáhpáhusdutkamuš mii guorahallá 126 9-16 jahkásaš davvisámegielohppiid konteavsttaid, čálamáhtolaš duovdagiid ja čállima dakkár metodalaš perspektiivvas mas dutki ávkkástallá mánggain sierra dutkan- ja guorahallanmetodain (eän. multi-method dahje mixed-method). Nákkosgirjii vuodčnu beat guhtta artihkkala mat deattuhit 1) dutkanmetodalas gažaldagaid mat gusket álgoálmotdutkamuša, 2) gielladoaladumiid, ideologiijaid ja giellašiljuid mat váikkuhit guovtttegiela čálamáhttu bohciideapmái davvisámegielat Sámis, dahje 3) máŋggagielat ohppiid čállima ja teavsttaid iešvuóddaid ja erenoamáš dovdomearkkaid.


Visotgokči teorehtalaš rámma man jelgi dáhpáhusdutkamuš ja oktagas artihkkalat leat plánejuvven ja guorahallon lea Nancy H. Hornbergera Continua of Biliteracy dahje guovtttegielat čálamáhttu skálat (1989; mii lea muddejuvven otniža hápmái artihkkalis Hornberger & Skilton-Sylvester, 2000). Dasa lassin lea juohke artihkkalis ieżas teorehtalaš ja metodologalaš

**Dutkanbohtosat**  
Artihkal I čuoččuha ahte go leat dutkamin álgoálbmot konteavstta de lea hui dehálaš ahte álgoálbmot beassá oassálastit dutkanprošektii mänggain sierra vugiiguin. Prošeavtta oassálastit berrejet leat mielbargi rolls proséavttas. Juos lea vejolaš gávdnat bargovugiid maiguin sáhttá sikkharastit oassálastiid anonymitehta ja rievtt geavahit sin iěža válljen giela, de dutkít ožžot áidnalunddot vejolašvuodøa beassat juogadit deatalaš máhtu ja muhtumin hui persovnnalaš vásihuusa oassálastiiguin.


Dán dutkamuša bohtosiid miedle sáhttá árvalit ahte oahppit gudet leat muhtin láhkai aktiovalačcat miedle sámegiellat servodagas šåddet bajás oppalaš giellamáhtuin mií dakhá sidjiide vejolašžan ávkkašallat dan måhtus buot sin gielain. Olus gielalaš máhtut ja strategijat sáhttet sirdsít gielas gillii go beare oahppi beassá gullat ja geavahit buot su gielaid doarvái dávja. Seammás dát dutkamuš lea goittotge čájehan ahte buot dat oahppit, geaid
teavsttaid mii leat guorahallan dárkili, čället eamboo ja gielalaččat eanet 
juolga iežaset eanetlogugii go sámegillii. Artihkal VI árvala dasa lassin, 
ahte guovttiegaliel ohppiid (geat leat Suomas eret) sámegielat čállosiin 
vuhttot hástalusat maiddá gullet omd. čällinmeattáhusat ja vättisvuodat 
čuovvt čällinnjuolggadusaid, hástalusat mat eai lean oidnosis dàid ohppiid 
eanetlogugielat teavsttain. Dát dutkamuš lea maiddái gávdnan ahte 
eangalsgiella, mii lea dáid ohppiid vieris giella, čuovvula jodánis 
occhdanminstara ja ahte dan minstara lea vejolaš oaidnit go guorahallá 
mánggagielat mánáid ja nuoraid eangalsgielat čállima mas skuullas ja 
birastahtti globála máilmismi geavahuvvon eangalsgiella suddet oktii hui 
árrat.

Jurddabohtosat Davvisámegiella, eangalsgiella ja našuvnnalaš 
eanetlogugielat leat beaviváláččat miede sámegielohppiid eallimis. 
Sámegieloahppit, mánát ja nuorat, šaddet mánggagielat globála 
dayvimáilmmi miellahttun dasgo sii beaiviváláččat ellet ja leat oktavuodas 
mánggain gielain ja birastahtti kultuvrrain. Gielat ja kultuvrrat bakhkejit sin 
eallimiitta omd. populára kultuvrra, girjálašvuoda, media, turismma, 
ruvvtu ja skuulla bokte. Dattege lea nu ahte eanaš oassi nuorra 
sámegielohppiin i bi esa ávkástattal seammá olu buot sin gielain 
guovttiegaliel čálamáhtu skálain. Mángga sámegieloahppi guovttiegaliel 
čálamáhtu skálat leat hállanan dan láhkái ahte sin árbejuvvon 
emialbmotgiella jodánit geaffu ja sáhttá ohanassii jávkat. Davviriikkaid dála 
skuvlavuogádagat dorjot sámegielohppiid guovttiegaliel ja guovttiegaliel 
čálamáhtolaš ovdánumi dušše dihdo dássái, ja dáid riikkaidge gaskkas leat 
vuhttomis stuorra erohusat dán doarjaga doibmii bijus sihke gielda dásis 
ahte báikkálaččat skuullaid dásis. Dat ahte beassá gullat ja geavahit giela 
sihke njálmmálaččat ahte girjálaččat lea dehálaš eaktun čálamáhtu 
vdánumis oktagasain. Guovttiegaliel čálamáhtu ovdánumis lea fas dehálaš 
ahte oahppi beassá hárjehit iežas čálamáhtolaš dáidduid buot su gielain. 
Okta buot duodaleamos áitta guovttiegaliel čálamáhtu ovdánumi ektui Sámis 
lea sámegielat giellagálduid vátni mat sistisdoalaše sihke veahádat ahte 
eanetlogu sisdoalu, kontekstii čádnon ja konteavstta olgobealát sisdoalu, ja 
sihke girjegielat ahte árgagielat sisdoalu.
Summary in Swedish
Flerspråkig literacitet bland elever som studerar nordsamiska: Kontexter, komplexitet och skrivande i Sápmi

Bakgrund Utveckling av literacitet hos flerspråkiga barn och ungdomar som studerar urfolksspråket samiska är än så länge ett rätt så outforskat område. Ett nytt forskningsfält som detta erbjuder en stor mängd forskningsmetodologiska valalternativ för att angripa intressanta forskningsfrågor. Elever som läser samiska i skolan i Sverige, Norge eller Finland studerar alla minst tre språk samtidigt eftersom de förutom samiskan också måste studera sitt lands respektive majoritetsspråk samt engelska. Den ständiga närvaron av tre språk i dessa elevers liv lockar till en komparativ studie av hur literacitet utvecklas i elevernas tre språk. Samtidigt uppmuntrar också situationen till mer ingående och detaljerade studier inom de individuella språken. Denna rätt så komplexa språkliga kontext uppmuntrar också till studier av elevers personliga skrivstrategier, utmaningar och språkkattityder som formar och styr utvecklingen av tvåspråkig literacitet hos dessa unga.

Metoder Det här är en tvärsnittsstudie som tittar på kontexterna, literacitetslandskapet och skrivande av 126 elever från ett mixed-method perspektiv. Eleverna studerar nordsamiska i skolan och är i åldrarna 9-16 år. Avhandlingen baseras på sex individuella artiklar som fokuserar på 1) forskningsmetodologiska aspekter i samband med urfolksforskning, 2) språkkattityder, ideologier och tillgängliga språkarenor som påverkar hur literacitet uppstår i den nordsamisktalande regionen av Sápmi, eller 3) kvalitéer och egenskaper i elevers skrivande och texter.


genomförandet av ett projekt som forskar om literacitet i Sápmi. Andra artikeln utforskar kontexter och innebörden av tvåspråkig literacitet i Sápmi genom de svar som elever och deras föräldrar har gett i sina frågeformulär. Den tredje artikeln har liknande fokus som den andra men tittar närmare på lärarnas intervjuer. De tre kvarvarande artiklarna är tre fallstudier som analyserar elevernas skrivande från olika perspektiv.

**Resultat** Den första artikeln menar att det är viktigt att engagera medlemmarna i urfolkssamhället i forskningsprojektet när man studerar någon aspekt av ett sådant samhälle. Man ska se deltagare som viktiga samarbetspartners i projektet. När man lyckas garantera deltagarnas anonymitet och möjlighet att delta i projektet på det språk som man själv känner sig mest bekväm med så kan det leda till att forskarna få ta del av värdefull kunskap och ibland mycket personliga erfarenheter av de individuella deltagarna.

Enligt den uppfattningen som elever och deras föräldrar har om literacitet i Sápmi så är det svårt att skriva på nordsamiska och samiskan lämpar sig bättre till muntlig än till skriftlig kommunikation. Sådana här attityder strider mot de praktiker i skolan som värdesätter skrivkunskaper och som ägnar mycket tid i klassrummet till just värvning av kunskaper i läsning och skrivning. Artiklarna II och III hävdar att den huvudsakliga kontakten till samiskan sker för många flerspråkiga elever i den litterära och formella skolkontexten medan andra språk dominerar i de flesta andra sammanhang och skapar en obalans på de olika skolorna i deras tvåspråkiga literacitetsutveckling. Det finns dock elever som kan dra nytta av flera punkter på dessa kontinuum (eng. Continua of Biliteracy) vilket ger dem bättre möjligheter till fullskalig utveckling i tvåspråkig literacitet, d.v.s. en situation där utveckling i skriv och läsförmåga sker samtidigt i fler än ett språk. Artiklarna II och III identifierar två omedelbara hot mot tvåspråkig literacitetsutveckling som är de språkidéologiska aspekterna inom samhället som tenderar att uppvisa de olika språken till särskilda funktionella kategorier samt bristen på tvåspråk och nordsamisk innehåll både i skolan och på fritiden. Artikel III föreslår att "bottom-up", nerifrån och upp, strategier till att handskas med tvåspråkig literacitet kan fungera som brobyggare mellan skolan, hemmet och den språkliga gemenskapen i samhället, samtidigt som sådana strategier kan stärka samiskans position i den flerspråkiga blandningen av språk i det här området.

Den här studien antyder att de elever som är aktiva deltagare i det samiskspråkiga samhället växer upp med kunskapen om hur man utnyttjar alla språk i den individuella repertoaren. Många språkkunskaper och strategier kan föras över mellan språken om eleven får tillräckligt mycket exponering i alla sina språk. Emellertid, alla elever vilkas skrivande har analyserats i mer detalj i den här studien har visat sig vara mer produktiva och formellt mer korrekt i sitt skrivande på deras majoritetspråk än i
nordsamiska. Resultaten från artikel VI antyder också att de nordsamiska texterna (som i det här fallet var skrivna i Finland) karaktäriseras av utmaningar med stavning och hur man följer de ortografiska konventionerna, medan liknande utmaningar uteblir i texterna skrivna på det nationella majoritetsspråket. Enligt den här studien lär sig eleverna engelska genom stora steg på en utvecklingskurva, och dessa steg kan delvis spåras genom en analys av elevernas engelska skrivande som redan tidigt visar tecken på en sammansmältning av skolengelskan och den globala engelskan från andra källor.

**Slutsatser**

Nordsamiska, engelska och det nationella majoritetsspråket finns ständigt närvarande i de elevers liv som läser nordsamiska i skolan. Barn och unga som studerar samiska växer upp till att bli mångspråkiga medborgare i den globala Norden genom en intensiv exponering till många språk och kulturer. Exponeringen sker via många olika källor så som populär kultur, litteratur, media, turism, hemmet och skolan. Ändå är det så att de flesta unga elever som läser samiska inte kan utnyttja lika stora portioner på de skalor som styr deras literacitetsutveckling i alla deras språk. För många elever som läser samiska sluttar dessa skalor på ett sätt som orsakar allvarlig obalans mellan språken och som kan snabbt leda till en situation där deras samiska, ett arvspråk och ett urfolksspråk, förtvinar och riskerar att helt försvinna. Dagens skolsystem i de nordiska länderna stödjer tvåspråkighet och tvåspråkig literacitet bara till en viss punkt och det finns märkbara skillnader i hur det stödet fördelas i de olika länderna och även lokalt inom kommuner och individuella skolor. För att man ska kunna utveckla kunskaper i läsande och skrivande är det en viktig förutsättning att man utsätts till stor mängd av språkligt innehåll. För att man ska kunna utveckla tvåspråkig literacitet är det viktigt att eleven har goda möjligheter att träna både de perceptiva och de produktiva kunskaperna i båda (eller alla) sina språk. Det mest alvarliga hotet för fullskalig tvåspråkig utveckling av literacitet i Sápmi är enligt den här studien bristen på nordsamiskt innehåll som är adekvat och sträcker sig över så väl minoritetsinnehållet som majoritetsinnehållet, varierar från att bundet till kontexten till att komma utifrån, och som visar ett vitt spektrum av både skriftspråkligt och vardagsspråkligt språkbruk.
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Other sources


Appendices

APPENDIX 1 - Procedures for text collection

Procedures Text 1

1. Inform the participants in the majority and/or minority language about the project, that it is important for the revitalization process of North Sami, that they are going to write six text in total, that later on some of them will be invited to fill in a language diary and be interviewed, that their parents, teachers and school principals also will be involved by answering questionnaires and being interviewed, and that they can withdraw at any time if they like.

2. Give the writers the following instructions in the majority and/or the minority language: “Imagine that you are contacted by a school in a large city in the south of SE/NO/FL. A class, in the same school year as you, are doing a project where they want to learn more about different parts of the country. This class have now asked you to write a few texts about different parts of your life that they can publish on their web site. They want to publish texts in different languages to show that children and young people in SE/NO/FL not only know SE/NO/FL, but also North Sami and English. You will not write about the same topic and language at the same time, so I will now give each of you the right computer to use today. Try to write at least half a page (about one full window) and let me know when you have finished, you have a maximum of 45 minutes to complete your text”

3. Use the pre-coded list of participant and make sure each participant has a computer with the correct language settings and topic.

4. Go around to each individual participant, check that they have the right computer

5. Start Inputlog, fill in the student’s code as file name, choose language and fill in session number, save word document with student code and task number

6. Start Camstudio, fill in student code and task number

7. When the student is ready, first turn off Camstudio and then Inputlog. Make sure the files are saved using the student’s code as file name.

8. If someone finds it very difficult to write the text, tell them to write as well as they can, if they lack a word encourage them to rephrase, if that doesn’t work write the word in another language

9. If 8 is not possible tell them to write a text about anything in that language

10. If 9 doesn’t work tell them to write all the words, phrase and sentences they know in the language

11. If 10 doesn’t work tell them to write the text in another language
1. Give the writers the following instructions in the majority and/or the minority language: “You remember the school class in Southern SE/NO/FL who wanted information about your part of SE/NO/FL. Today you are going to write another text for them. We will do just like last time, but you will write a different text, and perhaps also a different language. You will not all write about the same topic and language at the same time, so I will now give each of you the right computer to use today. Try to write at least half a page (about one full window) and let me know when you have finished, you have a maximum of 45 minutes to complete your text“

2. Use the pre-coded list of participant and make sure each participant has a computer with the correct language settings.

3. Go around to each individual participant, give them their second etc. topic

4. Start Inputlog, fill in the student’s code as file name, choose language and fill in session number, save word document with student code and task number

5. Start Camstudio, fill in student code and task number

6. When the student is ready, first turn off Camstudio and then Inputlog. Make sure the files are saved using the student’s code as file name

7. If someone finds it very difficult to write the text, tell them to write as well as they can, if they lack a word encourage them to rephrase, if that doesn’t work write the word in another language

8. If 7 is not possible tell them to write a text about anything in that language

9. If 8 doesn’t work tell them to write all the words, phrase and sentences they know in the language

10. If 9 doesn’t work tell them to write the text in another language
APPENDIX 2 - Topics for the writing tasks
A school in a large city in the south is running a project in which they are learning about different parts of the country. This school has asked you and your classmates to write some texts for their project’s home page. Write around half a page (a full window on the computer). You can write for 45 minutes, but you decide when your text is ready. Let me know when you are finished.

**Descriptive writing task - D1EN**
Tell the class in the large city about and describe what people of your age usually do when they are alone at home, at different times of year, when outside and in the countryside, when at school, in your free time, inside and outside, depending upon the weather.

**Descriptive writing task - D2EN**
Tell the class in the large city about and describe what people of your age usually do when they are with their families at home, at different times of year, when outside and in the countryside, when at school, in your free time, inside and outside, depending upon the weather.

**Descriptive writing task - D3EN**
Tell the class in the large city about and describe what people of your age usually do when they are with their friends at home, at different times of year, when outside and in the countryside, when at school, in your free time, inside and outside, depending upon the weather.

**Argumentative writing task - A1EN**
Tell the class in the large city why you think it is important to think about the environment.

**Argumentative writing task - A2EN**
Tell the class in the large city why it is important to have access to computers and modern technology (such as vehicles and mobile phones).

**Argumentative writing task - A3EN**
Tell the class in the large city why it is important that people live in the countryside.
APPENDIX 3 - Summaries of questionnaire questions

Since the pupil, parent and teacher questionnaires used in this study are all in all more than 100 pages long in their original form, we have here only summarized the questions and the alternatives given in them in order to save place.

A. Summary of questions in the pupil questionnaire

1. Are you a girl or a boy?
2. When are you born? Month _ Year _
3. How often do you do these things on your free time?
   Alternatives: Daily or almost daily, Couple of times a month, Seldom, Never
   a) Read aloud to someone at home
   b) Listen when someone reads aloud to me at home
   c) Talk to friends about my readings
   d) Talk to my family about my readings
   e) Read for fun on my free time
   f) Read for acquiring information about the things I am interested in
   g) Watch TV or videos
   h) Write letters and postcards
   i) Write stories
   j) Write a diary or a blog
   k) Write SMS (text messages)
   l) Chat and write short messages on the Internet
   m) Write e-mail
   n) Write on hand
   o) Write when doing homework
4. Which (one or more) languages do you use when you do the following things?
   Alternatives: Sámi, Swedish/Norwegian, Finnish, English, Other
   (Same activities as in question 3)
5. When you are not in school, which language do you usually choose when you write?
   Alternatives: Mostly Sámi/Swedish/Finnish/Norwegian/English/Other
   If you chose other language, which_
6. Approximately how long time do you spend on following activities on your free time during a normal school day?
   Time alternatives: 5 hours or more, 3-5 hours, 1-3 hours, Up to 1 hour, no time at all
   Language alternatives:
   Sámi/Swedish/Finnish/Norwegian/English
   a) Watch TV (also videos and DVDs)
b) Play TV or computer game (e.g. Nintendo®, Gameboy®, X-Box®, Play Station®)
c) Write stories or/and articles on the Internet
d) Write stories or/articles by hand
e) Listen to music

7. How often does any of the following take place in school?
   Time alternatives: Daily or almost daily, Couple of times a month, Seldom, Never
   Language alternatives: Sámi/Swedish/Finnish/Norwegian/English
   a) I write from my own initiative
   b) I write in a group
   c) I write answers to questions/tasks
   d) I write what I hear (write down what is said)
   e) I write to my classmates
   f) I write about a topic I have chosen myself
   g) I write about a topic that has been given to me by my teacher

8. When you do write something in the class, how often do you do some of the following?
   Time alternatives: Daily or almost daily, Couple of times a month, Seldom, Never
   a) I write answers to questions in an exercise book or on a work sheet about the things I have read about
   b) I write something about the readings I have done (e.g. a summary, a story or an evaluation)
   c) I write orally on the questions my teacher poses on the writing that I have done
   d) Talk to my peers about the writing I have done (texts I have written)
   e) Do group work on or around the writings I have done (e.g. set up a play)
   f) I answer to written tests or exams in writing
   g) I talk to my teacher about the writing I have done

9. A. Is your mother tongue?
   If you have more than one mother tongues, choose the ones that fit
   Alternatives: Sámi, Swedish, Finnish, Norwegian, English, I am multilingual, Other, What other language_

   B. I get to use my mother tongue(s) when I work with tasks described in question 8
   Alternatives: Yes, No, Only in one of the languages (Which is _), Depends on the subject

10. How often are you given home work by your teacher that involves writing (all languages and subjects together) - choose only one alternative
    Alternatives: I never have to write anything, Less than once a week, Once or twice a week, 3-4 times a week, Daily
11. In which language do you receive the most and the least written home assignments, how much time does this homework consume?
Language alternatives: Sámi, Swedish, Finnish, Norwegian, English, Other
Amount alternatives: Most, Quite much, Little/Seldom, Never
Takes most time/takes least time

12. How often do you use the computers in the following places/locations?
Time alternatives: Daily or almost daily, Couple of times a month, Seldom, Never
a) I use computer at home
b) I use computer at school
c) I use computer somewhere else
d) I use a mobile phone or a surf pad as a computer

13. How often do you use Internet to do the following things?
Time alternatives: Daily or almost daily, Couple of times a month, Seldom, Never
a) Search for information for school
b) Search information about sports
c) Search information about music
d) Search information about other activities or free time interests
e) Chat, send e-mail or send instant messages to friends
f) Chat, send e-mail or send instant messages to family

14. A. How often do you loan books from the library or the school library?
Choose only one option:
At least once a week, Couple of times a month, Couple of times a year, Seldom, Never
B. When you loan/borrow books from the library are they written in...
Language alternatives: Sámi, Finnish, Swedish, Norwegian, English, Other (Which other__)
Time alternatives: Always, Often, Sometimes, Seldom, Never

15. How do you feel about writing in general? Choose the option that suits you best.
Alternatives: Suits perfectly, Suits quite well, Does not suit so well, Does not suit at all
a) I only write when I must
b) I like to talk about texts with other people
c) I think writing is boring
d) I need to be able to write well when considering my future
e) I like writing
f) I like to write in Sámi
g) I like to write in the majority language
(Swedish/Norwegian/Finnish)
h) I like to write in English
i) I like writing, but not equally much in all languages
j) Writing is very easy for me
k) I don't write as well as the other pupils in my class
l) I write best in Sámi
m) I write best in Swedish/Norwegian
n) I write best in English
o) I write slower than the other pupils in my class

16. Which language(s) did you speak before going to school?
   Language alternatives: Sámi, Swedish, Finnish, Norwegian, English, Other (Which other_)

17. How often and with whom do you speak the following languages?
   Choose all alternatives that suit you.
   Language alternatives: Sámi, Norwegian, Swedish, Finnish, English
   a) At home I speak most often
   b) With my mother I speak
   c) With my father I speak
   d) With my siblings I speak
   e) With my older relatives I speak
   f) At school I speak
   g) During the breaks at school I speak
   h) On my free time I speak
   i) With my friends I speak
   j) I could, but I only speak if I must
   k) I speak never or very seldom
   l) I cannot speak
   m) I dare not to speak
   n) Most often I speak

18. If you have a mobile phone, how often do you receive and send SMS (text messages) in the different languages?
   Language alternatives: Sámi, Norwegian, Swedish, Finnish, English
   Answer options: I don't have a mobile phone, Never, Seldom, I don't know, 1-5 times a day, 6-9 times a day, 10-19 times a day, 20-49 times a day, 50 or more times a day

19. How do you feel about the following claims/suggestions?
   Alternatives: True, False, I don't know
   a) I am interested in writing in Sámi
   b) I find it hard/difficult to write in Sámi
   c) I find it easier to write in Sámi than in other languages
   d) I am a better writer in other languages than in Sámi
   e) I am proud of my language skills
   f) I often hide that I can/know Sámi
   g) There is a language I like to write in although it isn't my mother tongue
   h) I'd rather write in my mother tongue
   i) I like to write
   j) The most difficult thing about writing in Sámi is spelling
   k) I think it is more important to be able to speak than to write in different languages
l) I like receiving writing assignments/homework that involves writing
m) The most difficult thing about writing in Sámi is the vocabulary (not knowing enough/all words)
n) I prefer writing by hand
o) I prefer typing on a computer
p) I am good at writing in English
q) I am good at writing in Swedish/Norwegian
r) I am good at writing in Finnish

B. Summary of questions in the parent questionnaire

1. This questionnaire is filled in by:
   Alternatives: Yes, No
   Alternatives 2: The mother, The father, Other

2. A. Before your child started first grade in school, how often did you or someone else in your household use to do the following with her/him? Choose one answer for each language
   Language alternatives (depending on the country): Sámi, Swedish/Norwegian/Finnish, English (three alternatives)
   Time alternatives: Often, Quite often, Seldom, Never
   a) Read books
   b) Tell stories
   c) Sing
   d) Play with literacy toys (e.g. cubes with letters)
   e) Talk about things that you had done
   f) Talk about things that you had read
   g) Play word games
   h) Write letters or words (or similar)
   i) Visit the library
   j) Play different sorts of games

B. Before your child started first grade in school, how often did you or someone else in your household use to use social media or/and the Internet together with him/her [child]? Choose one alternative for each language.
   Language alternatives (depending on the country): Sámi, Swedish/Norwegian/Finnish, English (three alternatives)
   Time alternatives: Often, Quite often, Seldom, Never
   a) Surf on the Internet
   b) Visit gaming sites on the Internet
   c) Visit Facebook pages or similar
   d) Follow a blog
   e) Shop on the Internet

C. Before your child started first grade in school, during which occasions or activities did you use the different languages with your child? Choose one answer for each language.
   Language alternatives (depending on the country): Sámi, Swedish/Norwegian/Finnish, English (three alternatives)
Time alternatives: Often, Quite often, Seldom, Never
   a) At home  
   b) In the local village/town  
   c) When visiting relatives  
   d) When visiting friends  
   e) On the Internet  
   f) At school

3. A. Which language was used the most during the activities and occasions described in question 2? Choose only one alternative.
   Language alternatives (depending on the country): Sámi, Swedish/Norwegian/Finnish, English, Other language

B. What or which languages did your child speak before starting in the daycare? You can choose more than alternative.
   Language alternatives: Sámi, Swedish, Finnish, Norwegian, English, Other (which_)
   Alternatively: My child did not speak any language yet when starting at the daycare but had the following language(s) at home: Sámi, Swedish, Finnish, Norwegian, English

4. Did your child go to a daycare or pre-school child care facility?
   Alternatives: Yes, No
   If yes, then answer questions 4a-4c.
   4a. How long time did the child attend to daycare? choose one option.
   Alternatives: Three years or more, between two and three years, two years, between one and two years, less than a year.
   4b. What or which languages were used at the daycare?
   Alternatives: Sámi, Swedish, Norwegian, Finnish, Other

4c. What or which languages did your child speak before starting school?
   Alternatives: Sámi, Swedish, Norwegian, Finnish, Other

5. How old was your child when she/he started first grade at school?
   Choose only one option.
   Alternatives: Five years or younger, Six years, Seven years, Eight years or older

6. A. How well did your child do the following in Sámi when she/he started first grade?
   Alternatives Very well, Quite well, Not so well, Not at all
   a) Identify/know the letters  
   b) Read individual words  
   c) Read sentences/clauses  
   d) Write letters  
   e) Write individual words  
   f) Re-tell stories  
   g) Participate in conversations with children from of the same age

B. How well did your child do the following in Swedish/Norwegian when she/he started first grade? (Same alternatives as in 6A)
C. How well did your child do the following in Finnish when she/he started first grade? (Same alternatives as in 6A)
7. How often do you or someone else in your household do the following together with your child? Choose one answer for each language
   Language alternatives (depending on the country): Sámi, Swedish/Norwegian/Finnish, English (three alternatives)
   Time alternatives: Daily or almost daily, Once or twice a week, Once or twice a month, Seldom, Never
   a) Listen when my child reads aloud
   b) Talk to my child about things that we have done
   c) Talk to my child about the readings she/he does (literature she/he reads)
   d) Talk to my child about the writing she/he does
   e) Talk to my child about the readings that she/he does in class
   f) Talk to my child about the writing she/he does in class
   g) Visit a library or a book store with my child
   h) Helps my child with the writing for school
   i) Talks to the child about what I (or the other adult, or someone else) reads and writes
   j) Encourages my child to read
   k) Encourages my child to write

8. Which language was used most often during the activities described in question 7? Choose only one option.
   Language alternatives: Sámi, Swedish/Norwegian/Finnish, English, Other language
   A. How much time does your child approximately use on homework daily? Choose only one option.
      Alternatives: My child has no homework, 15 minutes or less, 16-30 minutes, 231-60 minutes, more than 60 minutes.
   B. How much time does your child approximately use on writing in Sámi daily? (Same time alternatives as in 9A)
   C. How much time does your child approximately use on writing in [MAJORITY LANGUAGE] daily? (Same time alternatives as in 9A)
   D. How much time does your child approximately use on writing in other language daily? (Same time alternatives as in 9A) Which language_

9. How much do you yourself use to read at home during a regular week? Readings can include books, journals, magazines, and texts that you must read for your work.
   Time and amount alternatives: Nothing, Less than an hour per week, 1-5 hours per week, 6-10 hours per week, more than 10 hours per week.
   How often alternatives: Mostly, Quite often, Seldom, Never
   Languages: Sámi, Swedish, Finnish, Norwegian, English, Other languages

10. How much do you yourself use to write at home during a regular week? Writing can include texts that you must write for work.
Time and amount alternatives: Nothing, Less than an hour per week, 1-5 hours per week, 6-10 hours per week, more than 10 hours per week.
How often alternatives: Mostly, Quite often, Seldom, Never
Languages: Sámi, Swedish, Finnish, Norwegian, English, Other languages

11. A. How well do the following claims about reading suit you?
   Alternatives: Suits well, Suits quite well, Does not suit so well, Does not suit at all
   a) I only read if I must
   b) I like to talk about book with other people
   c) I like to read on my free time
   d) I read only when I need information
   e) Reading is important for us in our family
   f) I remember that I had difficulties in learning to read at school

B. How well do the following claims about writing suit you?
   a) I only write if I must
   b) I like to write on my free time
   c) Writing is important for us in our family
   d) I remember that I had difficulties in learning to write at school in the following language(s) - alternatives: in Sámi, in Swedish, in Finnish, in Norwegian, in English, in other languages

12. A. Approximately how many books do you have at home? (do not count journals, magazines or children’s books)
   Alternatives (choose only one): 0, 1-10, 11-25, 26-100, 101-200, more than 200

B. These books are written in
   Alternatives: Mostly, Quite many, Some, None
   Languages: Sámi, Swedish, Finnish, Norwegian, English, Other languages

C. Approximately how many children’s books do you have at home?
   Alternatives (choose only one): 0, 1-10, 11-25, 26-50, 51-100, more than 100

D. These books are written in
   Alternatives: Mostly, Quite many, Some, None
   Languages: Sámi, Swedish, Finnish, Norwegian, English, Other languages

13. A. What language does the mother, the father or other guardian use most often with the child?
   Alternatives: Mother, Father, Other guardian
   Languages: Sámi, Swedish/Finnish/Norwegian, Other language, Not applicable
   Additional questions: I am _, the other guardian/parent is_ ([i.e. I am MOTHER]

B. If other languages was chosen - What language does the father speak?
C. What language does the mother speak?

14. What is the highest level of education of the parents?
   Alternatives: Mother, Father
   Education alternatives: Some level of primary school or no
   schooling at all, Primary school, Upper Secondary level, Studies
   following upper secondary level (not higher education), Higher
   education (e.g. university)

15. Work situation?
   Alternatives: Father, Mother
   Work alternatives: Fulltime employment, Part time
   employment, Unemployed/looking for employment, Other, Not
   applicable

16. Occupational categories for the parents
   Alternatives: Father, Mother
   Working categories: includes 13 categories from working at
   home, to entrepreneurs, to workers in industry/handicraft/other
   worker occupations, academics, officials and so on. Each
   category includes examples of occupations that can be
   considered under the category.

17. Has your child been in need of a contact or services of a speech
    therapist or a special teacher?
   Alternatives: Yes, No

18. Here you can leave any additional comments, and additional
    information that you think is of importance or that could be
    interesting [for the researchers] when we map and explore the
    writing of children. Thank you!

C. Summary of questions in the teachers' questionnaire

1. What or which grades do you teach and how many pupils are there
   in these grades?
   Give you answers in the following format:
   Example: Grade 3
   14 pupils
   Swedish (subject)

2. For how long have you been teaching the following language
   subjects? Choose one answer for each languages subject.
   Alternatives: 0 years, 1 year, 2-3 years, 4 years or more, Not my
   subject [does not teach it]
   Languages: Sámi, Swedish, Finnish, Norwegian, English, Other
   (language)

3. Based on your experience, how would you describe pupil's writing
   skills in the following languages? choose only the languages you have
   been teaching
   Languages: Sámi, Swedish/ Norwegian, Finnish, English
   a) Most of them do better than average
   b) Most of them are around the average
   c) Most of them are below the average
   d) Writing skills vary considerably [between pupils]
   e) Writing skills vary between grades
Writing skills vary between mother tongue speakers and L2 speakers
Writing skills vary according to the topic/theme
The pupils find it easier to write about familiar topics
- True
- No difference
New words or unfamiliar themes/topics affect the writing skills
- Negatively
- Positively

4. A. How many of your pupils in the different grades [of ages 9, 12, 15 or older] have the following languages as their mother tongue? Alternatives: Sámi, Swedish, Norwegian, Finnish, English, Other language
B. How many of the pupils in the grades that you teach are bi- or multilingual?
C. How many of the pupils in the grades that you teach are according to you experiencing problems when listening (and understanding) the following languages? Alternatives: Sámi, Swedish, Norwegian, Finnish, English
D. How many of your pupils receive [special] mother tongue teaching? Alternatives: Sámi, Swedish, Norwegian, Finnish, English, Other language
E. How many of the pupils that you teach have lessons in the language subject Sámi?
F. How many of your pupils are in need of special teaching/support teaching? Alternatives: Sámi, Swedish, Norwegian, Finnish, English, Other language
G. How many of your pupils receive special teaching? Alternatives: Sámi, Swedish, Norwegian, Finnish, English, Other language
H. In which languages do you teach [the medium of instruction]? Alternatives: Sámi, Swedish, Norwegian, Finnish, English

5. A. Do you think that the efforts that the school puts into language teaching is enough to support the development of writing skills among the pupils? Language alternatives: Sámi, Swedish, Norwegian, Finnish, English
   Answer alternatives: Yes, No, Uncertain, Not applicable (e.g. the teacher does not teach this subject)
B. Do you think that the support that the children receive from their homes is enough to support the development of their writing skills? [Same alternatives as in 5A]
C. What are, according to you, attitudes toward the different languages among the pupils if you get to rate their attitudes between
a scale of 1 and 5, 1 being negative and 5 being the most positive attitudes.

Alternatives: Sámi, Swedish, Norwegian, Finnish, English
Scale: 1 to 5 and an additional alternative Not applicable
D. What is your understanding of the attitudes that the children and young have about Sámi and other languages when you think of the following alternatives.

Alternative answers: True, False, Uncertain/Don’t know
a) Most of my pupils are interested in writing in Sámi
b) Many of my pupils experience problems when writing in Sámi
c) Many of my pupils find it easier to write in Sámi than in other languages
d) My pupils write better in other languages than in Sámi
e) My pupils are proud of their languages skills
f) My pupils often hide that they know and can Sámi
g) My pupils have often one language that they like to write in although it might not always be their mother tongue
h) My pupils prefer writing in their mother tongue
i) My pupils are good writers in the language that I teach
j) My pupils make a difference between spoken language skills and written language skills
k) My pupils find being able to speak a language more valuable than being able to write it
l) Most of my pupils like receiving writing assignments as home work
m) Even if my pupils know how to write in one language, they still choose another language in which they have better writing skills when they for example write messages and use the Internet
n) My pupils prefer writing by hand
o) My pupils prefer typing (on a computer)

6. When you are in the classroom with your pupils, how do you divide your time between the following during a normal work week? Give your answers in percentage - the sum should be 100%

a) Teaching the whole class
b) Work with individual pupils or smaller groups
c) Administrative chores
d) Keeping order
e) Other chores

From here on the teachers get questions concerning the language subjects they teach. One teacher answers for all language subject she/he teaches. The same set of 8 questions is placed for all language subjects.
First question: I teach this subject (e.g. Sámi language): Yes or No

7. How much time do you approximately spend during a regular work week on teaching the language subject X and activities connected to this subject?
   Format: Hours_Minutes_per week

8. How much time is used for reading?
   Hours_Minutes_per week
   Is part of the time addressed especially for improving or developing the pupil's reading ability? Yes or No

9. How much time is used for writing?
   Hours_Minutes_per week
   Is part of the time addressed especially for improving or developing the pupil's writing ability? Yes or No

10. How often do you have reading classes or other reading activities with your pupils?
    Choose only one alternative
    Alternatives: Everyday/daily, 3-4 days a week, less than three days a week, less frequently than twice a week, almost never, never

11. How often do you have writing classes or other writing activities with your pupils?
    Choose only one alternative
    Alternatives: Everyday/daily, 3-4 days a week, less than three days a week, less frequently than twice a week, almost never, never

12. Do your pupils have some other teacher than yourself teaching them most of the time during a regular week?
    Which grades:
    Alternatives:
    • No, I am their teacher during the whole or almost the whole week
    • Yes, there are separate teachers besides me in some of the subjects (e.g. mathematics, science)
    • Yes, I share the teaching responsibilities of my grades/groups with other teacher(s)
    • Yes, they have another teacher in Sámi language
    • Yes, they have another teacher in Swedish/Norwegian
    • Yes, they have another teacher in Finnish
    • Yes, they have another teacher in English

13. How often do you let your pupils write the following text types or genres in language X when you have writing class or other writing activities?
    Time alternatives: Daily or almost daily, Once or twice a month, A few times a week, Almost never, Never
    a) Short stories
    b) Longer stories
Questions 7-13 are placed for all language subjects in the study (Sámi, Swedish, Norwegian, Finnish and English) and the questionnaire comes back to general question at question 32. There are 25 general questions following the subject specific questions so that the questionnaire has all together 56 questions.

32. How often do you organize the pupils in the following ways when working with writing in class or when doing other writing activities? Alternatives: Always or almost always, Often, Sometimes, Never
   a) I teach the whole class in writing at the same time
   b) I group the pupils according to their writing skills (pupils with similar writing skills in one group)
   c) I group the pupils so that each group has pupils with varying writing skills
   d) I teach pupils individually in writing
   e) The pupils work independently according to a plan or a goal set for them
   f) The pupils work independently according to a plan or a goal that they have chosen themselves

33. How often do you use the following resources in writing classes or during other writing activities?
   Alternatives: Daily or almost daily, Once or twice a month, Couple of times a week, Almost never, Never
   a) textbooks
   b) exercise books for writing
   c) working sheets
   d) Computer programs for writing classes
   e) Writing materials on the Internet
   f) Materials from other subjects
   g) Materials produced by the pupils
   h) No materials, just themes/topics
   i) Materials from novels and other fine literature as models or support

34. Which of the following describes best the way you let your pupils, who are on different levels when it comes to their writing skills, use the writing materials you have chosen for the class?
   Alternative languages: Sámi, Swedish/Norwegian, Finnish, English
   • All pupils use the same materials because they are all on the same level
They use the same materials but work in different speeds according to their levels
Pupils on different levels use the same materials and work in the same speed
Pupils with varying writing levels use different materials

35. How often do you do any of the following when you teach writing or do other writing activities?
   Alternatives: Daily or almost daily, Once or twice a month, Couple of times a week, Almost never, Never
   Language alternatives: Sámi, Swedish/Norwegian, Finnish, English
   a) read aloud for the class
   b) let the pupils read aloud for the class
   c) let the pupils read their own texts to the class
   d) let the pupils themselves decide the topic of the writing
   e) teach the pupils different writing strategies
   f) let the pupils work with vocabulary
   g) let the pupils write and work on new words and themes/topics (e.g. technology)
   h) ask the pupils to discuss their writings with their peers

36. How often do you ask the pupils to do any of the following in order to develop their writing strategies and writing?
   Alternatives: Daily or almost daily, Once or twice a month, Couple of times a week, Almost never, Never
   Language alternatives: Sámi, Swedish/Norwegian, Finnish, English
   a) Identify different parts in the texts they have written
   b) Compare the writings with earlier experiences and lessons
   c) Compare the writing with that of the peers’ or with similar writing elsewhere
   d) Discuss how they can develop or elaborate their texts
   e) Describe and analyze the style and the structure of one’s own text
   f) Discuss the word choices and think of how other word choices can change the style or the message of the text

37. A. Are there computers available for your pupils/classes?
   Alternatives: Yes, Yes, but not for all grades, No, Uncertain, Not applicable
   Languages: Sámi, Swedish, Norwegian, Finnish, English
   If you answered yes...
   B. Where are these computers located?
   Alternatives: Yes or No
   a) One or more computers are found in the classroom
   b) There are computers in some other place at school or close to the school
   C. Are the computers connected to the Internet
   Alternatives: Yes or No
D. How often do you ask the pupils to do the following on the computer?
   Alternatives: Daily or almost daily, Once or twice a month, Couple of times a week, Almost never, Never
   Languages: Sámi, Swedish/Norwegian, Finnish, English
   a) Search for information (in the Internet)
   b) Send e-mail or chat with other pupils about the school work
   c) Write stories or other texts on the computer
   d) Use pedagogical computer programs for developing writing skills

38. A. Is there a library or a “reading corner” in your classroom?
   If you answered yes...
   B. Approximately how many books and journals/magazines (individual titles) are there in your classroom library?
      Give the answer in the following format: Language AND number of books/journals/magazines
   C. How often do you give your pupils the possibility to use the classroom library or “reading corner”?
      Choose only one option
      Alternatives: Daily or almost daily, Once or twice a week, Once or twice a month, Seldom, Never

39. A. Is there a library close to the school?
   Alternatives: Yes or No
   B. Does a library bus visit your school?
      Alternatives: Yes or No
   C. If you answered yes to question 21b, then how often does the library buss visit your school?
      Alternatives: Daily or almost daily, Once or twice a week, Once or twice a month, A couple of times during the school year
   D. How often do you let your pupils visit the library (bus or town library, not the classroom library)?
      Alternatives: Daily or almost daily, Once or twice a week, Once or twice a month, Seldom, Never, All pupils can visit the library bus when it comes to the school

40. In which language subjects and how often do you give the pupils homework that involves writing?
   Language alternatives: Sámi, Swedish/Norwegian, Finnish, English
   Alternatives: Never, Less than once in a week, 1-2 times a week, 3-4 times a week, Daily

41. Approximately how long time is the pupil expected to work on homework that involves writing per each home assignment?
   Alternative languages: Sámi, Swedish/Norwegian, Finnish, English
   Time alternatives: 15 minutes or less, 16-30 minutes, 31-60 minutes, more than 60 minutes
42. Are the following resources available for you and at your school when you work with pupils that have reading- and/or writing difficulties?
   Alternatives: Always, Sometimes, Never
   Language alternatives: Sámi, Swedish/Norwegian, Finnish, English
   a) Special teacher who can work with these pupils in the classroom
   b) Special teacher who can work with these pupils in a separate classroom
   c) Another helping teacher, teacher aid or some other adult who can work with these pupils in the classroom
   d) Other specialists (e.g. speech therapist) who can work with these pupils

43. How important are the following methods when it comes to assessing and following pupils' writing development?
   Alternatives: Very important, Quite important, Some importance, No importance
   a) Diagnostic reading tests
   b) Diagnostic writing tests
   c) Tests and exams in the class (produced by the teacher or taken from the teacher materials)
   d) National exams
   e) Your own professional assessment

44. A. How often do you use the following methods to assess the writing skills of your pupils?
   Alternatives: At least once a week, Once or twice a month, Once or twice a year, Never
   Alternative languages: Sámi, Swedish/Norwegian, Finnish, English
   a) Multiple choice questions on the materials that the pupils has read
   b) Short written answers to questions on materials that the pupils are familiar with
   c) Let the pupils summarize in text what they have heard or read
   d) Spend time with each individual pupil and discuss how and what the pupil has written

B. How do you use the information you gain from these assessment methods?
   Alternatives: Yes or No
   a) I use it to give some sort of written assessment or grade
   b) I use it for the purposes of adjusting my teaching
   c) I use it to inform the parents about the development the pupils are making
   d) I use it to detect which pupils might be in need of special support
   e) I use it to divide the pupils into different learner groups
f) I use it for gathering data for assessment and follow up of pupils' skills on local or national levels

45. How often and much are so called portfolios used for assessment of the pupil's writing development?
   Alternatives: Used often, Used as additional information, Not used at all
   Languages: Sámi, Swedish/Norwegian, Finnish, English

46. How many years have you been teaching in total?

47. How old are you?
   Alternatives: Younger than 25, 25-29, 30-39, 40-49, 50-59, 60 and older

48. Are you man or woman?

49. What is the highest educational level that you have reached?
   Alternatives: Some level of primary school or no schooling at all, Primary school, Upper Secondary level, Studies following upper secondary level (not higher education), Higher education (e.g. university) (Lower or Higher degree)

50. A. Do you have a degree or exam from some teacher training program?
   Alternatives: Yes or No
   B. If you answered yes in 32a then which program have you taken your degree in?

51. To what extent have you studied the following subjects or aspects during your education or practice?
   Alternatives: Not at all, Only at introductory level, It was an important part of my education, It was the main subject in my education or an aspect of great importance
   a) Sámi language
   b) Swedish or Norwegian
   c) English
   d) Finnish
   e) Writing (pedagogy, didactics)
   f) Reading (pedagogy/didactics)
   g) Psychology
   h) Supporting writing, writing aid
   i) Supporting reading, reading aid
   j) Theories about writing
   k) Language acquisition
   l) Special pedagogy
   m) Second language learning
   n) Language revitalization
   o) Indigenous studies

52. How many hours have you used for personal (professional) competence development on the field of writing during the last two years? This can include seminars, courses and study groups that directly involve writing and teaching writing (e.g. theories about writing, teaching methods).
   Alternatives: No hours at all, less than 6 hours, 6-15 hours, 16-35 hours, more than 35 hours
53. How often do you read some of the following in order to increase your personal competence level or to keep you updated on your own field of education?
   Alternatives: At least once a week, Once or twice a month, Once or twice a year, Never
   Languages: Sámi, Swedish/Norwegian, Finnish, English
   a) Books and academic journals that are involved in education in general
   b) Books and academic journals about teaching writing
   c) Children's books
   d) Literature about bilingualism or teaching in Indigenous contexts

54. How often do you write for fun when you are at home and on your free time?
   Alternatives: Daily or almost daily, Once or twice a month, Couple of times a week, Almost never, Never
   Languages: Sámi, Swedish, Norwegian, Finnish, English

55. What and where (e.g. at home/Facebook) do you write in those different languages?
   Languages: Sámi, Swedish/Norwegian, Finnish, English
   Free answers

56. Do you have additional comments or thoughts about writing and teaching writing that you would like to give us? You can leave your additional comments here, Thank you!