



**UNIVERSITY
OF TURKU**

**The Role of The Environment and Heritage
Language Instructions as an Input Factor in Literacy
Development
The Case of Kurdish Bilingual Children in Finland**

Education And Learning
Master's thesis

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12.12.2023

Turku

The originality of this thesis has been checked in accordance with the University of Turku quality assurance system using the Turnitin Originality Check service.

Master's thesis (Double Degree)

Subject: Education and Learning

Author(s): Geo Gewran Goyi

Title: The Role of The Environment and Heritage Language Instructions as an Input Factor in Literacy Development for Bilingual Children of Kurdish Background in Finland

Supervisor(s): Professor Koen Veermans & Hans Gruber

Number of pages: 140 pages

Date: 10.11.2023

Abstract

This master's thesis is written in the field of language education within the framework of immigrant languages in host countries. It aims to investigate the impacts of the environmental conditions, such as family dynamics, peers, and heritage language instructions (Finnish: Oman äidinkielen opetus) particularly provided in Finnish public schools at the basic education levels (grade 1-8) for the children of Kurdish (Kurmanji) background. The study was initiated on the grounds of the hypothesis that especially the heritage language education of Kurdish children would comprise different pedagogical aspects, and thus, the development of their heritage language also occurs in divergent ways in the diaspora compared to that of other nationalities.

To narrow the scope of the research, the impact of the instructions and the effect of the environment was handled primarily from the perspective of literacy skills in the Kurdish Kurmanji dialect. In order to investigate the impact of environmental input on children's literacy skills, two main dimensions of their linguistic condition needed to be discovered: the amount and the characteristics of the Kurmanji input they receive from their environment and the language proficiency they possess regarding Kurmanji. Therefore, two different data collection tools that could be used for collecting as much data as possible were developed. The first tool was a comprehensive survey that aimed to reveal the linguistic input factors involved in the Kurdish-Kurmanji language development, such as exposure, environment, family construction, etc. The second tool was a literacy test with eight tasks targeting crucial literacy skills such as word recognition, reading comprehension, listening competency, etc. The reason for having two different instruments derived from the need to grasp the relationships between various factors that play a role in language development and preservation within the minority context in the diaspora.

The study's results confirm the complexities regarding the unique position of the Kurdish language. In more explicit terms, due to a lack of official settings, the literacy skills in Kurmanji are feeble among the families. Therefore, the own-mother language classes in public schools appears not to be the only resource for obtaining literacy for their children. In another word, participating this education was not the variable that contributed the most to all aspects of the literacy skills, except some areas, such as general reading skills. At the same time, children did not show significant performance in other literacy areas, such as vocabulary depth. The results also show deficiencies of linguistic input that these Kurdish families are constrained by and have correlations with the socio-political background of their homeland. For instance, the inadequacy of written materials, poor standardization of the spoken language among the native speakers from different parts of Kurdistan, weak educational levels of the parents in their mother tongue, and other similar determinants negatively affect both literacy and general capabilities in Kurdish. Given that these factors affect parental education and that fathers are relatively more educated in the Kurdish community, the findings indicate that fathers significantly impact their children's Kurdish literacy skills, even more than the heritage instructions. Apart from these, age was an essential variability in positive correlation with children's literacy skills.

This study reveals numerous factors and variabilities in Finland's Kurdish-background children's language acquisition and maintenance processes. Therefore, the essential components of this intricate linguistic case were uncovered throughout the present research, and ideas about current limitations and possibilities to enable more comprehensive studies on the subject in the future were aimed to be established.

Key words: Heritage language instructions, Kurdish language, Kurmanji, Kurdish in Finland, omanäidinkielen opetus.

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1 Introduction

1.1 Background and Rationale

Academic debates around multilingualism and bilingualism have been going on for a long time. For example, (Aronin & Jessner, 2015), while examining the difficulties of studying the concept of multilingualism, also touches on the discussions about how it can be distinguished from bilingualism. From this point of view, the authors argue that multilingualism is more complex and requires unique research methods. The article examines the three language-related stages of awareness: 'monolingual,' 'bilingual,' and 'multilingual.' They also argue that multilingualism is even more critical in modern times for contemporary science. Recently, interest in heritage languages (Hereafter HL) has also increased academically. A study conducted in 2017 (Nagy, 2017) describes an undergraduate course on the HL courses that were previously given to first-year undergraduate students of a university. According to the paper, the course was organized in a format that integrates and simulates teaching, learning, and research altogether. This article suggests that a project called Heritage Language Variation and Exchange (HLVC) may be undertaken in the future. It also envisages that other heritage languages will be explored, more research tools will be developed, and even a database of heritage language speakers may be created. In addition, the study indicates that future research may focus on the relationship between heritage language use and identity. Also, many studies await to be done on the relationship between language policies and heritage language maintenance (Nagy, 2017).

In today's globalizing world, there is a growing need to protect immigrant languages in host countries and an emerging seek to develop an inclusive education for them in sustainable multicultural harmony. One of the considerable yet new phenomena in this context of multicultural education is migrants' own mother language education, also known as the "Heritage Language" in the host country. Today, especially in Western countries, HL instruction is guaranteed by specific laws and regulations to support migrants and their children to preserve their own mother language.

The scope of this study covers also the settings in Finland in terms of HL dynamics with a focus on children of Kurdish background who speak the Kurmanji dialect of The Kurdish language. In Finland, children in comprehensive-level educational institutions, whose at least one parent is other than a native speaker of Swedish or Finnish, have the right to obtain their

mother language instructions in ordinary elementary-level educational institutions. This education is provided 2 hours per week in certain predefined public schools, only afternoons when the regular daily school schedule ends, which are not earlier than 02:00 PM on ordinary weekdays. The HL instruction is given under the municipality's responsibility, and schools under the respective municipality are entirely free of charge. Pupils can register for this course through their schools by filling out an application form during the summer interim. The groups generally consist of approximately ten students, and the place of instruction is arranged based on the physical feasibility. The number of languages taking place within this framework varies from province to province, depending on the population of migrant groups.

When combined with a linguistically rich environment, HL lessons hypothetically contribute to children's literal and oral skills and help them preserve and develop linguistic competencies in their heritage language. This study not only examines the impact of HL instruction provided for immigrant children with Kurdish backgrounds on their literary skills in the Kurdish language but also delves into the familial and other environmental effects regarding language exposure, input quality, and other elements of the language sources. The study is intended to have an ethnographic perspective of the scope of the Kurdish minority. With this projection, Kurdish HL instructions will be approached as one of the input factor of the acquisition process regarding the language development of the Kurdish children in Finland.

A side objective of this study is to contribute to the ethnographic research inventory concerning HL studies. Kurdish communities, unlike migrants of other nationalities, do not own institutional settings such as the nation-state, universities, or other established educational and administrative organizations except for a few limited feasibilities. Kurmanji-speaking Kurdish people have no political status or legal recognition in international settings, which makes them an "unprotected minority" in their homeland. Therefore, the Kurdish linguistic case demonstrates characteristics like that of endangered indigenous languages, even in places where they have demographic domination. Another point of the research is to make an academic involvement in the ongoing discussions over the schooling systems and curricula in connection with multicultural education. Some educators and parents have criticized the implementation of the HL instructions in terms of the time reserved per week (2 hours) and the time of the class in the curricula, which is only after regular school class ends.

HL has a crucially important role in preserving linguistic and cultural sustainability and diversity, especially for immigrants, as it offers a solution for HL speakers' need to connect children with their cultural roots and maintain their sense of identity, particularly in host countries. However, HL speakers undergo a rapid linguistic degeneration in countries where a small and dispersed population speaks the HL, possesses limited resources for its development, and paves the way for children to grow up without knowing their parents' language. The Kurdish language presents a similar situation for Kurdish immigrants in Finland. The Kurdish community in Finland, who migrated here especially after the 90s, with an estimated population of around 20,000, is linguistically a vital minority group in this country.

Three main features distinguish the Kurds from other immigrant communities in Finland. Firstly, since the Kurds do not have their own national state, their language does not benefit from the opportunities that official institutions provide to many other languages. The Kurdish language lacks enough media organizations, universities, institutes, and different governmental settings and institutions to improve the language. Moreover, oppressive policies have not allowed Kurdish to be utilized in the educational system, and therefore, the lack of educational materials has become an immense problem. Secondly, the Kurds have slightly different cultural backgrounds since the homeland of Kurdish-speaking people (Kurdistan) is divided between countries with other official languages. For example, the Kurdish spoken by those from Iran contains many Persian borrowings. At the same time, those from Turkey have Turkish words, and those from Syria and Iraq have similar Arabic words in their spoken language. Such diversity in the language has made it difficult to establish a standard written language and emerged as a challenge for many teachers who attempt to teach Kurdish in the diaspora. Thirdly, the Kurdish language is composed of different dialects for natural reasons. Although these dialects are not too distant from each other in spoken language, various writing systems are used for historical standardization. Albeit the Kurmanji dialect studied in this work is primarily standardized with the Latin alphabet, the Kurdish region under the sovereignty of Iraq traditionally utilizes the Arabic alphabet for both the Kurmanji and other dialects.

Consequently, the Kurdish diaspora is perhaps more urgently needed to develop educational means for preserving its linguistic and cultural identity than many other communities. Yet, the academic infrastructure for their HL is by far weak and insufficient, not only in Finland but

also in other countries. Moreover, this subject's research and developmental studies are indisputably insufficient for filling the field gap.

The previous research in the field does not provide a precise approach for the particular position of the Kurdish language. There is also a significant information gap in the field regarding a suitable perspective for Kurdish HL in Finland. Also, the relationship between the linguistic proficiency of children with Kurdish backgrounds and the HL instructions provided in Finland is not studied, and this creates ambiguity regarding the quality of HL instructions provided in Finland, as it is still not known to what extent these courses contribute the language development especially when it comes to more fragile minority languages, such as Kurdish. Another gap in the research is about the impact of Kurdish HL speakers' linguistic inputs from external sources such as family and home activities. Moreover, as HL proficiency is a matter of cultural diversity and social integration in the context of immigrant education, it is crucial to understand the influential variables and factors in this regard. Understanding these factors would help to promote HL education, support HL policies, enhance other educational programs for the Kurdish language, and fill the gap of information in the field, especially regarding the unique situation of the Kurdish language. Hence, This study aims to identify the factors affecting language development among children from Kurdish (Kurmanji) speaking families in Finland. Therefore, the aim is to investigate the role of HL instructions (FI: Oman äidinkielenopetus) and other linguistic factors from the external environment, such as parents and home activities.

In short, the rationale for this research lies in addressing the gap of knowledge on the subject by investigating the role of family, HL instructions and other linguistic inputs impacting the language proficiency of children with Kurdish-speaking backgrounds in Finland. The research provides a holistic perspective regarding the relationship between HL instructions, parental involvement, and linguistic competency.

1.2 Research Aims and Objectives

Our main objective in this study is to launch an exhaustive investigation on the complex relationships between family dynamics, HL instructions, language input, and literacy skills with qualitative and quantitative aspects regarding language development in children of Kurdish heritage residing in Finland. To accomplish this comprehensive task, I break down the main research question into specific aspects and attempt to explain each aspect with the following aims:

1. To explore a comprehensive literature review regarding the position of HL in the frame of bilingualism and pedagogy in the context of Finland. The multifaceted dimensions of the subject will be provided throughout the previous studies. Therefore, a robust theoretical framework will be created using input factors and HL instructions in light of the language acquisition process.
2. To conduct an explanatory examination regarding the current situation of the Kurdish community and Kurdish HL instructions in Finland with an in-depth analysis of the linguistic resources to contextualize the environment in which Kurdish-backgrounded elementary school-aged children receive linguistic input in their heritage Kurdish.
3. To meticulously and systematically analyse the collected empirical data regarding the literacy skills and general linguistic proficiencies of the Kurdish-backgrounded children in Finland, assessing their linguistic competencies to scrutinize the impact of family dynamics on HL development.
4. To systematically analyse the data concerning the linguistic input received from the family members and extended environments, evaluate the quality and quantity of the linguistic input regarding their HL, and set a trajectory for further development in language education and preservation.
5. To explain the underlying components, qualitative and quantitative relationships between HL dynamics, familial input, literacy skills, and other linguistic competencies in the Kurdish Kurmanji language among children, with the attempt to clarify the most salient factors involved in the acquisition and preservation process of the Kurdish language as the HL.

Through an in-depth approach to these objectives, the current research aspires to close the existing knowledge gap in heritage language research, explicitly focusing on the undiscovered domain of Kurdish language in Finland. The findings of this research are expected to offer insightful knowledge for a wide range of stakeholders, including academics, educators, and civil society organizations in the diaspora in general. The results may also provide valuable contributions to help formulate and implement effective strategies regarding “Own Mother Language Education” (FIN: Oman äidinkielenopetus) in Finland, particularly for immigrants whose language is a fragile indigenous language, such as the Kurdish language.

1.3 Research Questions

Having worked as an “HL teacher” of Kurdish in Helsinki for three years, I have wondered how practical my lessons are and to what extent these lessons contribute to my students’ HL skills when combined with the family dynamics. Under the consideration of the official objectives mentioned previously, few research questions formulated to investigate the impact of the family dynamics and other particular environmental factors in diaspora on children’s literacy skills are as follows:

- To what extent do Kurdish HL education and the social environment outside the school provide sufficient language input for children with Kurdish backgrounds in Finland?
 - a) Does the familial environment contribute to children’s literacy skills?
 - b) Does HL education in Kurdish, as it is organized within the Finnish schooling system, contribute to Kurdish children’s literacy skills?
 - c) What underlying factors lay behind the different areas of the literacy skills these children possess?

Similar studies with different ethnographic approaches, such as those (Ganuza & Hedmen, 2019) have investigated the case of Somali children in Sweden and provided evidence that HL education contributes positively to children’s literacy skills not only in the Somali language but also with cross-linguistic effects in Swedish which is the schooling language in their case. The hypothesis for the Kurdish case could not be as clear as that of Somali or other languages as for the Kurdish case, linguistic structure and cultural background contains more diversity due to the reasons explained previously. As mentioned before, this study focuses on the linguistic situation among the Kurdish community, inside the Kurdish households and Kurdish HL instruction because Kurdish migrants have a very distinguished background with their socio-cultural characteristics and ethnographical properties. Besides these unique attributes that Kurdish children have, they also own properties that migrant children commonly share regardless of their HL, such as having only one parent or a wider native family with an immigrant background or being from different generations of immigrants, etc.

1.4 Scope and Structure

This research is meant to be a master's thesis in education. Therefore, the nature of the work brings along a particular framework. Yet, in this section, it is essential to acknowledge the boundaries of the scope and limitations of this specific research itself as outlined below:

1.4.1 Scope of the Study

The current study focuses explicitly on linguistic input sources such as the familial environment and the Kurdish Kurmanji education provided by the government to all immigrant groups in the context of Finnish elementary schools. The study does not comprehensively analyse all input factors that may influence participants' linguistic development. Instead, it examines only the literacy skills in correlation with the input amount that the participants receive. Yet, further interpretations regarding other aspects of language development will be made to the extent that the findings allow. The environmental sources have been accounted for throughout the research.

1.4.2 Participants

Most participants are those children who have already joined Kurdish HL instructions at some point in Finland. The rest of them had never received any sort of education in the Kurdish language; however, they could still read and understand the standardized test they participated in as the test was written in the Latin alphabet of Kurmanji. Yet, this specific sample group was composed of 31 participants. The group may not fully represent a larger group as the variables diverged widely for each group member. Some participants were siblings, which impacts the amount of linguistic input they receive compared to those with narrower language acquisition opportunities. Other factors that constrained the participants' selection were the family's home country, range of age, socioeconomic background, native speakers of the HL in the family, and individual motivations towards HL, which could have limited the diversity and generalizability of the results.

1.4.3 Structure

The master thesis is structured in six chapters and extended by a reference list in APA 7th edition style and necessary appendixes. Each chapter addresses a specific dimension of the research topic by organizing the information systematically and explaining related aspects to

provide an in-depth understanding of the social environment and the role of the HL instructions as an input factor in Kurdish-backgrounded bilingual children in Finland.

Introduction: The introduction chapter provides a general overview of the research framework, presents the context, and explains the underlying motivation of the current study. It gives directions regarding the background of the Kurdish language and justifications for the research by elaborating on the scope and prevailing limitations of the study. Also, the chapter contains the aims and objectives of the research in a precise setting. The chapter attempts to guide the reader through the text and helps illuminate the research effort by formulating the preliminaries for the following chapters.

Literature Review: The second part presents a comprehensive review of the existing literature on the research topic, including definitions, approaches, methods, input factors, significance, context, and challenges. The chapter aims to establish the basis for the theoretical framework of the study by shedding light on HL education, HL acquisition and development, linguistic input factors in HL acquisition, the position of the HL in the field of bilingualism, and the Kurdish language as HL in Finland. The primary purpose of this exhaustive review is to provide a concrete foundation for the theoretical principles the current study will build upon. The chapter explores relevant theories related to various aspects of bilingualism, precedent empirical research, and potential gaps in the field.

Methodology: This chapter provides detailed information regarding the research design and presents the scientific approach used in the current research. The aim is to elucidate the participant selection procedure in a well-rounded description and present guiding criteria, data collection means, assessment tools (i.e., proficiency test and input questionnaire), and data analysis techniques. The section informs the reader about the research process and displays the study's meticulousness, transparency, and repeatability.

Results: The fourth chapter introduces all the notable findings derived from data analysis with necessary descriptive tables. The findings include the most significant results of the literacy tests and the linguistic input survey. The chapter presents comprehensive reports regarding the conclusions. It systematically reveals the descriptive observations on family conditions, HL instruction, input amount, and HL development among Kurdish-speaking children in Finland. The chapter discusses the empirical foundations, subsequent discussion, and conclusions. This section also provides a broader perspective and practical basis for the discussion points and findings that can be drawn from the results.

Discussion: In this chapter, the experimental and observational findings obtained from the data are interpreted in the context of the research objectives and the theoretical framework provided by the current literature on the research topic. This chapter elaborates on the contributions of the research in the field of HL education in the bilingual framework and tries to illuminate possible ways for promising future research in the field. Thus, it offers insights and enables readers to make more profound interpretations regarding the study's findings within the context of Kurdish HL in Finland and other parts of the world, including the homeland, Kurdistan.

Conclusion: This final section draws a concrete synthesis of the main findings achieved throughout the investigation. This chapter provides a coherent summary in which the purpose and objectives of the study are addressed. The chapter also revisits constraints and touches upon challenges, acknowledges other potential limitations, and provides illuminating recommendations for future work in HL teaching and Kurdish language education.

We aimed to organize this thesis by following a logical progression, aiming to provide a coherent and comprehensive exploration in the field of HL within the Kurdish language context as a fragile, stateless, indigenous, immigrant language, to maintain academic rigor and adhere to the stylistic conventions that proposed by The University of Turku for a Master's degree thesis.

2 Literature review

2.1 Heritage language: Definition

HL-related studies developed as a research body within the frame of bilingualism and the sociology of languages with considerable contributions from a small group of scholars such as Joshua Fishman. Since the 1980s, research on different dimensions of this topic, such as family roles, ideologies, identities, attitudes, schools, etc., influenced the HL development (Guardado, 2019). Fishman&Peyton (2001), as in Deusen-Scholl (2003), categorizes the concept of HL into three groups: colonial, indigenous, and immigrant languages. In this context, the last category will refer to living languages from any part of the world within a broader majority language spoken by people of immigrant background in a host country. (Fishman's definition is essential because it provides an aspect of the Kurdish language, which is both an indigenous and immigrant language.) One of the most comprehensive definitions of the HL for this paper was made by Rothman (2009), which is followed:

“A language qualifies as a heritage language if it is a language spoken at home or otherwise readily available to young children, and crucially this language is not a dominant language of the larger (national) society. Like the acquisition of a primary language in monolingual situations and the acquisition of two or more languages in situations of societal bilingualism/ multilingualism, the heritage language is acquired on the basis of an interaction with naturalistic input and whatever in-born linguistic mechanisms are at play in any instance of child language acquisition. Differently [from monolingual acquisition], there is the possibility that quantitative and qualitative differences in heritage language input, the introduction and influence of the societal majority language and differences in literacy and formal education can result in what on the surface seems to be arrested development of the heritage language or attrition in adult bilingual knowledge” (Rothman, 2009, p. 156).

In the early 70s, there were different terms in different contexts, such as “community languages,” which referred to specific immigrant languages in Australia. The term is equivalent to the American term “heritage language,” which later gained general acceptance in the field; however, the Australian term does not include language revitalization and indigenous languages (Scarino, 2018). HL can be simplified from the abovementioned definitions as a non-dominant language to which a particular group of individuals connects,

usually through family or community ties in mainstream society. Therefore, the heterogeneity of the population is exceptionally complex, and this complexity has impacted the definition of the concept by and large. A comprehensive volume of literature has been struggling to make a clear definition for heritage language (Beaudrie & Fairclough, n.d.; Benmamoun et al., 2013b; Bot et al., n.d.; Carreira et al., 2011; Fishman, 2001; journal & 2004, 2004; Linguistics & 2010, 1905). Cummins (1978)'s Linguistic Interdependence Hypothesis (Cummins, 1978) argues that an individual's first language (L1) knowledge can have a positive effect on the second language (L2) learning process. From this point of view, the grammatical accumulation of an HL speaker who speaks the heritage language as a mother tongue affects their acquisition of the second language. According to this hypothesis, speaking skills can be transferred, and literacy skills can appear in a dynamic form (Cummins, 2010; Granados et al., 2021; Vrooman, 2000).

The study of heritage languages has received particular attention recently among researchers studying both bilingualism and linguistic theories. Research on heritage language is closely related to unbalanced bilingualism (Polinsky & Scontras, 2020) and has tried to benefit from empirical foundations. As for the links between heritage language, bilingualism, and multiculturalism, the study "Understanding Heritage Languages" by Maria Polinsky and Gregory Scontras has an important place. This study examines the competence of the people who use a heritage language, the observations made in the field of heritage language, the prominent theories on the subject, and even the heritage language as a grammatical structure (Polinsky & Scontras, 2020). Another study (Ortega, 2020) examines the cognitive, social, and other pedagogical issues that arise in the acquisition and learning processes of the heritage language and tries to explain some concepts and methodologies. The study investigates the HL from the perspectives of bilingualism and social justice. The Helascot Project (Berthele et al., 2017) was conducted to test the interdependence hypothesis in Switzerland with Portuguese HL speakers. During the projects, the development of the HL language was compared to the school language. As a result of the study, it was observed that the literacy development of individuals who speak Portuguese as a heritage language, both in this heritage language and in the languages of the schools they attend (French or German), is affected by each other. In addition, the linguistic typology of HL and school languages was also found to play a role in second language acquisition processes. Accordingly, ease of transmission has been observed between languages in a kinship-like relationship (Berthele & Lambelet, 2017). Another empirical work (Shorten et al., 2015) examined in an intelligent

computer-assisted language learning (ICALL) environment how students with low proficiency in their HL performed in a dictation task in their second mother tongue, German. As a result, it is concluded that there is a need to develop a unique curriculum for HL speakers.

Minority languages such as Kurdish have faced new challenges due to factors such as globalization and migration, and their processes of oblivion have accelerated. As a result, so-called "translanguaging" has become more widespread and raises considerable concerns that it may hasten the demise of minority languages. On the other hand, if a sustainable translanguaging event can be made possible, balance elements can be established for multilingual students to use the linguistic resources in their linguistic repertoire and thus to be able to use both their heritage languages and other languages they know more effectively. According to (Cenoz & Gorter, 2017a), minority language education has faced various challenges locally and globally. In local contexts, minority language education is often threatened by the continued promotion of the standard majority language which is led by political will. This complicates the use and survival of minority languages. At global scales on the other hand, the developments in communication make minority languages fragile against the influence of other cultures' ideas and products since it is challenging for minority languages to remain isolated as before. In addition, the contextual variables involved in implementing multilingual education programs, which vary from society to society, are complex and involve complexity. Therefore, it is tricky to quickly transfer these complex programs from one educational setting to another. While there are some excellent examples globally, the contextual adaptation of systems comes with economic and structural challenges, which results in education systems harming minority languages. Although minority groups see education as a tool to protect and develop their own language, the education system generally operates in only one dominant language. In addition, children and young people who speak a minority language feel obliged to learn other languages from an early age (Gorter et al., 2014) Also; another aspect in this regard is the transfer effect, which refers to the effect of a language that a people utilizes predominantly on their weaker language, which is also their HL (Romano, 2021; Scontras et al., 2015) This is based on the assumption that the dominant language of heritage speakers potentially influences their weaker language from childhood. Studies investigating the transfer effect constitute a significant part of the research in the field (Krompæk, 2018a).

Due to all these complexities and difficulties, it has been demonstrated by academic circles that a holistic approach is needed in multilingual education (Cenoz & Gorter, 2011) because such a holistic approach allows us to make inferences by considering all the languages in the linguistic treasure of the student. The most important contribution of the holistic approach is that it emphasizes the relations between languages in multilingual education. In addition, this approach includes a linguistic sensitivity dimension, which helps students to be aware of language-related issues. Thus, students can better understand how the languages they use or learn are processed and used. In addition to all these, a holistic educational approach can also clarify the knowledge of researchers so far on multilingualism and language acquisition. For example, by examining the total language vocabulary of bilingual people, the qualities of their skills in different languages and how these multilingual individuals use their linguistic resources during communication can be explored. In addition, these studies can open the door to numerous comparative studies by including linguistic usage characteristics of monolinguals. In conclusion, HL is a language acquired through family inheritance and known by individuals raised in families where a language other than the dominant language is spoken within the community. In other words, individuals who grew up in such families have an ancestral link with this language, which is defined as HL and is not dominant in terms of usage, originating from familial traditions (Polinsky & Scontras, 2020).

2.2 The profiles of HL speakers

To map the linguistic profiles of HL speakers, developers of linguistics, educational sciences, and language policy engage in continuous research and development. Understanding the profile of HL speakers and gaining insight into their unique language characteristics will also help us to meet their particular needs arising from their multilingualism, enabling the development of quality language teaching methods for them (Polinsky & Kagan, 2007a). Another critical point is that in an increasingly globalized and complex social structure, such studies are crucial in order to preserve and improve people's cultural diversity and linguistic heritage.

As mentioned earlier, speakers of the heritage language have many different linguistic characteristics due to their exposure to both the heritage language and the dominant language in the environment (S. Montrul, 2010, 2013b). Linguistic profiles of HL speakers in a linguistic context include some of the following dimensions: varying levels of proficiency in HL, language attrition or loss in cognitive storage, levels of borrowing or code-switching

between known languages, and levels of interlingual influences penetrating linguistic development (Kagan & Dillon, 2003; Rothman, 2009; Silva-Corvalán, 2014). Of course, these aspects can be affected by factors such as the degree of exposure to HL, the age of the individual, the relevance of the other language to HL, the typological affinity of the two, and the socioeconomic and sociopolitical status of HL.

The profiles of HL speakers may have unique characteristics according to the structural features of the language with HL, as well as showing general characteristics. For example, a study (S. Montrul, 2013a) discussing the language skills of second language learners with a Spanish HL has focused on gender negotiation. At the same time, HL speakers identified similarities in some morphosyntactic and lexical aspects. Upon this, the author highlights that the HL speakers range in proficiency from “overhearers” to “native” speakers. The study, therefore, distinguishes between the terms "*native language*" and "*native language ability*." According to this, for example, all English native speakers have native language skills, but not all individuals who have the ability to use English as a mother tongue are native speakers of English (Montrul, 2013a).

The HL-speaking people have a complex heterogeneity, making it difficult to characterize HL speakers. Carreira (2004) states this challenge as follows: “We do not have a size that fits all” (Carreira, 2004). According to Benmamoun et al., (2013a), HL speakers learned their HL as their first language in childhood but became more dominant in a different language as adults. Thus, HL speakers may be defined as asymmetrical bilinguals. The study makes a broad and narrow distinction between HL speakers, and accordingly, in a general sense, HL speakers are anyone with a traditional, ethnic, cultural, or other connection to a language. In the narrow sense, they are people who grow up learning HL and have some proficiency in that language (Benmamoun et al., 2013a). However, one of the vital features of HL speakers is their family composition. Accordingly, both parents of HL speakers may be native speakers of a single heritage language, or both parents may have ties to different heritage languages. In some cases, one of the parents is related to HL, and the other is a native speaker of the dominant language (Benmamoun et al., 2013a). The authors also point out that the familial composition of HL speakers is not the only factor influencing their linguistic proficiency in HL. Other factors, such as the amount of input and the linguistic diversity of their parents, may also play a role in people's skills in HL.

We understand from Meisel's works that studies on bilingualism in children and first language acquisition in the context of bilingualism have shown us that young children initially keep both language systems separate in the initial stages of bilingualism, but they go through the same developmental stages in each language as monolingual children do (Meisel, 2001, 2009; Tracy & Gawlitzek-Maiwald, 2017).

In the literature, HL speakers have been defined as semi-speakers (Dressler & Dorian, 1982), or incomplete language acquirers (Cognition & 2002, 2000; Polinsky - Southwest journal of & 1995, n.d.; Polinsky - The learning and teaching of Slavic languages & 2000, n.d.; Polinsky Maria & 2006, n.d.) and (Polinsky 1997, 2000, 2006; Montrul 2002). Also, as stated (Bamyacı, 2016) some researchers call heritage speakers unbalanced, dominant, or pseudo-bilinguals (Baker & Jones, 1998) or early bilinguals (Kim, 2007). The term Heritage Speaker was framed initially in Canada (Cummins, 2005a, p. 585), and later in the USA (Bamyacı, 2016). Generally, the lack of consensus on a specific term in studies indicates a lack of information about the characteristics of HL speakers (Polinsky & Kagan, 2007, p. 369; Benmamoun et al., 2013a, p. 132). However, as the concept of the HL cannot be restricted to a specific group of speakers, some speakers in Europe and Latin America with similar characteristics also fall under the category of HL. (Rothman, 2009, p. 157). Some HL speakers have equivalent proficiency in both the heritage and dominant languages. Others are weaker or even develop only basic skills in the heritage language (Polinsky & Kagan, 2007, p. 373; Montrul, 2010, p. 4). Previous studies have shown that HL speakers have similar morphosyntactic features (Bamyacı, 2016, p. 58) but better phonology compared to adults learning a second mother tongue (Montrul 2010, p. 4; Benmamoun et al. 2013, p. 137).

Case studies were also conducted to determine the characteristic features of HL speakers. One of them (Bateman, 2016) is performed on a heritage language speaker at a young age who grew up in an English-Romanian bilingual home. This study examines how the child perceives his linguistic identity and group membership in a community through dialogue. According to the study results, the child uses HL to reinforce his linguistic identity and to confirm his group membership, both for himself and his interlocutors, through dialogue. Sociocultural background factors are an essential aspect of HL instruction because they can predict the extent to which HL learning can be successful, especially for adult learners (Oh & Au, 2005). Their findings revealed that pronunciation and grammar improved when HL speakers identified themselves more often with their culture, participated in community events such as cultural events, and used HL more often outside the classroom. This study was

critical because it shows how cultural background and personal experiences affect HL learning ability (Oh & Au, 2005).

The linguistic repertoire of students with a heritage language is complex regarding school age and access to HL. Accordingly, individuals in the upper-middle classes have a more comprehensive range of linguistic registers and expressions suitable for different situations. On the other hand, lower-class groups, if they have little access to formal education on HL, have a narrower HL utilization capacity. The article also states that HL speakers may be weak in terms of reading and writing skills in the HL and may not have a high command enough to explain the grammar system of HL (Valdes, 2001).

2.3 The difference between HL learners and L2 learners

HL learners often acquire HL skills in natural settings, such as at home, and in many cases, HL will be their first language acquisition. Although SL started as their first language, their proficiency decreases with the effect of the dominant language in their society, and in some cases, they remain undeveloped compared to their mother tongue level (Kagan & Dillon, 2003a). A study (Potowski et al., 2009) examining the effects of different types of L2 instruction between US Spanish HL speakers and traditional L2 learners compared the effects on the development of the Spanish past subjunctive in both groups and found that the language development of HL speakers may differ from that of native speakers. The study also revealed that HL speakers could benefit more from focused grammar teaching instructions.

On the other hand, when those who use the dominant language in the environment as their mother tongue start learning a second language, they go through different ways of acquiring it (Gass & Selinker, 2008). Another critical point is that L2 learners usually have never been exposed to the language they are learning before; that is, they start to acquire and understand the target language at a later age (Rothman, 2009a). A study investigating the Spanish second language learners and Spanish HL speakers in terms of having the target knowledge of morphological question structures such as double complementizer questions (DCQ) (Cuza & Frank, 2015) also aimed to compare the performance of bilingual speakers with monolingual speakers in different aspects. Another exciting study (S. Montrul et al., 2013) shows that the experience of being exposed to language at an early age and the type of linguistic input received make HL speakers advantageous, especially in oral language production. The study also reveals quantitative differences between the two groups in verbal production, especially in the syntax before and after the critical period in the developmental process; there are

differences between the two groups regarding the abstract gender trait (p. 103). Montrul et al., (2008) aimed to measure grammatical gender congruence dominance in Spanish between Spanish L2 learners and Spanish HL speakers of different ages and language acquisition contexts/modes. The study found that L2 learners could identify the gender of words while reading and writing more accurately. On the other hand, it was revealed that HL speakers were able to use the category of gender better when speaking (S. Montrul et al., 2008).

Academic studies have observed several vital differences between HL learners and L2 learners. For example, HL learners have stronger cultural ties to this language because HL has additional appeal as part of their traditional background and cultural identity (Carreira & Kagan, 2011). In contrast, second language learners are more motivated for various reasons, such as professional development, personal interest, economic reasons, or academic needs. A study examining the role of motivation in vocabulary development among high school students who speak Japanese as HL in the USA (Mori & Calder, 2015) showed that motivational factors such as career orientation, positive perceptions, and Japanese heritage were influential in the learning process regarding both Japanese and English. The regression analysis in the study showed that American identity and career orientation had negative effects on HL (Japanese) vocabulary, and positive perceptions also positively affected L2 (English). A study (Pinto & Raschio, 2007) comparing bilingual and HL speakers was conducted in the USA on three groups of bilingual speakers. Speakers using Spanish as HL, Mexican native Spanish speakers, and native English speakers were compared for directness and frequency of downgrades, especially when making linguistic requests. The study found statistically significant differences in all three categories examined. However, despite the differences, HL speakers were found to have a unique cross-cultural style, sharing some characteristics with both L1 groups. Regarding the hyphenated identity structures of different HL generations as learners, Shin (2016) specifically examined how Korean bilinguals experience and drive ethnic and racial exclusion in another society. The study found that the effects of racial and ethnic exclusion are felt differently in different generations. Therefore, 2nd generation HL learners sometimes seemed to avoid newly arrived Koreans due to negative images created about Asians in the West (Shin, 2016). Regarding motivational factors such as autonomy, competence, self-perceptions of relatedness, and orientations toward learning German as both a native speaker and an HL learner, (Noels, 2006) found that HL learners scored higher in perceived proficiency than non-HL learners.

In addition, HL learners have a more profound lexical capacity and a broader lexical proficiency, as they are exposed to this language in a more natural environment and at a younger age compared to L2 learners (Montrul, 2008) As mentioned before, HL learners may not have a comprehensive formal education in this language, so their literacy skills may be more limited than L2 learners (Polinsky & Kagan, 2007b) Apart from lexical differences, some studies (Treffers-Daller et al., 2016) show other differences such as use of collocations. The study was conducted on speakers using Turkish as HL in Germany and compared that with returnees' usage of HL and found that both groups preferred different linguistic structures regarding some collocations. In order to develop better assessment tools, a study (Titus, 2012) examining the differences between those learning Russian as a second language and those learning Russian as an HL found that those learning Russian as an HL generally learned in a much shorter time, better pronunciation, and a higher fluency in the language. However, it was observed that the knowledge of Russian HL learners had significant deficiencies since HL speakers did not learn this language in formal settings. Iranzo (2022) found that HL bilinguals with a good command of both languages outperformed the written form in the aural form to determine whether the stimulus was presented in written or aural form on the linguistic performance of HL bilinguals (Iranzo, 2022).

As a result, HL learners and L2 learners go through different learning processes, and it is important to thoroughly research and identify the differences between these processes to improve language education and develop appropriate pedagogical approaches.

2.4 Heritage language instructions: Approaches and methods

Heritage language instruction refers to teaching the HL in a formal setting (Potowski & Shin, 2019). HL education has become more prevalent in recent years as interest in multilingual education, and the number of English-speaking people has increased (Fairclough et al., n.d.). The importance of HL instructions is not merely related to identity and cultural apprehensions but also associated with the academic maturing of students with a migrant background. In recent decades, many studies on HL instructions have shown that using the HL actively supports students' academic development in other languages (Duff, 2008). Bilingual and applied linguistics researchers initially conducted studies on HL; however, few studies later emerged to examine the impact of HL on different aspects of children's academic progress and linguistic development. Some studies, such as (Hyltenstam & Tuomela, 1996), as stated

in (Ganuza & Hedmen, 2019) also questioned the impact of HL education on identity formation in young learners. Some reports were published by the Swedish National Agency for Education (Skolverket, With another mother tongue.) regarding “another mother tongue” and its effect on general school achievements. Another research (Bylund & Díaz, 2012) investigated the impact of the HL on the grammatical competencies of Spanish cases. Concerning an ethnographic scope, one of the latest research was done in Sweden by Ganuza & Hedman (2015, 2017) with Somali-background students in Swedish schools for a broader exploration of different ingredients regarding the influence of HL (Ganuza & Hedmen, 2019). On the other hand, Valdés (2001) argues that there is a need to develop coherent pedagogical theories for teaching heritage languages and argues that current standards for foreign language learning can be the basis for establishing such a framework. The article also argues that classroom practices cannot prevent HL from weakening and that the preservation of HL depends on a sustainable system for generations (Valdes, 2001).

The primary purpose of HL instruction is to help HL learners learn, develop, or maintain their HL and understand their cultural heritage through their HL (Fairclough et al., n.d.). Therefore, various approaches have been suggested for comprehensive HL instructions. Currently, pedagogical approaches for HL instructions mainly focus on functional skills, that is, developing communicative abilities regarding HL to allow learners to dive into critical explorations of bilingual practices and discover their identities (Kisselev et al., 2020). Adapting foreign language instruction is quite a typical application for the needs of heritage language learners. For example, communicative language teaching (Richards & Rodgers, 2001) focuses on using language for communication and aims to simulate real-life communication by sharing information and processing the target language. Therefore, HL instruction can adapt methods from this approach, especially by using listening and speaking to develop literacy skills in the HL. Also, the materials used during the HL instructions may contain intellectually and culturally stimulating activities and texts. In addition, through this approach, real-life situations can be illustrated through written and verbal activities, such as dialogues (Approaches to Heritage Language Instruction - Center for World Languages, n.d.).

In order to provide recommendations for teaching heritage languages in postsecondary settings, (Gatti & O’Neill, 2017) investigated the relationship between writing proficiency in HL speakers regarding Mandarin Chinese, Korean, and Spanish. The study elaborates on factors such as the context of an acquisition, educational experiences, and language practices and found out that the quality of the experience of learning and using these languages at home

improves writing skills in HL speakers of these languages. Thus, the study reveals the factors crucial for heritage speakers' writing proficiency.

Research shows that HL instructions can positively impact students' self-esteem, interests in their culture, heritage connections, and, most importantly, academic performance. Aiming to assess programs for HL instruction and language regulations to support these programs, (Seals & Peyton, 2017) finds that students exhibit positive attitudes toward learning their heritage languages and cultures. Most students felt more confident about their identity and even scored better on other subject tests. However, after the abolition of the HL program due to some difficulties, it was observed that some students lost their ties with HL and even got lower grades in various subjects.

HL education in the context of Finland is known as “home language” (Fin: kotikieli) or “own mother language” (Fin: oman äidinkieli) education. In Finland, HL education is a right granted by law to all immigrant communities (National Core Curriculum for Basic Education for Adults 2017, 2019). People with an immigrant background in this country show a tendency to pay attention to HL education provided in Finnish public schools (McCabe, 2016) as cited in (Kozhabayeva, 2017), which highlights the importance of HL for immigrants for the sustainability of identity, ideology, and cultural heritage.

According to the statistics from the Finnish National Agency, the number of pupils who joined HL courses in public schools country-wide was 20,173 from 53 languages for the Spring semester of 2019, and it raised to 21,028 pupils from 55 different languages in the Autumn semester of 2019 (Maahanmuuttajien koulutuksen tilastot.). Saami and Roman languages have been excluded from these statistics as they are not immigrants but local indigenous communities. The increase in HL education has been growing gradually from 1998 to 2019 according to statistics available on the website of the Finnish National Agency for Education (Maahanmuuttajien koulutuksen tilastot.)

Studies on heritage HL and HL education have increased in recent years, since the public discourse centered around migration, educational opportunities, and multilingualism (Mehlhorn, 2020). However, there is still little consensus among scientists about the role of HLE in children's linguistic, educational, or personal development (Gross et al., 2021).

2.5 Heritage Language Instructions in Finland

The dynamics of minority languages as an HL are highly complex, and both socio-economic and sociopolitical factors influence these dynamic features. Minority languages generally do not have the same legal status and economic value as majority languages in almost all parts of the world. It is, therefore, often difficult to find professional teachers and quality teaching materials for minority languages. Many minority languages, including Kurdish, are still in the process of standardization and have an uncommon use, especially in literary and academic contexts. As with Kurdish, historically, regional minority languages have remained relatively isolated and thus survived due to limited geographical and interactive possibilities. However, in today's globalized world, this isolation does not continue and this situation is unrealistic and undesirable (Cenoz & Gorter, 2017b).

2.5.1 Kurdish, as in HL instructions in Finland

The Kurdish language is one of the languages in Finland's context of HL education. This language belongs to the Irano-Aryan subgroup of the Indo-European language family and is spoken in Southeast Asia, mainly in the lands between South Caucasia and Anatolia. The dialects of this language are generally divided into three groups by the linguists. The largest group by the number of speakers is Northern Kurdish, also called "Kurmanji," spoken in Turkey, Syria, the former USSR, and by some Kurds in Iran and Iraq. The second group is called Sorani, spoken in the North East of Iraq and some parts of western Iran. Most Kurds have spoken these two groups widely and developed a literary language throughout history (Joyce Blau, 2020). The last group consists of smaller variants spoken in various parts of Kurdistan by relatively more minor groups of people. Among these dialects, Zazakî is spoken by a dozen of thousands of people and is severely endangered in Turkey (Zazaki.de, ei pvm); other smaller and critically endangered dialects are Hawramî, Feyli, and Lekki, which are spoken within Iran and Iraq's current borders.

The Kurdish community appeared in Finland at the beginning of the 1990s and has grown ever since. Finland's Kurds are generally speakers of Sorani dialect who are officially from Iraq and Iran; however, particularly during the last two decades, the number of Kurmanji speakers who arrived from Turkey and Syria also increased.

As Kurdish people do not have their own state or comprehensive autonomy in their homeland, it is difficult to get information about their population merely based on their passport records.

The homeland of the majority of the Kurds in the Middle East (Kurdistan) has been politically shared by Turkey, Iran, Iraq, Syria, and some Caucasian countries, which resulted in Kurds not having their own nationality but one of these country's nationality in the legal sense. Thus, the indispensable way to obtain data about the Kurdish population is to trace language statistics, which is more likely to provide reliable information than their official passport records. According to the last figures about Finland's population structure regarding language backgrounds of Finnish citizens, there are 14.803 Kurdish speakers in Finland, including Kurds from Kurmanji, Sorani, and possibly other dialects (Statistics finland.2020). There are, unfortunately, no reliable sources for the numbers of each dialect; however, as a matter of general fact, speakers of the Sorani dialect outnumber those of Kurmanji within the Kurdish community of Finland. Explicit evidence for this could be the difference between the number of schools and students involved in Sorani and Kurmanji instruction in terms of HL education. Kurdish language as a subject within the scope of HL education is divided into two for Sorani and Kurmanji dialects, and the lesson arrangements are implemented separately for each dialect; that is, instruction in each dialect is given differently in separate schedules, schools, and classrooms as if the two dialects are two different languages. Kurdish instructions began much earlier with the Sorani dialect, while on the other hand, it started with Kurmanji only after 2010 in Finland. Based on the Finnish National Education Agency records in 2019, the number of Kurdish-backgrounded students who enrolled for the Kurdish language in the Spring semester was 538. For the Autumn semester, the number was 526. As previously stated, these numbers represent the cumulative number of students from all dialects of this language.

2.5.2 General goals of HL instructions in the Finnish National Curriculum

According to the latest core curriculum for basic education in Finland (National Core Curriculum for Basic Education 2014) the most general goals of the HL instructions can be considered together with the general objectives of multilingual education in Finland, which are defined as follows:

“In the instruction of other plurilingual pupils, the particular goal is supporting the pupils' plurilingualism and the development of their identity and self-confidence. Capabilities for a balanced and active membership in society are thus imparted to the pupils. The pupils' background and initial situations, including their mother tongue and culture and the length of their stay in Finland, are taken into account in the instruction. Plurilingual pupils are encouraged to use the languages they know in a versatile manner in the lessons of various subjects and other school activities.

The learning and use of their mother tongue support the assimilation of the content in various subjects, and the pupils also learn to communicate about the contents of school subjects in their mother tongue. Under the Constitution of Finland, each person living in Finland has the right to maintain and develop their own language and culture. An effort is made to offer the pupils instruction in their mother tongue. Under a Government Decree, instead of studies of mother tongue and literature determined by the language of instruction in the school, instruction of the Finnish or Swedish language may be delivered to immigrants either fully or partly following a specific syllabus intended for immigrants.” (National Core Curriculum for Basic Education 2014/2016), p.148)

More specific yet still general objectives directly addressing HL education can be found in Appendix 3, which is named “the objectives, contents, and assessment of the pupil’s learning in the instruction in his or her mother tongue complementing basic education.” The task of the instruction is defined as follows:

“The purpose of the instruction of the pupil’s mother tongue is to support the development of active plurilingualism and to develop his or her interest in the lifelong development of language proficiency. Studies in the pupil’s mother tongue support integration into Finnish society.

The instruction in the pupil’s mother tongue is implemented in cooperation with the instruction of Finnish language and literature and Finnish as a second language and literature as well as the instruction of other languages. The task of joint language education is to increase the pupils’ understanding of the significance of linguistic and cultural background for the individual, the community, and society as well as to guide the pupils to appreciate their mother tongue and other languages. Teaching and learning are based on the pupils’ active agency, which allows for the utilization of the pupils’ language skills and other abilities. The cultural and linguistic diversity of the school is also utilized in all school activities.

The pupils’ opportunities for developing their language skills outside the school are utilized in teaching and learning. The pupils are encouraged to use their own language diversely in the lessons of different subjects and other school activities. The learning and use of mother tongues support the adoption of the content of different subjects, and the pupils learn to discuss the contents of school subjects in their mother tongue. The pupils’ personal choices, experiences of participation, and the meaningfulness of the studied topics are important motivators. Interaction and communication are emphasized in the instruction.

This core curriculum has been formulated for all the languages that are taught as the pupil’s mother tongue. The objectives and contents of the core curriculum have been defined for the instruction of the pupil’s mother tongue for the extent of two annual weekly lessons for the course of the entire basic education. Based on the core curriculum, the education provider prepares a local curriculum which may utilize the descriptions in the core curriculum for mother tongue and literature regarding the task, the objectives related to learning environments and working methods as well as guidance, differentiation, support, and the assessment

of the pupil's learning. The education provider may also formulate a language-specific curriculum. The objectives and contents of instruction as well as the assessment criteria are determined in the language-specific curriculum, taking into account the special features of the language, including its writing system. Language-specific curricula may also be formulated in cooperation between education providers. The pupil's proficiency achieved in basic education may vary between different languages." (National core curriculum for basic education 20142016) p.797)

2.5.3 Specific goals of HL instructions in Finnish curriculum

After presenting the general goals, it is of utmost importance to quote the specific HL education goals in the core curriculum. The following statements are the ultimate objectives declared officially by the authorities. The associated official recommendations will be annexed to this paper (see; the appendix). As in the core curriculum, the specific goals will be presented here, based on the grades in the primary education, i.e., HL complementing in grades 1-2; HL complementing in grades 3-6, and HL complementing in grades 7-9. (National core curriculum for basic education 20142016):

“The pupil's mother tongue complementing basic education in grades 1-2:

The special task of the instruction in grades 1-2 is to encourage the pupils to learn to use their mother tongue in different interactive situations. The pupil learns to listen, to ask, and answer questions, and to relate information. The pupils systematically expand their vocabulary and resource of expressions to cover different areas of life. In cooperation with guardians, instruction helps the pupils to improve their thinking and self-expression skills. The pupil acquires basic reading and writing skills and becomes familiar with age-appropriate children's literature as well as narrative and cultural traditions. The aim is to learn to use language in different learning environments and acquire information using one's mother tongue. The aim is to become aware of the significance of one's mother tongue and to develop a positive relationship with the mother tongue.” (p.798)

“The pupil's mother tongue complementing basic education in grades 3-6:

The special task of the instruction in grades 3-6 is to encourage the pupils to participate actively in their mother tongue in different interaction situations. The pupils learn to use different reading strategies in their reading, to structure what they have read, and to share their reading experiences as well as to strengthen their command of the writing system. The pupils familiarize themselves with the key characteristics of the language. The pupils learn to make comparisons between languages and utilize their language proficiency in different learning environments by searching for information in their mother tongue in different subjects. The aim is that the pupils deepen their relationship with language and learn to appreciate proficiency in different languages. The aim is also that the

pupils learn to assess and direct their own learning. The pupils' study motivation is strengthened in cooperation with the homes and the language community.” (p.801)

“The pupil's mother tongue complementing basic education in grades 7-9:

In grades 7-9, the special task of the instruction is to deepen and expand the pupils' proficiency in their mother tongue according to the language proficiency of each pupil. Do pupils familiarize themselves with diverse spoken and written texts and learn to interpret, analyze, and produce them. the pupils' relationship with the literature, narrative, and cultural tradition in their mother tongue and the language community deepens and diversifies. The pupils advance their knowledge of the characteristics of the language and utilize their language knowledge and skills in different learning environments by acquiring information in their mother tongue in different subjects. The pupils' appreciation of their mother tongue is strengthened and they developed their ability to use the language consciously and creatively. The pupils adopt an inquisitive and self-directed approach to studying the mother tongue and deepen their skills in making comparisons between languages as well as utilize their proficiency in different languages diversely. The pupils learn ways of developing their language proficiency also after basic education. The pupils deepened their study motivation in cooperation with homes and the language community. (p.803).

2.6 Kurdish bilinguals: Input Factors and Significance

Based on sociolinguistic research in Europe, HL speakers who are not immigrants but ethnic minorities have more language attrition, intergenerational language loss, and incomplete acquisition than other bilinguals (Benmamoun et al., 2013). However, studies (Extra & Verhoeven, 1993; Schaufeli, 1993) demonstrate bilingual children who have different ethnic minority background than European local minorities in Europe show lower performance in their mother language, which is indeed their heritage language in the context of this study. The limited exposure to the mother language is proposed to be the reason for such linguistic phenomena. A similar study (Pavlinić, 1993) found that due to the restricted input, the heritage language is heavily influenced by the dominant language, especially at the syntax level (Benmamoun et al., 2013).

Input is one of the foundational concepts in language acquisition research, referring to the characteristics of language exposure from the sources of the target language. Thorsten Piske & Martha Young-Scholten (2008) defines the input phenomenon simply as the learner's environment, which contains everything that contributes to the process within the context of

language acquisition. As the input contains all the elements in terms of exposure and experiences, it is crucial to identify the factors of the input in coherent integrity.

Input factors are the variables that help to evaluate the effects of input in the literature of bilingual acquisition. These factors are primarily (1) the amount of input, (2) sources regarding models and interlocutors, (3) environmental settings through which learners hear the language and the materials used in the acquisition. In a bilingual context, more specific factors within these frames affect the learners' eventual linguistic proficiency. (Unsworth, Hulk, & Marinis, 2011).

Kurdish lessons in educational institutions within the context of HL education can be considered an input factor that has its own role in developing Kurdish children's HL skills. However, as the children of Kurdish background vary significantly from each other, the role of these lessons requires further investigation. For more elaboration, unlike other communities in Finland, Kurdish migrants come from countries linguistically different yet neighboring each other, i.e., Turkey, Iran, Caucasian, and Arab countries. The Kurdish language is not the dominant language, and neither has the official settings, political recognition, schooling system, and curricula in most parts of their homeland. Consequently, Kurdish children born and joined schools in their homeland were already bilingual regarding Kurdish and that country's official language. Thus, for those born in their home country, the Finnish language has been a third (L3), even fourth language (L4) for them, after the migration.

One of the most significant outcomes caused by the absence of political and administrative establishments is the deprivation of unity and standardization in their language, resulting in linguistic distinctions among Kurdish children. Additionally, as in their homeland, Kurdish people live in the official borders of countries with different languages and alphabets they have been compelled to use different writing systems as for in Iraq and Iran they have been using the Arabic alphabet, while in Turkey and some Caucasus countries they use Latin alphabet although they all speak in the same language with only dialect variability. Being divided between multiple countries with nonidentical languages and literacies indisputably affected their language, especially in terms of vocabulary; the gap between dialects opened more during the decades. In addition to the natural linguistic varieties of the Kurdish dialects, the heavy influence of mainstream languages such as Arabic, Persian, and Turkish in their homeland has created a linguistic distortion that subsequently decreased understandability in

terms of communication among Kurdish children who have different backgrounds in terms of dialects, variants, and countries.

Moreover, the lack of establishments and other official institutions has pedagogical limitations on teaching Kurdish, particularly regarding teacher competencies and teaching materials. Only a few universities and research centers provide academic Kurdish studies worldwide, which is insufficient considering the large Kurdish population.

Kurdish language lessons, particularly for the Kurmanji dialect, are generally conducted by teachers with very narrow teaching qualifications. In recent years, for example, municipalities in Finland struggled to find qualified Kurdish teachers, forcing them to recruit teachers with a low pedagogical background and insufficient subject expertise. Finding language materials for teaching Kurdish in classrooms is another challenge that Kurdish educators face constantly, especially for the Kurmanji dialect. Besides, there is inadequate pedagogical consistency, unsatisfactorily standardized language, and lack of consideration regarding the various accents among the children in the existing materials.

As another characteristic, the Kurdish language has been transferred orally through generations without official settings, and native Kurds, especially Kurmanji speakers, have none or minimal literacy skills in their mother tongue. This lack of literacy skills of Kurdish parents has hypothetically particular drawbacks on the development of their children's mother language (L1) acquisition, however, that is out of the scope of this research.

Under these considerations, the Kurdish community and its linguistic properties differ noteworthy from other migrant groups such as Russians, Arabs, Germans, Somalians, etc. Indeed, the Kurdish socio-cultural and linguistic characteristics resemble that of indigenous peoples with endangered languages, in my consideration. This research may open a new door for novel approaches to evaluating indigenous tongues within HL education.

3 Methodology and Instruments

3.1 Research design

We have employed predominantly a quantitative research design to rigorously explore the role of children's social environment and HL instruction in order to measure the input amount in the HL acquisition of Kurdish-backgrounded elementary school-aged children in Finland. The quantitative approach for the design of this research is established to ensure a clear description regarding measurable data, even-handed analysis, and a more nuanced inquisition about the relationships between variables. Furthermore, in order to set a reliable comparison in literacy skills among the participants, a quantitative design would facilitate a better assessment of the results of the standardized instruments. In other words, the nature of the assessment tools made it necessary to implement it in a quantitative design.

For the purpose of this study, data was collected from 31 children with Kurdish background from all compulsory school grades (age 6-15) regardless of their sex, age, age of arrival to Finland, size of their family, the number of native parents, and whether they have ever joined Kurdish HL lessons. Students were contacted through municipalities, Kurdish NGOs, and schools where it is known to be plenty of Kurdish children. All necessary permissions and written consents were taken from engaged authorities and parents for the children's participation.

To be able to understand the participants' literacy backgrounds, an oral background survey will be conducted before testing the children. In the survey, participants will be asked about their family backgrounds, such as SES and home country specifications, dialects they use, their literacy practices, such as reading and writing in Kurdish, and their self-perception of their proficiency in Kurdish.

Our participant pupils' literacy skills will be measured in terms of vocabulary and reading competencies with tests that were previously used for different research in different contexts. Hence, as for assessing the breadth of vocabulary, an instrument called "*the Peabody Picture Vocabulary Test IV (PPVT)*" (Dunn & Dunn, 1997) as cited in (Ganuza & Hedmen, 2019) will be implemented. PPVT works well for recognizing words as it is a picture-based test and, therefore does not require reading ability from the test takers. Participants will only need to choose one of the multiple pictures that best describe a spoken word. As for measuring reading competency, pupils' capacity of word decoding and sentence reading comprehension

will be tested. For word decoding, a word-chain test, that is generally used as a screening tests with the young student; for reading comprehension, a sentence reading test will be implemented sequentially. Both tests for measuring reading competency were prepared by the National Centre for Multicultural Education in Norway (NAFO) and later were adapted and used for different studies (Ganuza & Hedmen, 2019).

Also, an input survey was designed to accompany the HL skill tests. This survey were developed based on Q-BEx Project's questionnaires and their sources (The Q-BEx project.; Cat et al., 2021). In addition, the components of our questionnaire were determined based on a comparative study (De Cat et al., 2021) that reviews many questionnaires quantifying bilingual experience. In this review, De Cat and her colleagues provided a list of available questionnaires used to measure children's bilingual skills and aimed to extract various components of bilingual experience documented across the 48 questionnaires in different contexts.

Thereafter, all the tests and surveys were adapted and translated into Kurdish with the review of Kurdish teachers. Before the data collection procedure starts, to check the reliability piloting process operationalized with all of the tests; consequently, tests were thoroughly reviewed and revised by Kurdish teachers and translators if needed.

The testing process will begin with a pilot step. The participants who joined the pilot study, will not be included in the actual study. Test items with irrelevant answers or meager response rates are to be removed or changed. Both pilot and real testing will be conducted by Kurdish teachers who have received all the necessary instructions on implementing each test. To ensure that all the participants will complete the tests, teachers were asked not to include children who have any reading disabilities.

3.2 Participants and sampling

We exclude children with linguistic disorders and speech challenges in order to set a nonprobability sampling strategy. Therefore the most convenient sampling was aimed to be reached participant selection. This approach enabled us to recruit efficiently 31 Kurdish HL speaking children aged 7-15 from different locations in Finland. The families of the children through municipalities, Kurdish associations, and schools in relatively Kurdish-populated areas were reached to ensure a diverse and representative sample. The participants were included randomly regardless of the demographic factors of their parents, their sex, age of

arrival in Finland, family size, and the number of native parents (in some families, both parents were native speakers of the Kurdish HL while in some families only one of the parents had Kurdish background.) This inclusivity in participant selection aimed to contribute to the generalizability of the findings.

3.3 Data collection and instruments

Data collection instruments were chosen to cover the broadest range of the sample parameters and align with the quantitative research design in order to effectively measure literacy skills and HL development in general. There were two main instruments: the standardized literacy test and a parental input survey. The literacy test was adapted from the Peabody Picture Vocabulary Test IV (PPVT) and Reading competency tests of which the first adaptation was used to measure children's vocabulary skills through picture-based items, that does not require the ability of reading. On the other hand, the reading competency tests consisted of a word-chain test for word decoding skills and a sentence reading test to assess reading comprehension. Both measurements were utilized to evaluate the participants' literacy skills. The National Centre for Multicultural Education in Norway (NAFO) developed the original version of these literacy skills and was previously used in various studies, confirming the test's reliability and validity. As for our survey, the aim was to gather extensive information regarding the situation of the Kurdish HL at home, such as exposure time, the amount and quality of the input the participant receives, and also the child's language background. Also, sufficient information about the demographic and family background, such as home country and dialect specifications, literacy practices at home, and self-perception of HL proficiency were collected. Therefore, we developed our unique instruments, based on these previous examples that have been developed in different contexts.

Data collection procedures were complicated and involved multiple cycles to ensure the reliability and validity of the research. The participant recruitment was made by contacting families in person and therefore the research consent and other permissions were collected from the parents. The assessment tools were adapted from original versions and translated into Kurdish language by a group of experts. Then, the instruments were carefully reviewed by multiple Kurdish teachers in Finland to ensure linguistic and cultural appropriateness. Also, a team of Kurdish teachers and translators employed the piloting to establish test reliability and made subsequent revisions. This small-scale pilot study was carried out with approximately 10 participants in order to identify potential issues and address the necessary

recommendations regarding the test items, such as low response rates and irrelevant results. Upon these finalizations, as a trained and experienced HL teacher for the Kurdish language, I performed the test for this research. For each participant, the data collection process lasted approximately 40 minutes. Before each session, the parents -or caregivers- received detailed instructions on administering the tests and survey to ensure safety and accuracy in data collection. The assessment tools were in paper format, and participants wrote the answers manually on the test forms.

3.3.1 Input survey

This survey is designed based on Q-BEx Project's questionnaires and their sources. The Q-BEx project is a UK-based research project that aims to provide customizable tools for quantifying bilingual experience that serves the development of children's bilingual profiles (The Q-BEx project.; Cat et al., 2021). In addition, the components of the questionnaire were determined based on a comparative study (De Cat et al., 2021). This study reviews 48 questionnaires quantifying bilingual experience. In that review, De Cat and her colleagues provide a list of available questionnaires used to measure children's bilingual skills in various contexts. They also extracted the main components of bilingual experience documented across the 48 questionnaires. The authors have identified 32 overarching constructs, which indicated 194 components of which they finally formulated a subset of general constructs such as language exposure, language use, activities, and current language competencies.

As for the purpose of the present research, the general linguistic input children obtain by conducting this survey with their parents is ensured and complementarily a literacy test on those whose parents participated in this survey was implemented. Then the differences in the literacy performance test results was checked when the other variables are added. Those students who have joined the HL lessons are hypothetically expected to have higher scores on the literacy test; however, the parental parameters also impact the results. Together with the student's performance scores, the input survey will construct an integrated holistic dataset that provides comprehensive information about students' linguistic conditions regarding their heritage language. With this aim, the survey includes five main overarching components that provide information about the participant's background, parental conditions, other housemates, exposure and input, and other input sources. While choosing and composing these components, the specific Finnish and Kurdish socio-cultural and linguistic conditions

were taken into consideration. This information is elaborated in the survey with corresponding questions, which is covered by the following list of variables regarding the respondent child:

- Number of children over 1.5 years old in the same family
- Child's birth order
- Child's age
- Grade level of the child
- Gender of child
- Whether the child had a language disorder (e.g., dyslexia)
- Place of birth of the child
- Age the child when exposed to the Finnish language
- Whether the child has ever participated in HL instruction
- Dominant language spoken by the child in general
- The language mother uses the most when speak to the child and vice versa
- The language father uses the most when speak to the child and vice versa
- Whether there is a caregiver or another adult at home and his/her language
- The language these adults use the most when speak to the child and vice versa
- Whether both parents live together
- Whether the parents are native Kurdish speakers
- The primary Kurdish dialect of parents
- The birthplace of the parents within Kurdistan
- Parents' ages of arrival in Finland
- Both parents' proficiency in Finnish as well as in Kurdish.
- Both parents' literacy skills in Kurdish
- Presence of Kurdish books at home
- The attitudes of the parents towards their child's language skills
- The language siblings use the most when speak to the child and vice versa
- Number of Kurdish-speaking peers of the child in Finland
- The language these peers use the most when speak to the child and vice versa
- Whether there are Kurdish-speaking relatives living in Finland
- Hours per week spent for Kurdish language education
- Hours per week spent with Kurdish-speaking peers
- Hours per week spent with Kurdish materials (books, internet, TV, music, etc.

- Hours per week spent with Kurdish-speaking family members on weekdays, Saturdays, Sundays, during summer vacation, and other holidays

Administration of the Survey and the proficiency test

- Parents were given the survey in paper form as some of them were not able to use technological devices.
- The language of the survey is Finnish because not all parents have literacy skills in Kurdish. Yet, the researcher explains in Kurdish when needed.
- The parents who spend the most time with their children were chosen to answer the questionnaire because it is more likely to obtain more precise information from them.
- In case one family have more than one child that can participate in the literacy test, the parents shall fill out separate input questionnaire for each child since every child may have different birthplace, hobbies and other specific conditions that could significantly impact the input they have in the heritage language.
- The collected data will be added to the literacy dataset as additional variables in the SPSS, the data analysis software for the holistic assessment.

Children who come from the same family will be marked with a two-digit code of which the first letter is always F (from the word family) and the second will be a number, showing the order of the interview and testing starting from the first one.

3.3.2 Standardized literacy test

This literacy measurement tool includes eight main tasks, each aiming to measure different aspects of literacy skills in Kurdish. Each of these tasks was adapted from previous literacy tests and standardized based on the specific position of the Kurdish language in the heritage language instruction program in Finland. While most literacy measurement tools in the literature are designed to measure the quality of L1 and L2, another large group of tests aims to find reading difficulties -such as dyslexia- in monolingual and bilingual children. Literacy tests that measure HL experiences are relatively rare, and existing ones are characterized mainly by a specific language such as Spanish, English, Italian, Chinese and some other heritage language bilinguals in different countries. These tests were surely beneficial till a certain point. Yet, a more suitable instrument would be a test for indigenous language bilinguals since Kurdish is an indigenous language while at the same time, it is in a heritage

language position. Finding an adaptable example test for such a rare bilingual group was not easy while developing this Kurdish-specific heritage-indigenous language test for literacy.

Most of the tests in the literature are designed based on the test takers' age and educational level. These pedagogical considerations are necessary, especially when the target groups are monolinguals, SL learners, or other bilinguals. As for the HL bilinguals, however, far more variables can affect the bilingual process. In addition to the age and educational level of the bilinguals, the language characteristics, student background, family background, family structure (the number of native HL peoples in the family), residential location of the family in the host country, the size of the family and many more variables are in the scene when measuring the HL competencies. Consequently, as the age and the educational level become less effective compared to some of these parameters, the test was standardized for all age groups in Finnish Basic Education (*ala- ja ylä koulu*). The test is designed as a compilation of tasks by which the literacy performance of all basic education level Kurdish bilinguals in Finland, whose age varies between seven to 14, can be measured. This test is designed within the context of Finland; therefore, Finnish-specific sociocultural, economic, curricular and especially linguistic conditions were considered. Thus, the test may not be suitable for another context without changes and adaptations.

The eight tasks, vocabulary depth, word recognition, sentence comprehension, lexical connection and listening skills, are all adapted and reformulated based on Kurdish HL dynamics. Although writing is only one of the aspects of literacy, the test aims to measure literacy in a broader context that could be linked with the quantity of input they take, which is the second dimension of this study. If a writing task were added to the instrument, those pupils who have not joined any formal or informal Kurdish course would not be able to complete that task at all, because they would not be sure even about the type of alphabet used in Kurdish. On the other hand, reading tasks provide visual hints such as phonemic similarities that they can relate to the meanings of the words and utilize; therefore, their linguistic skills with the help of their literacy knowledge from other languages they know, i.e. Finnish in this context.

The test will be administrated in Finnish to avoid any additional language exposure and contextual input that can affect the examinees' knowledge during the test. All age groups will take the same test, and they are expected to complete all of the tasks in one session which

takes around 40-45 minutes. The structure of each task and its administration is outlined below:

3.3.2.1 Kurdish Alphabet Knowledge

This task aims to determine whether children have minimal skills in literacy in the Kurdish language. As the Kurdish language is an indigenous language that does not possess official settings, even most Kurdish parents who were born and grew up in Kurdistan lack literacy skills in Kurdish. Thus, this task becomes a fundamental measure to detect the most basic literacy skills as it requires alphabet knowledge in Kurdish. Also, since the HL has limited input with only 2 hours per week and is almost the only literacy source for Kurdish children, this task was found suitable for all students from the first to the eighth grades. Another purpose of this task is to sharply separate the students who have obtained any formal or informal education in Kurdish from those who have never received it. The task was developed by a team of Kurdish HL teachers only for this study without any translation or adaptation from previous works.

The task contains only 16 Latin letters, most of which differ from the Finnish-specific letters in terms of pronunciation and look. These letters are “Ww, Zz, Qq, Uu, Ee, Ss, Îî, Cc, Yy, Şş, Jj, Ii, Ûû, Êê, Çç, Xx”. The reason for including only these letters is to measure different aspects of Kurdish literacy skills without distraction during the test implementation.

Administration and scoring of the task: Since this task requires pronouncing the letters, an oral exercise was considered to be the best option. The task includes 16 letters in total, and each of the letters is counted as one item. The examinees will pronounce letters by following the horizontal row from left to right within 2 minutes. The supervisor will keep the time records and instruct the examinee when to start and stop. The respondent was informed about the rules regarding the task beforehand and reminded not to mix the letters with similar Finnish letters. Since the children were Finnish-Kurdish bilinguals, some of the letters may be easier to read due to the equivalent letters in the Finnish alphabet, such as e and s. Thus, scoring each item with the same value may generate problems in terms of the validity of the test. For instance, the letter S sounds the same in both languages, yet C and S have the same sound in Finnish, while they sound different in Kurdish. Such phenomena require more knowledge from the participants to distinguish them from each other. With this consideration, factor analysis were applied during the data analysis and thus the underlying components

were identified and scored accordingly. The total time was 2 minutes for the completion of the task.

3.3.2.2 Picture to Word

This task aims to demonstrate the level of students' skills regarding Kurdish words. The task items include one picture followed by four similar words, of which only one is the name of the image. The other three words are phonetically similar and real words but have nothing to do with the given picture. The student is expected to find the name of the given object among the four words. By connecting the words and pictures, bilingual students prove to have the skills to associate items with semantically equivalent meanings in their lexical corpus. The task also measures the basic vocabulary that is related to daily life and home environment as the heritage language bilinguals supposedly have. The task is part of reading exercises. This test was adapted from Somalian version (Flerspråkig kartläggning av avkodning och läsning - lärarhandledning för årskurs 1-2 somaliska.), that was developed by NAFO (2012) which was for grade-1 Swedish-Somalian children.

Administration and scoring of the task: The supervisor shows the two example items and explains how to complete the task. To prevent confusion about the similarity of the words, the examinee was instructed to read all of the options and then put a cross only on the correct one. Then the students complete the task independently with the help of a pen, for marking their answers. The task consists of 10 items and every item are worth 2 points (in total 20 points). The examinee is supposed to complete the task in 5 minutes of which 30 s is allocated for each item.

3.3.2.3 Kurdish Word Reading Fluency and The Sight Word Efficiency

This task aims to measure the vocabulary recognition skills of the student. However, since the students are in a linguistic minority situation, it is challenging to be sure that all students know the words in the task. Yet, this task focuses more on reading ability rather than understanding. Also, it is considered that the student can speak a dialect that deviates slightly from the standard language. To ensure that students are familiar with the words, the most common words among Kurdish dialects were selected. This task is adapted from the Oregon University's DIBELS 8th Edition Literacy tests (Dibels.) that are prepared to measure 1st-grade children's mother language performance and TOWRE-2 Test that aims to measure word efficiency at sight. The sight word efficiency constructs the word reading efficiency test

together with the phonemic decoding efficiency task. Considering the heritage language characteristics, the item numbers are reduced for pedagogical and linguistic reasons. The example words do not include any Kurdish-specific letter to avoid any impact on the examinee's literacy skills.

Administration and scoring of the task: The supervisor asks the examinee to read the examples and explain how to complete the task. Then, the student reads the words, and the teacher listens carefully to check for pronunciation mistakes. The task consists of 20 words, and every word needs to be read by the examinee. Each word is considered as an item that is worth 1 point. The examinee is supposed to complete the task in 3 minutes, of which 15 s is allocated for each word.

3.3.2.4 The phonemic decoding efficiency test

The phonemic Decoding Efficiency (PDE) test is part of TOWRE-2 (Torgeson, Wagner, & Rashotte, 1999) which aims to find out graphophonetic knowledge by reading pseudowords. In the actual TOWRE-2 test, the number of items and the given time is different since one of the most prominent functions of the test is to detect reading problems. However, in my adaptation, students are given 20 fake words and 2 minutes to complete the reading. Since the position of a heritage language and, specifically Kurdish as an indigenous language requires different conditions, the fake words are chosen how they suit the general Kurdish phonetics and vocal harmony. Each of these words also contains at least one Kurdish-specific letter that differs from letters in the Finnish alphabet. By this arrangement, it is aimed to limit the purpose of measurement only to the Kurdish literacy context. Additionally, the example words do not include any Kurdish-specific letter to avoid impacting the examinee's literacy skills.

Administration and scoring of the task: The supervisor asks the examinee to read the examples and asks them to complete the task as fast as he or she can. The task consists of 20 words that are expected to be read within 3 minutes in a normal phase. Each word is considered an item worth 1 point with a total of 20 points of the score.

3.3.2.5 Vocabulary Depth (Antonyms, Hypernyms and Synonyms)

The three parts of the task are merged to cover the paradigmatic lexical knowledge as it is in Ganuza & Hedman (2019) and aim to capture the lexical depth of the children in Kurdish. These three tasks are adapted from the test that was implemented in (Ganuza & Hedmen,

2019). The authors developed the test from NAFO (2012) to measure the literacy skills of heritage language students with Somali backgrounds in Sweden. The task, therefore, measures the vocabulary depth of the heritage bilinguals. The tasks aim to capture semantic relationships and paradigmatic connections between the given words associated with the school-related context by recognizing antonyms, synonyms and hypernyms. As the selected words in the original test were observed in the educational materials used in Somali HL instructions, it is considered Kurdish HL materials used in Finland and the recommendations of three teachers who have experience in Kurdish HL instructions while adapting the tests for purpose of the present study. Ganuza & Hedman's (2019) task version was developed for children from 1-6 grades and contains more items than this adaptation. They have 20 items for antonyms, 15 for covering concepts, and 15 for synonym parts. Each of them were reduced into 10 items and created 30 items out of these three sections of the lexical knowledge task. The Ganuza & Hedman version of the antonym task contains several adverbs yet, in my adaptation all of the words are adjectives as in Kurdish the morphology of adverbs is relatively more complicated than that of many languages.

Administration and scoring of the task: Ganuza & Hedman (2019) presented the synonym test visually and orally to the students, yet antonyms and hypernym tasks were presented just orally. The same methods are followed for the test: the instructor reads all the choices aloud and shows the items to the student simultaneously. The hypernym and antonym tasks were all conducted only orally that is the instructor read aloud the items and the examinee answered verbally. Each part of the task consists of 10 items which makes 30 items in total. The total score for this task is 30 points, distributed equally among all the items. Each part of the task is expected to be completed in 2 minutes and therefore, the total time is 6 minutes to complete the entire task. The examinees should be told to say “pass” when they do not know the answer to an item. For the hypernyms, students are allowed to answer in the Finnish language because the point is to determine whether they understand the given words' relationships.

3.3.2.6 Reading Comprehension

This test was adapted from Somalian version (Flerspråkig kartläggning av avkodning och läsning - lärarhandledning för årskurs 1-2 somaliska.) that was developed by NAFO (2012) for grade-2 Swedish-Somalian children in Sweden (Ganuza & Hedmen, 2019). The items are constructed of a short sentence and four pictures. The examinee will read the sentence first and then pick the picture that visually depicts the sentence. The task aims to catch the lexical and

semantic skills by connecting texts and real-world events displayed as pictures. In this task, students can see the connection between the sentence and the picture even if they do not recognize Kurdish-specific letters but have minimal Kurdish syntactic and lexical structure existing in their linguistic repertoire. In the original test, there were 16 items of which only 10 items were picked due to Kurdish-specific language input limitations that cause additional linguistic difficulties regarding HL instructions.

Administration and Scoring of the task: The task will be implemented visually, and the student will complete it independently after the supervisor explains how to do it with the provided examples at the beginning of the task. The task includes ten items, and each item will be scored with 3 points since completing this task requires both vocabulary and syntactic skills. The total score for this task is 30 points, distributed equally among all the items. The time allocated for this task is 10 minutes.

3.3.2.7 Listening skills and Comprehension

The task was adapted from a literacy test developed by LUKIMAT (2011), a Finnish public web-based platform that provides information on children's literacy and mathematical learning process. LUKIMAT developed this test for measuring first-grade Finnish pupils' mother language literacy skills during the Spring season. Each item of the task is constructed from a morphologically correct sentence yet does not necessarily have logical meanings. Half of the items (sentences) are obviously illogical in terms of the meaning and the examinee is supposed to understand if it is logical or illogical. The original test includes 70 items that aimed to capture the fluency of reading sentences. However, in my particular test, it is aimed to measure listening comprehension by implementing the test orally as it is more in line with detecting language input, which was the other aspect of the study. Therefore the main purpose is to measure the comprehension and understanding of the spoken language. This task was adapted for this study and picked the most suitable ten items for the literacy test. While selecting the items, the quality of HL input and exposure limitations as well as the vocabulary context limited with the home environment was considered. The reason for diminishing the number of the items was the other qualifications of the HL dynamics, economical reasons in terms of time and volume.

Administration and Scoring of the test: The instructor reads the first two sentences to the examinee and explains how to detect whether the sentence's claim is logical. For pedagogical reasons and possible lack of concentration, the instructor will repeat twice the sentence and

ask if it is right or wrong. The examinee's answer will be marked on the answer sheet. Each item is scored with 2 points (20 p. in total), and the time allocated for this task is 2 minutes (20 s per sentence).

3.3.2.8 *Word Chain Test*

This task was adapted from a Somali version (Flerspråkig kartläggning av avkodning och läsning - lärarhandledning för årskurs 1-2 Somaliska.) that developed by NAFO (2012) for grade-2 Swedish-Somali children in Sweden (Ganuza & Hedmen, 2019). In the original task, there were 24 items, of which ten items were picked due to Kurdish-specific language input and exposure limitations that cause additional linguistic difficulties regarding HL instructions. Each item is a chain, the combination of three different words that are not morphologically and semantically suitable to form a meaningful combined word. The reason for choosing such distinct words was to prevent possible confusion with a meaningful combined word. Another consideration was to ensure that each chain includes at least one Kurdish-specific letter to diminish the effect of letter similarities between Finnish and Kurdish languages. The word chain test is a screening test that aims to measure children's ability to decode and recognize words. This test is generally used to detect reading difficulties such as dyslexia in primary and elementary level students. The test was adopted and standardized to detect mainly word recognition and lexical abilities in terms of written skills in the Kurdish language.

Administration and scoring of the task: As part of written skill measurements, the task will be completed by the students themselves, independently, with a pen. The instructor explains how to do it and demonstrates the rules on the given examples. Each of the 10 items is expected to be completed in 30 s. which means 5 minutes is allocated for the whole task. Also, each item is scored according to the amount of the words that students detects within the chain. Therefore, the examinees will get no points (0 p.) when cannot identify any word; 1 point for identifying 1 word and 2 points for identifying 2 words (identifying 2 word means the third word is automatically identified, due to the vertical lines drawn to split the chain).

3.4 Data analysis

The data analysis procedure is conducted via convenient techniques for the quantitative design, including descriptive statistics to provide main results, such as means, standard deviations, and frequency distributions. The aim is to present clear information regarding

literacy skills and HL competency levels among the participants. Another part of the procedure is depicting the inferential statistics, such as regression analysis or correlation, which reveals the complex relationships between HL dynamics, HL instruction, parental input, and other developmental stages regarding HL acquisition and preservation. The objective is to consider all the confounding variables, such as linguistic exposure and demographic factors to ensure more robust and meaningful conclusions. By using these powerful analytical techniques, comprehensive answers to the research questions were aimed and the overall analysis of the work was provided by clarifying and simplifying the findings. The analysis procedure began with collecting the paper versions of the surveys and the tests from the participants. After the paper versions were collected, each participant's instruments (the input survey and the literacy test) were combined in one file as one single test form. Then, these unified forms were manually entered into the Webropol survey creation system in order to digitalize the data. Later, necessary checks and controls were made by comparing the paper versions and the SPSS files, to fix possible errors. Finally, the digitalized data was processed via SPSS, the statistics software.

4 Descriptive Results and Interim Discussion

This section aims to demonstrate a detailed presentation of the results in accordance with the research question that profoundly seeks to find an answer for the impact of family dynamics on the language proficiency in Kurdish children in Finland. As there are large amount of variables, the endeavour is not only to explain all existing relationships, but also a deep focus on those relationships that composes the answer for research question.

The influence of the family dynamics on children's linguistic competency consists of various factors, including their age, family size, their exposure to language from their environment - such as parental input- etc. Throughout the investigation, the information about children's wider environment and the characteristics of their literacy skills, phonemic decoding efficiency, parental linguistic input, and many more factors to understand the foundations of their linguistic skills were collected. The interplay of these variables will provide a comprehensive response to the question.

During this chapter, I will first present the results of the Linguistic Competency Test, and then begin by providing a summary of the overall performance through main descriptive statistics to obtain a broad picture of the language proficiency of the attendees. This will also provide an understanding of the pupils' linguistic skills via different questions in the language test. This chapter will also present significant differences and instabilities among other categories. In order to conclude with the most possible consistent results, various inferential analyses to see the main patterns and relationships will be provided in the following sections. Then, the Parental Input Survey Results findings will be investigated and linked with the survey variables with the findings of the language skill test. Since the survey provides broad information about the child's linguistic environment, it is essential to begin with insight regarding the quality and quantity of the linguistic exposure children receive. Therefore, these descriptive statistics will comprise the dominant source of the participants' language as it will depict the typical linguistic environment in which children obtain the Kurdish language.

Throughout this chapter, I aim to provide the findings one by one, in a descriptive overview, to establish a ground for later discussions. Since the data comprises many variables, a detailed analysis was essential to picture the most critical correlations between the variables. The results will open the doors for the discussion chapter by creating a comprehension over the factors that are involved in children's language development.

4.1 General Descriptives

This chapter will provide the most essential descriptive statistics from the input survey and literacy test. Input survey combines the first 49 questions that aimed to ask from the parents about the linguistic environment in their household, the literacy test on the other hand, was performed with their children in order to determine their Kurdish literacy skills in relation with the provided data in the input survey. Since the data is too large, I am going to provide the descriptions only for the most essential variables here. One purpose of formulating this chapter is to create a foundation for the next chapter, the discussion, in which I aim to present other data patterns and inferential statistics.

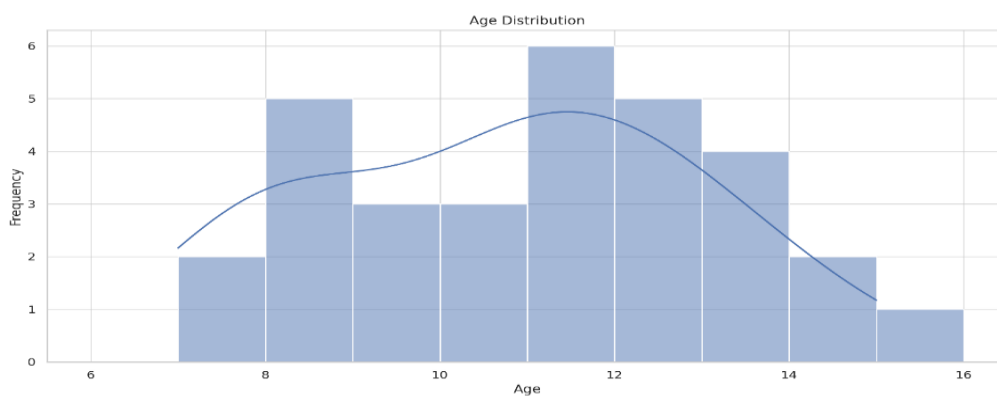


Figure 1: The Age distribution of the participating children

In total, 31 children participated in the research and were from 21 different families, meaning most of the participants were siblings. The age frequency diverted from seven to fifteen, of which six kids were 11-year-olds with the highest number, followed by five kids with 12-year-olds and five kids with 8-year-olds. There was only one child with the age 15 years.

Regarding the age of the child being regularly exposed to the Finnish language, not all children born in Finland have the same initial time. Some parents have raised their children at home till 3 to 4 years old while others had to send the child to a Finnish kindergarten during the first 2 years. The kindergarten was the main standard, especially when both parents were native Kurdish. Thus, the most common age range at which these pupils were regularly exposed to the Finnish language was 1-2 years old, with 32.3% of children. This ratio includes partly those born in Finland and some who arrived at Finland at this age range. The ratio was followed by 3-4 years old, with 19.4% of respondents, and 0-1 years old, with

12.9% of the sample. There were no children whose first regular exposure to the Finnish language was in the age range 7-8, 8-9, 11-12, 12-13, or 13-14.

Table 1: First regular exposure to Finnish

From what age onward does the child begin to be exposed to the Finnish language?	N	%
0-1 vuotiaat	4	12.9%
1-2 vuotias	10	32.3%
2-3 vuotias	3	9.7%
3-4 vuotias	6	19.4%
4-5 vuotias	3	9.7%
5-6 vuotias	1	3.2%
6-7 vuotias	1	3.2%
7-8 vuotias	0	0.0%
8-9 vuotias	0	0.0%
9-10 vuotias	1	3.2%
10-11 vuotias	2	6.4%
11-12 vuotias	0	0.0%
12-13 vuotias	0	0.0%
13-14 vuotias	0	0.0%

The attendance of the Kurdish HL instructions is one of the most important variability that comprises an important element together with the family dynamics which the present study focuses on. Table 2 presents the frequency and percentages of children's participation in HL instructions for Kurmanji Kurdish in Finnish public schools. The data provides the range of HL instructions' durations to which approximately 39% (12 children)- have never attended, while the others have joined in different lengths. As seen on the table, those who participated and continued for more than one semester are significantly higher than those who quit after several weeks. These findings show a consistent motivation regarding the attitude towards the Kurdish HL instructions.

Table 2: The time they have ever joined HL instructions or any other Kurdish language course.

Durations	Frequency	Percentage (rounded)
1 to 2 week	2	%6
1 to 2 months	3	%10
1 semester	5	%16
1 school year	6	%19

2 school years	3	%10
Never joined HL Inst	12	%39
Total	31	%100

The birthplace of the participants is another important factor both for language skills and the input quality for several reasons. First of all, the dominant language spoken in the birthplace of the child is expected to considerably impact the input amount, depending on the time that the child has lived in the place in question. Therefore, a child who born and raised in a Kurdish-dominated location will possess better language skills when compared to a child who was born and raised in Finland. Besides, cultural domination also influences language proficiency, especially during the process of language development in children, as the dialects and spoken language would be more heterogenous in a Kurdish-dominated area for a native Kurdish child. Although the birthplace also affects participants' linguistic input through the education system, the Kurdish kids are exclusive as they do not attend formal education of which the language is Kurdish in their homeland. In addition to these reasons, the birthplace also plays a significant role in language development via social interactions, media exposures and even family language. Thus, the participants who were born in Kurdistan (%35 of them) are expected to have more substantial proficiency, at least in verbal and phonetic level, which is confirmed by the present study.

Table 3: The birthplace of the participants

birthplace	Number & percentage
Suomessa	17 54%
Kurdien hallitsemassa kaupungissa kotimaassa	11 35%
jossain mualla	3 9%

As an input factor, the birth order of the sample is provided in *Table 4*. The distribution of the birth order has some important influence on the quality of the language input and the length of the language exposure: Firstborn children receive the language directly from their parents, allowing them to have more one-on-one interaction with adults who have advanced language. On the other hand, second or third-born children receive the language input partly from their siblings who still have weak language proficiency. Also, firstborn children obtain more parental attention compared to later-born children. Therefore, the birth order also may affect the results in terms of generalizability. The findings indicate that first-born children's

linguistic proficiency depends on many other factors, such as the size of the family, the number of native speakers inside the family, the duration of the HL instructions they participate etc. Yet, almost half of the participants (n. 14) are firstborn children; consequently, they are more likely to have better proficiency in Kurdish.

Table 4: Birth order of the participants

Birth order	N	percentage
First child	14	45%
Second child	7	22%
Third child	6	19%
Fourth child	4	12%
other	0	0.0%

We also asked the parent which language do they think their child speaks best, and their answers indicate that the prevailing language is believed to be Finnish with 52%. This shows consistency with the fact that most children participated in Finnish kindergartens at an early age. The ratio was followed by 26% for Kurdish as their children's best language. Also, 23% of parents reported a third language, such as Turkish, Arabic, Farsi or German. Among these other languages, Turkish, Arabic and Farsi are the politically dominant languages in Kurdistan. Kurds who came from Iran, Iraq, Syria or Turkey may speak better one of these languages due to language loss. However, since they still preserve their ethnopolitical identity, they send their children to Kurdish HL instructions and desire their kids learn Kurdish.

Table 5::The language that parents think their child knows the best

What is the best language of the child?	N	Percent
Kurdish	8	25%
Finnish	16	51%
Other	7	22%

As for the spoken language at home among the family members, the results show that more than half of these children (55%) speak in Kurdish with their mothers, while most of the mothers (71%) speak in Kurdish with them in an ordinary dialog. The figures get more interesting for the dialogs between the children and the fathers, with 71% of children speaking in Kurdish with their fathers and 84% of fathers talking in Kurdish with them. These figures

show that Kurdish is used more between fathers and children, with a higher ratio of fathers speaking in Kurdish with their children. This might have sociological reasons, such as fathers being more educated and perhaps more ideological about this issue. The construct of the family is primarily heterogeneous; that is, the intercultural marriages in which one of the parents is not a native Kurdish make up a large proportion (only 13% of mothers and 10% of fathers) in the sample. As for spending more time with the children, the findings show that 84% of the children spend more time with their mothers at home. Also, 81% of all respondents reported that both parents live together, which positively affects the input amount of the Kurdish language.

One of the crucial characteristics of Kurdish HL instructions was that the children come from different countries, although they come from same ethnic and linguistic background. The data shows that 39% of the fathers and 29% of the mothers come from Bakur (Eastern Turkey) with a similar ratio coming from Rojava (Northern Syria). However, the mothers who are originated from Rojava are slightly higher than those of Bakur, despite the fact that the Kurmanji-speaking Kurdish population is much bigger in Bakur. This might relate to the prevailing language loss among the Kurds in Bakur.

Table 6: The locations where the parents come from

Which part of Kurdistan the parents are originally from?	Mothers		Fathers	
	N	%	n	%
Bakur (Eastern Turkey)	9	29%	12	39%
Rojava (Northern Syria)	11	35%	9	30%
Bashur (Northern Iraq)	2	6%	2	6%
Rojhilat (Western Iran)	5	16%	4	13%
Kafkas&Sovieta Berê (Armenia,Azerbaidzan & Former SSCB)	0	0.0%	0	0.0%
Other locations	4	13%	4	13%

Regarding the environment in which the participating children are at home, the patterns in the results show that 77% or 24 people, a significant majority of the children, live with both parents. This can be due to the fact that divorce and single parenting are not common in the Kurdish society due to their cultural background. However, this two-parent structure of the families may not necessarily contribute positively to the language input as some of the families have non-native parents (See Table 6.). Also, the answers collected for the question "With whom do your child live?" indicated no third caregiver in the children's home

environment. Nevertheless, the family dynamics of the exposed group provide insights into the potential influences of the parental structure on other aspects of the children's input factors and language skills. The language background of the family is the main input factor for these children as they are in an environment where the dominant language is another language. Therefore, in order to measure the language background of the parents, not only their proficiency in Kurdish but also their proficiency in the Finnish language was investigated, because their level of command in Finnish would effect their confident in speaking Finnish, and that may thus reduce or increase the input quantity children receive. The analysis of parents' language skills in Finnish and Kurdish revealed an expected insight regarding the linguistic landscape of the family. The results indicate that only two mothers and two fathers (6%) stated they could not speak Finnish. These were probably those who had recently moved to Finland. The rest of the parents indicated having limited, moderate or high proficiency in Finnish. A similar pattern was revealed for the proficiency in Kurdish as well among the parents. However, a more significant proportion of fathers (42%) than mothers (32%) rated their Finnish proficiency as moderate. Perhaps it is because fathers are more exposed to the Finnish language, possibly due to more social interactions stemming from their higher rate in professional life.

Table 7: The Proficiency in Finnish and Kurdish Among Parents

Proficiency Level	Mother's Finnish	Father's Finnish	Father's Kurdish	Mother's Kurdish
ei yhtään	6% (2)	6% (2)	3% (1)	13% (4)
ei hyvin	35% (11)	29% (9)	10% (3)	10% (3)
melko hyvin	32% (10)	42% (13)	19% (6)	16% (5)
oikein hyvin	26% (8)	22% (7)	68% (21)	61% (19)

As it is explained in the previous sections, Kurdish people deprive of any formal Kurdish education in their homeland. Thus, most Kurds lack literacy skills in Kurdish despite the considerable amount of written publications in this language. Nevertheless, due to their strong identity or ideological concerns, some Kurds have educated themselves and obtained literacy skills in their language through their individual efforts. Those with literacy skills can use more standardized language and produce more complex linguistic outcomes. Such an advanced language level would undoubtedly contribute to the children's input quality by itself; however, other factors complicate the situation. According to the data, more than half

of the mothers (51%) cannot read or write in Kurdish, while this is lower (45%) for the fathers. As presented later in the next chapters, the role of the fathers in children's HL development became more crucial than the role of the HL instructions, which was expected to be the most potent determinant, perhaps due to the higher level of education in the Kurdish language, personal attitudes, political and cultural concerns.

Table 8: Literacy skills and the availability of books in Kurdish at home.

Skill/Question	Respondents (%)	Mothers	Fathers
Cannot read/write in Kurdish	48% (30)	51% (16)	45% (14)
Can read but not write in Kurdish	34% (21)	32% (10)	35% (11)
Can both read and write in Kurdish	18% (11)	16% (5)	19% (6)
Have Kurdish books at home	45% (14)		
Do not have Kurdish books at home	55% (17)		

The availability of Kurdish books at home aligns with the parents' literacy skills. A slight majority said they had no books in Kurdish, while 45% claimed to have at least one book in Kurdish at their home. The higher rate of illiteracy among the mothers stems from socioeconomic backgrounds as the females have lower opportunities to access education in the Kurdish society. Besides the spoken language fluency and literacy skills, parents' attitudes towards Kurdish also impact the entire language development process. According to the findings, a significant majority (77%) of the parents stated that it was "very important" for them that their children possess literacy skills in Kurdish, while none indicated that it would be "not important". Interestingly, slightly more than half of the parents have concerns that their children will lose the ability of Kurdish language (55%).

Table 9: Parents' attitudes regarding their children's proficiency in Kurdish and their concerns

	Very Important/Highly Concerned	Important/Occasionally Concerned	Not Important/Not Concerned
How important is it to you that your child can read and write in Kurdish?	77% (24)	23% (7)	0% (0)
To what extent are you worried about your child losing her Kurdish language skills?	55% (17)	26% (8)	19% (6)

4.2 Parental Input Survey Descriptives

As in previous chapters mentioned, the data of this study consists of two central parts. In the first part, I investigate the linguistic environment that is surrounded by family members, peers, and relatives. In the second part, I measure the children's literacy skills in various aspects. Parental input part, initially focuses on the Kurdish language sources that the Kurdish-backgrounded children in Finland receive linguistic input.

Language exposure, especially in the case of HL, is predominantly determined by the home environment. In addition to all other parameters, siblings also play a crucial role. During the present investigation, I aimed to discover the parents' observations about the dialogs between their children at home. According to this data, Kurdish appears to be the dominant language among the siblings at home. Since this data covers only children aged 7 to 15, I collected the relevant information from the parents about those siblings outside this age range. Thus, all the children between 7 and 15 are involved in this research and their language proficiency in Kurdish is tested, as it is discussed in following chapters. With this arrangement, the language in which the siblings speak to the participants and vice versa are questioned. Approximately 40% of the parents claimed that Kurdish is the most spoken language among the children at home. Beside Kurdish and Finnish, as a third category, the "other" languages, primarily Turkish, were spoken among the children at home. The Turkish language comes with the family from Turkey, where most Kurds have a high exposure to it. Some parents from Bakur (Eastern Turkey were entirely Turkish speakers despite their self-proclaimed strong identity of Kurdishness.).

Table 10: The most spoken languages among the siblings at home. The data includes siblings outside the age range of 7-15. (the percentages are rounded)

Questions	Kurdish	Finnish	Turkish	German	Arabic	Farsi	No Siblings
The language siblings uses the most when speaking to the participant	40.0% (12)	26.7% (8)	20% (6)	3.3% (1)	3.3% (1)	3.3% (1)	6.6% (2)
Language the participant uses most when speaking to his/her siblings	38.7% (12)	32.3% (10)	16.1% (5)	3.2% (1)	3.2% (1)	3.2% (1)	6.4%

The linguistic environment at home changes significantly, especially when the family members extend to a wider scale, including grandparents or other adults besides the parents. In order to unveil as many dimensions as possible, the participant parents were asked whether there are other adults in the same household with the children in question because, in a traditional Kurdish family, it is considered to be a social norm that the primary family extends to cover farther family members, especially the grandparents. However, the data displays that the vast majority of the Kurdish families, i.e. 80%, do not have another adult living in the same household in Finland. Since most of the families are first-generation immigrants in this case, the grandparents and other family members are not even in Finland. In fact, the participants were asked about their relatives who live in Finland and almost half of them (45%) responded that they do not have any relatives in Finland. However, some households still had a third adult living with the children. When they were asked about the most spoken language between the third adults and the participant children, almost all answered that it was the Kurdish language. None of the parents who responded to the questionnaire chose Finnish or another language for the interaction between children and the third adult in the household.

Table 11: The interaction between children and other adults in the household.

The third adult in the household	Response Count (Percentage)	The language that the child Speaks to this adult the most	The language that this adult Speaks to this child the most
Grandmother (isoäiti)	3 (9.7%)	Kurdish	Kurdish
Aunt (täti)	3 (9.7%)	Kurdish	Kurdish
No additional adult	25 (80.6%)	-	-

Since the environment outside the household strongly influences the linguistic input dynamics, I explored the interactions between the child and their Kurdish-speaking peers and cousins with whom they spend the most time. Aiming to understand the language environment of the participant children in Finland, I examined the approximate number of the child's Kurdish-speaking peers, their interaction language, and the time they spent together weekly in hours. Considering the immigrant background of the families, children do not have many cousins and peers in their surroundings. The data shows the average number of Kurdish-speaking friends or cousins of a child in Finland is 4 with a median of 3, which is not a surprising figure in urban locations where most of the immigrants reside. Also, the data revealed that most of these peers have an intermediate level in the Kurdish language. However, despite that, the predominant language of interaction between the participant

children and their peers is the Finnish language, with 58% that is also due to the effect of the formal education that the participants join in Finland. A small percentage of the interactions were observed to be made in Turkish again, stemming from the sociolinguistic backgrounds of the Kurdish families from Bakur. In addition, the average number of hours spent with a Kurdish-speaking peer per week was 1.9 hours. It is worth remembering that in this context, “Kurdish speaking peer” does not mean that a peer who uses only Kurdish, but it means they have a Kurdish background like the participant children.

Table 12: Interaction language between the participant children and their peers

Parameters	Kurdish	Finnish	Other languages (Turkish/Arabic)	Statistics (If Applicable)
Language in which the peers speak to the child	29%	58%	13%	-
Language in which the child predominantly speaks to the peers	39%	48%	13%	-
Average number of Kurdish-speaking peers	-	-	-	Avg: 4.3, Median: 3, SD: 3.3
Time (h) spent with Kurdish speaking peer weekly	-	-	-	Avg: 1.9 hrs, Median: 1 hr, SD: 1.7

Part of the survey reveals information about weekly hours of various activities related to Kurdish that which children are involved. These activities include the HL instructions and other formal education in the Kurdish language and more passive activities such as watching TV and listening to music in Kurdish language. Formal Kurdish education also includes some short-term language courses by various Kurdish associations but predominantly consists of the HL instructions provided for immigrant-background children in Finland. Due to the lack of opportunities and other challenges, Kurdish education is limited; moreover, most of the participants do not receive such education on a weekly basis. Reading in Kurdish is not very common with an average of only 0.5 hours per week throughout the sample. This is partly due to the lack of interest and materials at home. The illiteracy of the parents also plays an important role in this result. The most common activity that were observed among the children is watching television in Kurdish, to which they engage an average of four hours a week. During the detailed interviews with the parents, I realized that most of these kids who are watching Kurdish TVs are passively exposed to it, while their parents watch TVs to follow the news and developments in their homeland. Regardless, such type of passive participation also contributes to the source of input in terms of language and culture. Another

everyday cultural activity for their parents is to engage in music, a vital element of the Kurdish culture, as it is in many other cultures. Thus, Kurdish households frequently listen to music from TV, smartphones, or computers. Yet, listening to music was observed to be a less common activity with an average of 2.9 hours per week compared to watching TV and videos.

All in all, linguistically more active engagements such as speaking and reading in Kurdish is less observed according to their parents who answered the survey; however, these children receive a significant amount of linguistic input via the abovementioned passive activities such as watching TV and listening to music in Kurdish.

Table 13: Active and passive participation regarding exposure to the Kurdish language

Activity	Average Hours per week	Median hours per week	SD	Range
Kurdish HL instructions	0.7	0.0	0.9	0.0 - 2.0 hrs
Interaction with other Kurdish-speaking peers	1.9	1.0	1.7	0.0 - 8.0 hrs
Engaging in reading material (books, internet, etc.)	0.5	0.0	0.8	0.0 - 3.0 hrs
Watching TV & videos in Kurdish	4.0	3.0	2.9	0.0 - 10.0 hrs
Listening to music in Kurdish	2.9	3.0	2.2	- 9.0 hrs

4.2.1 Input amount

4.2.1.1 Weekdays

We have asked the parents to provide information about the Kurdish speaker who spends time with the child in a specific time range on an average weekday by giving them a weekday schedule. The parents marked the relevant checkboxes on the schedule to describe the time range in which the child in question was actively interacting with people. The time range was divided into hourly periods, and the number of interactions for each time interval was divided by the person (for example, mom, dad, siblings, etc.) with whom the child shares the exact physical location that is available for interaction.

Table 14: the input sources during the regular weekdays

Time range	Mother	Father	Siblings	School	Others
7:00-8:00	18	24	16	0	1
8:00-9:00	1	1	3	1	0

9:00-15:00	1	0	1	1	2
15:00-16:00	0	0	2	2	2
16:00-17:00	15	15	14	0	3
17:00-18:00	16	21	16	0	8
18:00-19:00	20	25	18	0	19
19:00 - bedtime	18	23	18	0	8

Throughout the weekdays, the most extended interaction happens with fathers in the early morning times (7:00-8:00 am). Some of the fathers claimed that during this time, the mother is busy preparing breakfast while children spend more time with their father in the sitting room. As during the weekdays, children are at school between 9:00 – and 15:00, the language input is predominantly in Finnish, so they are not exposed to the Kurdish language almost at all. Perhaps due to common customs among the Kurds, friends and relatives visit each other's home during the evenings, primarily for dinner. Therefore the children receive the highest interaction from 18:00 to the bedtime.

To fully understand the quantity of language exposure, I have conducted a calculation in which the time ranges are divided among the category of interaction (e.g. mother, father, etc.), multiplied the amount of the marked cells in each category by the duration of the time, and sum up the hours during the day, as follows:

Time ranges

7-8 1 hour

8-9 1 hour

9-15 6 hours

15-16 1 hour

16-17 1 hour

17-18 1 hour

18-19 1 hour

19:00 to bedtime This time interval was assumed to be 3 hours, considering the bedtime would be 22:00.

To find out the total number of hours 31 children spend in interaction with each Kurdish speaker on a typical weekday:

- Mother: $(18 \times 1) + (1 \times 1) + (1 \times 6) + (15 \times 1) + (16 \times 1) + (20 \times 1) + (18 \times 3) = 130$ hours (cumulative for 31 attendees), $130/31 = 4.19$ hours. With the same math:
- Father: = 156 hours (cumulative for 31 attendees), $156/31 = 5,03$ hours
- Siblings: = 148 hours (cumulative for 31 attendees), $148/31 = 4,77$ hours
- School time: = 6 hours (cumulative for 31 attendees), $6/31 = 0,19$ hours. (11 minutes)
- Other adults: = 87 hours (cumulative for 31 attendees), $87/31 = 2,81$ hours.

Our respondent children (n. 31), on average, interact most with their fathers with a total of 156 hours while the least interactions happen during school hours when they predominantly use the Finnish language, as expected. It is also important to note that the peak of interaction time for mother, father, siblings and other speakers is between 18:00 and 19:00, indicating that the family and the community members are most active during these times.

4.2.1.2 Saturdays

We also collected information regarding the record of interactions for ordinary Saturdays when the children stay at home and spend more time with their parents, peers, and other people around the family. Considering that multiple Kurdish-speaking people might be together simultaneously with the children, I concluded that more than one interaction may occur in one-time slot during the day. For economic and practical reasons, the day was divided into periods of 2 hours. Then, the number of interaction hours in each time slot with the relevant people was determined as previously done for the weekdays. For example, since there were 31 participants, each child was calculated to have about 8.77 hours of interaction with their mother on Saturdays. The peak time for the interactions was observed to be in the morning and early evening, possibly during mealtimes when the family members are in close contact. Interactions with other adults peak later in the evening, which may indicate larger family gatherings or community events. The results are as follows.

- Mother: = 272 hours (cumulative for 31 attendees), $272/31 = 8,77$ hours
- Father: = 218 hours (cumulative for 31 attendees), $218/31 = 7,03$ hours
- Siblings: = 208 hours (cumulative for 31 attendees), $208/31 = 6,71$ hours
- Other adults: = 112 hours (cumulative for 31 attendees), $112/31 = 3,61$ hours.

The data indicates that the respondents receive significant HL input from their environment during the Saturdays. The absence of school interaction reduces the exposure to the Finnish language. Children mostly live in a Kurdish-spoken environment, especially with the participation of relatives, other family friends, and peers native to Kurdish.

4.2.1.3 Sunday

Similarly, I also collected information regarding the record of interactions for ordinary Sundays. The question's parameters were designed precisely the same as the one for Saturday, that is, the day was divided into periods of 2 hours. Then the same calculations were performed and the following results found out:

- Mother: = 274 hours (cumulative for 31 attendees), $274/31 = 8,84$ hours
- Father: = 233 hours (cumulative for 31 attendees), $218/31 = 7,68$ hours
- Siblings: = 226 hours (cumulative for 31 attendees), $208/31 = 7,29$ hours
- Other adults: = 120 hours (cumulative for 31 attendees), $120/31 = 3,87$ hours.

According to the data, each child in the group spends the most time with their mother on a typical Sunday, with approximately 8.84 hours. Also, the average duration of interaction with other people is significantly high, with about 4 hours of the time. Like Saturdays, school does not have any role on Sundays either. The high level of family interaction is considerable, as it was on Saturdays.

4.2.1.4 Summer holidays

As for an ordinary summer holiday day, the collected information about interaction records suggests a clear picture of the high amount of input in the Kurdish language. The question's parameters were designed exactly the same as the one for Saturday and Sunday: the day was divided into periods of 2 hours. Then the same calculations performed:

- Mother: = 246 hours (cumulative for 31 attendees), $246/31 = 7,94$ hours
- Father: = 284 hours (cumulative for 31 attendees), $284/31 = 9,16$ hours
- Siblings: = 210 hours (cumulative for 31 attendees), $208/31 = 6,77$ hours
- Other adults: = 160 hours (cumulative for 31 attendees), $160/31 = 5,16$ hours.

- School: = 2 hours (cumulative for 31 attendees), $2/31 = 0,06$ hours.

According to the findings, each child in the sample group spends the most time with their fathers (9.16 hours) during the summer vacation. Interestingly, Children spend more time with their fathers than their mothers during this vacation. A possible reason might be some sort of summer school or courses that mothers participate in when the fathers have a summer holidays. As it can be seen the average time spent with other agents are also relatively high, due to the intense interactions in the family environment. On the other hand, the effect of the school is almost non-existent (only 0,06 hours on average). Some sort of short-term summer courses or a special educational program may cause these minimal school interactions.

Compared to the previous findings, the time with "other adults" seem to have increased in the evenings (18-22) which may stem from events among the close community, such as gatherings, parties, or other activities that are more common during the summer evenings. Notably, the amount of Kurdish input from the family (especially from the parents) remains significantly dominant during this time. It is also a common habit among immigrants to visit their homelands during the summers, intensifying the exposure to HL interaction.

4.2.1.5 Other holidays

Finally, the other holidays of the year, such as national days, Christmas, and semester holidays, the data suggest similar results regarding the amount of input in the Kurdish language. The calculations for such a typical day are as follows:

- Mother: = 252 hours (cumulative for 31 attendees), $252/31 = 8,13$ hours
- Father: = 266 hours (cumulative for 31 attendees), $266/31 = 8,58$ hours
- Siblings: = 210 hours (cumulative for 31 attendees), $208/31 = 6,77$ hours
- Other adults: = 138 hours (cumulative for 31 attendees), $160/31 = 4,45$ hours.

Similar to the summer holidays, during the other holidays also, each child has the most time with their father (approx. 8.58 h), followed by their mother (approx. 8.13 hours) and then the rest of the surroundings. Compared to the summer vacation, during the other vacations, the input amount from with other adults has decreased from 5.16 hours to 4.45 hours, which may have been due to fewer community events and activities.

4.3 Linguistic Competency Test Descriptives

4.3.1 Phonetic proficiency (Letter reading) test results

The first item set of the linguistic competency test measured phonetic proficiency. The aim is to describe children's ability to read Kurdish letters that are relatively difficult and have different pronunciations from the similar ones in the modern Finnish alphabet. Therefore 16 letters from the Latin Kurdish alphabet were chosen, which can be divided into two categories based on the difficulty of recognizing them. Thus the relatively easy ones can be “Familiar Letters” (S, E, Z, U, W, Q, Î) which exist with the same pronunciation and phonetical values in the Finnish-alphabet as well; and the rest are “Kurdish specific latinic Letters” (Ş, C, Ç, Ê, I, Y, J, Û, X). Then, during the data collection, I scored both categories differently, meaning that the familiar letters were valued with a maximum of 1 point because these letters sound almost identical with their equivalents in the modern Finnish alphabet that children are familiar with. As for the Kurdish-specific letters, on the other hand, I assigned 2 points during the data collection because recognizing those letters without any previous training is difficult. Therefore, to have reliable scores from each participant, measure the most precise phonetic knowledge and distinguish participants who have any sort of prior education on Kurdish from those who do not, such scoring system was applied before interpreting the factor analysis later in the analysis process. Yet, at this point, I have calculated the descriptive statistics for each letter of which two examples from Kurdish-specific letters can be seen as follows:

- Ş ş: This letter sounds like “sh” in English, and it does not exist in the modern Finnish alphabet. According to the findings:
 - 66.7% of them recognized.
 - 33.3% of the pupils did not recognize this letter.
 - Average score: 1.3 (which indicates the majority understood it correctly).
 - Median: 2 (which indicates that over half of the participants received full marks).
- Ç ç: This letter sounds like “Ch” in English and it does not exist in the modern Finnish alphabet. According to the findings:
 - 60% of the children recognized it and secured the full points,
 - 40% of them did not recognize it,

- Average score: 1.2. which confirms that the majority of the participants recognize the letter.
- Median: 2, which indicates that the bulk of the students managed to receive the full score.

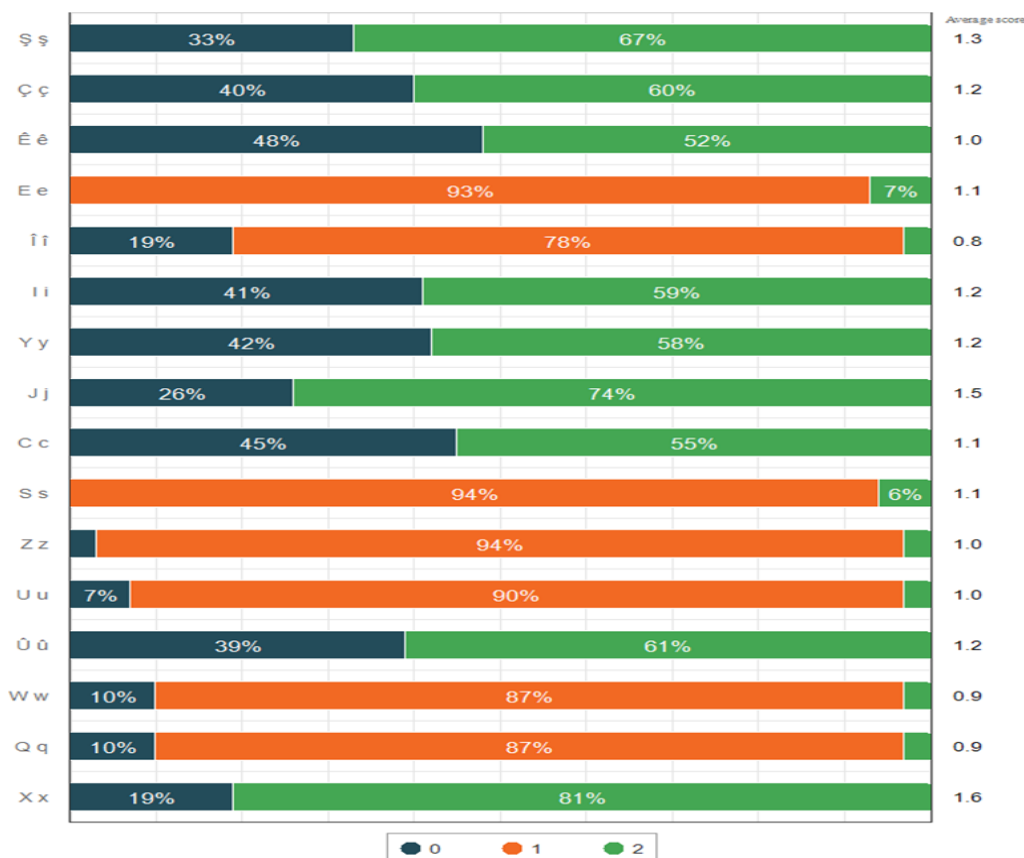


Figure 2: Phonetic proficiency measure for distinctive Kurdish letters (the percentages are rounded)

The percentage of participants who managed to recognize and receive full points from familiar letters was very high, as these letters almost all exist in the Finnish alphabet, which they learn at schools. As for the Kurdish-specific letters, slightly over 50% of the children recognized and received 2 points. This indicates that more than half of the children has learned these letters from somewhere. As previously stated in the findings, 61% of the participants received a formal Kurdish education at some point. Considering that, the percentage of those who recognized the non-familiar letters is influenced by that background.

Another categorization of the letters was made in order to see more precise results regarding the attendee's letter recognition skills. In this respect, I divided the given 16 letters into three sub-groups:

1. The letters that are identical in shape and sound in both alphabets: W, Z, Q, U, E, S, Î
2. The letters that have only similar shape in both alphabets but sounds different: C, Y, J, I,
3. The letters that are unique to the Kurdish alphabet both in shape and sound: X, Ç, Ş, Û, Ê

We also have applied factor analysis to confirm this categorization as well as to obtain more precise results during the data analysis on SPSS software.

Table 15: Rotated component matrix results for the internal factor analysis of the letter task.

Letters (each letter asked separately)	Component1 (Letters that are totally same in both Finnish and Kurdish)	Component2 (Letters that look same but sound different in Finnish and Kurdish)	Component3 (Letters that exist only in Kurdish)
W w	,891	-,124	,186
Z z	,865	,254	-,167
Q q	,865	,165	
U u	,819	,356	-,301
E e	,664	-,350	,164
S s	,588	,143	,183
Î î	,421		,300
C c	,120	,832	,200
Y y	,124	,805	,133
Ş ş		,748*	,380
J j		,638	,253
I i	,237	,458	,330
Û û		,325	,795
Ê ê	,126	,325	,784
Ç ç		,550	,648
X x		,135	,547

As shown in the table above, according to the factor analysis, the most strongly related letters are the first component, those letters that exist in both alphabets with the same appearance and pronunciations. Therefore this category was the easiest category of letters to read for the respondents. Among them -î- (the i with circumflex) has a relatively lower value (,421) of loading, which can be explained by the effect of similarity between the circumflex mark and

the dot on the top of the letter (short i). As for the second component in factor analysis, the letters in the group have different sounds but same shape in both languages, and therefore have a relatively lower degree of affinity. Since knowing these letters would not necessarily be easy due to the differences in sound, the similarities in the appearance could still potentially help to assume the letter. Thus, this category is the second most difficult group of the letters and related to the general skills in Finnish literacy (as for a side note, the letter Ş (S with cedilla) seems to have a stronger connection (.748) with this second component, although it belongs to the third component. The reason for the discrepancy may stem from the strong sound of this consonant in the Kurdish language). The third component that covers only the unique letters in the Kurdish alphabet is considered the most challenging group for the participating children, as these letters require formal or non-formal training in Kurdish literacy. However, given that they are eventually derived from the same Latin roots, even though these letters are “unique”, they are still somehow related to the Finnish letters in terms of their appearance or sound. Some of these letters such as ç , ê , û , ş have only the diacritical marks -such as circumflex, cedilla, dot above, etc.- and their pronunciation is also close to their correspondents in the Finnish alphabet. In addition, interestingly, the letter “x” (voiceless uvular fricative) have a relatively lower value (.547) in this category, although both the sound and name are completely different from the corresponding X in Finnish letter. This is presumably associated with the distinctiveness of the sound and its extensive applicability in the Kurmanji Kurdish.

Moreover, regarding the internal consistency, the 16 items (each letter was considered as one item) in this task were tested and the value of Cronbach’s Alpha was found to be .863, which means a “good reliability” for the set of the items.

4.3.2 Word picture test results

This "picture into word" task aimed to assess the ability to correctly identify the Kurdish words -mostly abundant in daily life- corresponding to the given four pictures. It also demonstrates the level of students’ skills in regarding Kurdish words. By connecting the words and pictures, participants have the skills to connect items with semantically equivalent meanings in their lexical corpus. The task also measures the basic vocabulary related to daily life and home environment as the Kurdish HL bilinguals should have. The task is part of reading exercises. The results confirm that the majority of the participants are able to connect words and pictures.

Table 16: The General results from the Word to Picture Test (the percentages are rounded)

Question number	Options	Correct Word	Correct Answer (%)	Top Incorrect Answer
1	şepal, tofan, qertal, gopal	gopal	61.3%	şepal (22.6%)
2	kuçik, biçuk, hurik, gurçik	kuçik	87.1%	gurçik (6.5%)
3	dan, nan, şan, ban	nan	90.3%	ban (9.7%)
4	duh, gur, guh, gul	guh	80.0%	gur (10.0%)
5	serî, herî, perî, derî	derî	93.6%	perî and serî (3.2% each)
6	herî, kesp, hesp, çesp	hesp	93.5%	kesp (6.5%)
7	guman, deman, zeman, ziman	ziman	67.8%	zeman (29.0%)
8	tilî, tirî, gulî, milî	tilî	67.7%	tirî (12.9%)
9	qefes, meqes, nekes, seqet	meqes	87.1%	nekes (9.7%)
10	şax, neh, şeh, meh	şeh	80.6%	şax (9.7%)

As previously mentioned, each question contained a picture followed by four phonetically similar words of which only one was the real name of the given picture. Since the words are phonetically close to each other and contain many common letters, the correct answer would prove the knowledge of the word and the ability to distinguish it from other phonetic distractions.

The high percentage of right responses for most items suggests that most respondents have a good proficiency in Kurdish. For instance, whereas 61% of participants selected the right answer for "gopal," 87% of people chose the right answer for the word "kuçik." Such high percentages demonstrate that a large number of students are able to recognize and understand these relatively frequent Kurdish words. The results show that students are confused connecting some words with the corresponding pictures. An example could be the seventh questions, where a considerable amount of the participants (29%) confused the word zeman with ziman. This might be caused by the extreme similarity between the two words; however, in almost all of the Kurdish dialects, the phonetic distinction between these two words is clear and common. Thus, I believe the confusion is mostly related to the literacy skills and general knowledge in Kurdish. Also, the higher rate of correct answers may demonstrate that these words have been used more widely in the respondent's environment. An example for this could be "kuçik" (dog), "nan" (bread), "derî" (door) and "hesp" (horse), some of the most frequent words, that were correctly detected by more than 90% of the students. Regarding the clarity or unambiguousness, all pictures were ensured to have equally same format, same size and same style (See the test in the attachments).

Also after the statistical reliability check, the internal consistency of the scale was measured with the value of 0,534, indicating a “poor reliability”. Such outcome is most probably related to the dialectical differences among the participants, as some words were more common in some dialects compared to others. For example, some students who live in locations that are more influenced by the Turkish language, may use a borrowing word from this language, although they have their own Kurdish word.

4.3.3 Real word reading fluency test results

This task aims to measure the skills of recognizing the general vocabulary of the student regarding real Kurdish words. The given words in the task are real words, including letters from the Kurdish latin alphabet. Some words include more than one letter, which aims to extract clear evidence for literacy skills. Also, we were cautious to ask the most common words between Kurdish dialects so that the test would be applicable for the sample. Yet, this task focuses more on the reading ability of the words. The task was developed cautiously because the Kurdish language has a wide range of vocabulary due to its special political position. During the development process the task was piloted among a group of students to enforce reliability. After the data collection, the desired internal reliability was also confirmed with a score of 0,853, the measurement of Cronbach’s Alpha. This score indicates good internal reliability among the set of items.

Our findings (Table 17) show that the majority of the respondents answered correctly in this task. However, some words were responded to by more than others. The word şekir (En: sugar) was correctly detected by 93% of all respondents despite containing ş, a distinctive Kurdish-specific letter. A possible reason for this can be the availability of this word across Kurdish dialects. This word sounds similar in all Kurdish dialects and dominating languages in Kurdistan -i.e., Turkish, Arabic, and Persian. (Turkish: sheker, Persian: Shekr, Arabic: Shukar). Also, the Finnish version of the word “sokkeri” has phonetic similarities with the given word in the task. All these factors made it relatively easier to read the word correctly, based on an “educational guess,” despite knowing about ş in the Kurdish alphabet.

Table 17: The results of Word Reading Efficiency Test. (the percentages are rounded)

The given word	Correct answers	Wrong answers	Average
çav	77.4%	22.6%	0.8
xêr	71.0%	29.0%	0.7

şîr	83.9%	16.1%	0.8
qut	83.9%	16.1%	0.8
şêr	58.1%	41.9%	0.6
jan	80.6%	19.4%	0.8
kêr	74.2%	25.8%	0.7
jin	74.2%	25.8%	0.7
yar	71.0%	29.0%	0.7
xuya	64.5%	35.5%	0.6
çûk	83.9%	16.1%	0.8
merc	80.6%	19.4%	0.8
civan	71.0%	29.0%	0.7
xwarin	67.7%	32.3%	0.7
hindik	90.3%	9.7%	0.9
yekşem	74.2%	25.8%	0.7
çarşem	83.9%	16.1%	0.8
şekir	93.5%	6.5%	0.9
cîran	64.5%	35.5%	0.6
jiyan	67.7%	32.3%	0.7

On the other hand, the words "*şêr*" (58% correct), "*xuya*" (64% accurate), and "*cîran*" (64% correct) received relatively lower correct responses from the children. As in all the other words, these ones also contained at least one Kurdish-specific letter; for instance, the word *Şêr* (Eng: lion), has two distinctive letters (*Ş* and *ê*) of which the latter is even more challenging to identify. There is also another word in Kurdish *Şer* (war) that has very little difference from the given word. Thus, reading this word correctly requires a previous knowledge about these two phonemes. Yet the difficulty that the respondent faced may have additional explanations: The word *xuya* (Eng: visible) may not be as common as other words in the daily life. This word also has many other synonyms that can be replaced with during daily life.

Moreover, this word is an adjective, making it even easier to replace with borrowings from Finnish during interactions in a Finnish-dominated environment. As for the word *cîran* (Eng: neighbor), a possible explanation might be due to the dialectal variation between different pronunciations of the word. (In some Kurdish dialects, the word becomes "*cînar*").

The findings show that more than half of the children managed to read the words. Even for those words with under 0.7 median value, most children still pronounce them correctly. It is also worth noting that some of the respondents did not know or remember the meaning of the given word during the test, yet they correctly read it, despite the fact that they could not fully recognize the Kurdish-specific letters in the word. Considering that the students were provided with only 15 seconds of time to read aloud each word, their literacy skills and linguistic resources in Kurdish is significant. The results of this task reveal that these pupils generally have strong ability to read and recognize Kurdish words, even when they do not have a formal education for this language, and even when their parents are themselves illiteracy in Kurdish. The successful score in the test, can explain a high understanding in detecting Kurdish words and the phonetics in Kurdish. However, the results also point to potential areas where children failed to respond correctly, especially challenges regarding Kurdish-specific letters and dialectal variants are important notes for further investigations.

4.3.4 Phonemic decoding efficiency test results

The phonemic Decoding Efficiency (PDE) test aims to measure graphophonetic knowledge by reading aloud given pseudowords. In this test, 20 fake words were listed and 2 minutes of time were five to the participants to complete the reading. Due to special position of the Kurdish language, these fake words were chosedn in a way that suits the general Kurdish phonetics and vocal harmony. Thus, each of these words also contains at least one Kurdish-specific letter that differs to measure Kurdish literacy skills.

As for the internal consistency of this set, the reliability value is 0,920, which is “excellent reliability”. Such strong reliability indicates that the items work well together and have very high internal consistency.

Table 18: phonemic Decoding Efficiency (PDE) test results(the percentages are rounded)

The given word	Correct answers	Wrong answers	Average
şê	64.5%	35.5%	0.6
sec	74.2%	25.8%	0.7
cik	83.9%	16.1%	0.8
çêj	51.6%	48.4%	0.5
yûq	67.7%	32.3%	0.7
wuş	74.2%	25.8%	0.7

zêş	71.0%	29.0%	0.7
şêlt	64.5%	35.5%	0.6
cisqu	77.4%	22.6%	0.8
zexiç	74.2%	25.8%	0.7
çûjnim	64.5%	35.5%	0.6
jeyen	67.7%	32.3%	0.7
xwaj	61.3%	38.7%	0.6
çîquwaz	74.2%	25.8%	0.7
jêrînde	61.3%	38.7%	0.6
qaytejî	51.6%	48.4%	0.5
eşxare	77.4%	22.6%	0.8
eswîrz	83.9%	16.1%	0.8
xewşazîr	74.2%	25.8%	0.7
mirjayok	41.9%	58.1%	0.4

Since the aim is to explore the ability to decode words, students are not required to recognize the letters or rely on previously stored vocabulary knowledge in Kurdish. Also, to increase the difficulty of the words the options that includes more Kurdish specific phonemes and letters were chosen. Thus, the first pseudoword *şê* was the shortest, while the last *mirjayok* was the longest and consequently the most challenging. However, despite that, *şê* was not the word that received the highest number of correct answers (only 65% read it). In contrast, *mirjayok* on the other hand, received the lowest correct answers (only 42%), consistently to its phonetic difficulty.

Nevertheless, according to the findings, the students performed well in most of the words. The mean for most of the pseudowords remained between 0.7 and 0.8, which proves that the majority of the participants were successful in performing the task. The most correctly answered pseudoword was “*cik*” (84%), and that was followed by “*cisqu*” (77%) and “*eswîrz*” (84%). Perhaps it is because these pseudowords were relatively more manageable to read, as there the only distinctive Kurdish-specific letter is “c” in the first two words. The pseudoword *eswîrz* contains *î*, which is very similar to the Finnish “i”. This result may also suggest that these children found some phonemic combinations easier or more intuitive to decipher.

As for the challenging pseudowords, '*mirjayok*', was particularly difficult, with only 42% of correct answers, and it was followed by *qaytejî* (52%), *çêj* (52%), *jêrînde* (61%). One

explanation for the these low scores could be the combination of Kurdish-specific letters - such as j- in these forms. In addition, previously the letters j and y were detected to be particularly difficult to recognize for these children because these two phonemes have completely reversed pronunciations in Finnish, that is, Finnish j, is the same as Kurdish y. As each pseudoword contains at least one Kurdish-specific letter, the findings indicate that students generally have a good command of the Kurdish alphabet and phonetics. However, the variations and fluctuations for particularly specific pseudowords may indicate specific difficulties regarding some phonemes.

4.3.5 Vocabulary depth: Antonyms

As part of the larger vocabulary depth test, this task aims to evaluate the depth of Kurdish vocabulary knowledge in terms of antonyms and contains ten common words. Therefore, the task examines children's ability to see the semantic relationships and identify words of opposite meaning for given words. The words are primarily common adjectives that are used in all dialects of Kurmanji, regardless of the location and political borders that divides Kurdistan. Since the participants are bilingual children, they are expected to have wider understanding of elements in the language such as antonyms, which can provide extensive insight about their metalinguistic capability and other nuances of the language in general.

Our data shows that students performed well in this task and successfully identified antonyms with a high percentage of correct answers for almost all of the words. Among the words, the first adjective *mezin* (big) received extremely high correct response rates (100%), proving the proficiency at least at the basic level in Kurdish. This word was followed by other adjectives such as "*germ*" (hot) with 93% correct answer, "*feqir*" with (90% correct answer, and "*baş*" (good) with 87% correct responses. These scores are evidence for understanding well the logic behind the antonyms and common vocabulary among students.

Also, the Cronbach Alpha value was measured as,726, which means "acceptable reliability" for the internal reliability of the item set in the task. This value represents the degree of the relationship in terms of the underlying context for the items.

Table 19: The scores obtained for the task Antonyms (the percentages are rounded)

The given word	Correct answers	Wrong answers	Average
mezin	100.0%	0.0%	1.0

tarî	54.8%	45.2%	0.5
jor	77.4%	22.6%	0.8
baş	87.1%	12.9%	0.9
fireh	64.5%	35.5%	0.6
germ	93.5%	6.5%	0.9
hişk	74.2%	25.8%	0.7
zuha	71.0%	29.0%	0.7
bilind	77.4%	22.6%	0.8
feqîr	90.3%	9.7%	0.9

As in the *table 19* can be seen clearly, some words seem to be more challenging than others, for instance '*tari*' (dark) had only 55%, and the word '*Fireh*' (wide) received only 64% correct answers. This was mostly caused by the rarity of these words or their antonyms in their Kurdish dialect. However, there was a clear consistency in high median values that underlines the general skill in understanding these words and remembering their antonyms. It is important to remember that the instructor was reading these words aloud for the participant; therefore, they did not need to remember Kurdish-specific letters or correctly read the given word. All they needed to do was think about the opposite word, remember it and tell it to the test instructor verbally. Thus, since the task was administrated orally, the challenge was tackled not only by understanding the meaning of the word but also the ability to recall its antonym quickly. Also, the duration of the task was in total was 2 minutes, which means the participants had approximately 12 seconds per word during which the instructor was reading aloud and they were answering. This may be considered a short period of time, in order to think about the opposite of the word and react correctly. Considering this, the high ratio of the correct response becomes even more impressive in understanding the semantic complexity of the Kurdish language. However, the lower scores for specific words i.e. *tari*, *fireh*, *zuha*, *hisk* provides insight into possible areas for further investigation. These words can also be the focus in HL instructions in the future for the Kurdish HL teachers in Finland. It may be helpful for teachers to investigate further why certain words have a lower correct response rate. This may be due to the complexity of the words, the frequency with which they are used in education or other external factors. Addressing these areas can increase the depth of students' vocabulary and overall language skills.

4.3.6 Vocabulary depth: Hypernyms

The Hypernyms section of the Vocabulary Depth Test was designed to assess students' understanding of the general category or a group of words that includes a list of specific words under the same semantic category in Kurdish. For example, if it consists of the words "cat, dog, cow, horse", the hypernym would be "animals". The task aimed to assess the ability to recognize broader categories for certain words and overarching concepts for individual nouns. Therefore, 10 hypernyms were created with each containing four items. For example, the first category of the words was “*nan* (bread), *mast* (yoghurt), *birinc* (rice), *savar* (bulgur) “ As can be seen, these are all together can be called “food” as hypernyms. While choosing these words, the most common elements of Kurdish cuisine were taken into consideration.

Also, the Cronbach Alpha value was measured as ,657, which means “questionable reliability” for the internal consistency of the item set in the task. Such low values indicated the need for further examinations regarding this task.

Table 20: The scores obtained for the task “hypernyms”. (the percentages are rounded)

Item number	The group of the given words	Corrects	Wrongs	Average
1	nan, mast, birinc, savar	93.5%	6.5%	0.9
2	şîr, dew, çay, av	96.8%	3.2%	1.0
3	Yekşem, Çarşem, îne, şemî	93.5%	6.5%	0.9
4	hesp, mar, berx, ker	83.9%	16.1%	0.8
5	kesk, sor, zer, sipî	96.8%	3.2%	1.0
6	dest, ling, mil, pişt	80.6%	19.4%	0.8
7	bihar, havin, payîz, zivistan	83.9%	16.1%	0.8
8	kitab, qelem, defter, jêbir	74.2%	25.8%	0.7
9	kenîn, girîn, tirsîn, qeherîn	67.7%	32.3%	0.7
10	pantor, gore, pêlav, kum	83.9%	16.1%	0.8

For this task, the majority of respondents proved a good understanding of hypernyms based on the given words. The highest correct answers came for the category of drinks that included *şîr* (milk), *dew* (liquid yoghurt), *çay* (tea), *av* (water) and the category of colors *kesk* (green), *sor* (red), *zer* (yellow), *sipî* (white) with 97% of all 31 respondents. These two categories were followed by the category of food “*Nan, mast, birinç, savar*” and the day name category “*Yekşem*”, *Çarşem, îne, şemî*” with a significant high ratio of correct answers of 93% . These

results indicate that these categories and their umbrella hypernyms were well familiar the children.

As for the challenging categories, the most notable one was the category of emotions that included four emotions: *kenîn* (to laugh), *girîn* (to cry), *tirsîn* (to fear), *qeherîn* (to be upset) which received only 68% of correct answers from the respondents. The lower age of the participants may have caused the low ratio of the correct answers for this hypernym, as it was difficult to name a common word that could correspond to these words. During the test, it was observed that some of the children understood every word; however, they find it difficult to name this group because it was too abstract for them, compared to the other groups like food, drink or colors. The instructor has accepted similar words, such as “feelings” or “expressions” instead of the hypernym “emotions”, because the main point was to make sure that children understand the logic behind the hypernyms and recognize them, not only remember the very exact name of the hypernym.

As with any test, there are areas in which participants perform less well. In particular, with the task, a low correct answer ratio came for the category of stationery items, which included “*kitab* (book), *qelem* (pen), *defter* (notebook), *jêbir* (rubber)” with only 74% of correct answers. One potential reason for this might be the rare availability of the hypernym “stationery”, because almost everyone completely understood the words under this category, yet naming a category was the challenge that most of them couldn’t tackle on time. Additionally, administering the task required only oral means, that is the participants quickly identified the concept and told the corresponding hypernym verbally to the instructor, without any visual or whatsoever cues.

All in all, the results from 'Hypernyms' section of the 'Vocabulary Depth' test indicate that most students have a good understanding of word categories in Kurdish, although the internal reliability of the item set is “questionable”. Apart from this, students are proving mastery of individual words and showing a broader understanding of how these words relate to each other and how they can be part of a larger context. For the Kurdish HL teachers, the results may suggest certain insights such as clarifying the areas for further improvement.

4.3.7 Vocabulary depth: Synonyms

Synonyms are one of the most important elements of vocabulary depth. Comprehension of synonyms is an important indicator in terms of proficiency in any language especially when

the circumstances of the HL is applied. This synonym section of the "Vocabulary Depth" test was developed to assess participants' ability to both recognize the given word and detect its corresponding synonym among the four words in the Kurdish language.

Table 21: The content of the synonym task and obtained scores

Question number	Given word	Given options that contain the correct synonym	Correct synonym for the given word	Correct Answers (%)	Top Incorrect Answers	Percentage of most incorrect choices
1	axiftin	Rûniştin, girêdan, behnkirin, Xeberdan	xeberdan	80.6%	behn kirin	9.7%
2	xanî	Mal, sol, pez, erd	mal	83.9%	pez	6.4%
3	kêmbûn	sorbûn, hindikbûn, xilasbûn, azadbûn	hindikbûn	80.6%	xilas bûn	9.7%
4	birrîn	Hilgirtin, komkirin, jêkirin, rakirin	jêkirin	83.9%	kom kirin	9.7%
5	Hişbûn	acizbûn, westîbûn, nexweşbûn, bêdengbûn	bêdengbûn	76.7%	aciz bûn/nexweş bûn	10.0%
6	yazkirin	rêzkirin, rastkirin, xêzkirin, nivîskirin	nivîskirin	70.0%	rast kirin/xêz kirin	13.3%
7	xebitîn	Bazdan, vekirin, karkirin, sekinîn	karkirin	90.3%	bazdan	9.7%
8	fêhmkirin	Avêtin, zanîn, çinîn, vexwarin	zanîn	73.3%	avêtin	16.7%
9	lêxistin	Lêdan, neman, girêdan, gezkirin	lêdan	82.1%	neman	10.7%
10	lênêrîn	Derxistin, mêzekirin, hilweşandin, birêxistin	mêzekirin	83.9%	derxistin/birêxistin	6.4%

As it was in the previous sections of the vocabulary depth test, the respondents' overall performance appears to be strong in this task. A significant percentage of respondents selected the correct synonym for most questions, indicating a solid command of synonyms in the group. The verb "*xebitîn*" (to work) received the highest correct answers (90%) followed by *lênêrîn* (to look) and "*xanî*" (house) with 84% of correct answers. As a side note, it may worth to mention that among all of the given words, the word *xanî* was the only one that was not a verb. Beside these three outstanding words that received the highest correct answers, the rest of the words were also recognized at a high rate (for more detailed information see *Table 21* above). The high scores may indicate the availability of these words in their daily life as well, however, it can be considered also the efficiency of the HL instructions that is provided in

Finnish schools. Despite the overall success, certain words such as *yazkirin* (to write) was answered correctly only by 70% of the attendees. Also, the correct answer rates for words *fêhmkirin* (to understand) and *hişbûn* remained among the lowest ones, consequently 73% and 76% of correctly detected synonyms. These words had many synonyms borrowed from Turkish, Arabic or Persian, the dominant languages in Kurdistan, and these borrowings are used in the home environment of some of the children. Thus, these children may have confused to chose the original Kurdish synonyms during the test. The results may also suggest that these synonyms are less common among the dialects or potentially more complicated for the participants. An important insight into the scores of this task may be seen in the top incorrect words that have been chosen as the synonyms erroneously for the initial word. The reasons behind these choices are not obvious yet it may be speculated in the context of Kurdish-specific circumstances. Observing these errors can also help HL teachers identify areas of confusion. As an example, “*avêtin*” (to throw) was confused as a synonym for the verb “*fêhmkirin*” (to understand) by 17% of 31 respondents, which may have a specific reason such as possible overlappings, colloquial usage or another confusion with the initial item. Moreover, the reliability for this set was measured as 0,761 meaning “acceptable reliability”.

4.3.8 Reading Comprehension

Each item in this task includes a sentence and four corresponding pictures, one of which is the visual definition of the initial sentence. The respondent reads each sentence and then figures out the correct picture based on the sentence's meaning. The purpose is to explore the lexical and semantic skills of the attendees, throughout the given connections between the texts and visual world, that is displayed as a simple picture. The task is designed by considering the risk of being unable to read Kurdish-specific letters, and therefore failing to understand the initial sentence. Thus, the sentences are kept short, composed them out of most common words, and dialectal features. Consequently, they will be able to predict the words and read the sentences with the help of the pictures provided, even if they have only minimal Kurdish syntactic and lexical knowledge in their linguistic repertoire.

Table 22: Reading Comprehension (RC) scores across 31 participants (the percentages are rounded).

Question code	Correct answers in %
RC1	90%
RC2	87%
RC3	94%

RC4	87%
RC5	87%
RC6	81%
RC7	81%
RC8	74%
RC9	77%
RC10	84%

The internal reliability for this task was measured 0,653 in Cronbach's Alpha scale, indicating a questionable reliability regarding the common ground on which the items developed.

Despite the low reliability, according to the findings, like in the previous tasks, most of the attendees answered correctly in this task as well. The percentage of correct answers were highly impressive ranging from 74% to 94%. During the test, it was observed that several participants were confused to understand the pictures, as they were mainly in cartoon formats, copied from the original test that NAFO prepared in 2012. As the task measures the real-world visual representations and short textual propositions, the results demonstrate a strong command in Kurdish literacy and significant evidence for linguistic repertoire in general.

4.3.9 Listening Comprehension.

This task was adapted from a literacy test developed by Finnish LUKIMAT (2011) that provides information on children's literacy and mathematical learning process. The adopted version was designed the way that each item of the task is constructed from a morphologically correct sentence logical correspondence. Half of the items (sentences) in the task have obvious illogicality that is, the sentences do not propose any reasonable suggestion. The aim is to measure listening comprehension by implementing the test orally with the assist of an instructor. Therefore the comprehension and understanding of the spoken language would be measured as precise as possible.

Table 23: Listening comprehension results (the percentages are rounded)

Spoken sentences	Correct (%)	Wrong (%)	Average	Median
Doşek jibo razanê ye.	97%	3%	1.9	2.0
Bacan û zebeş tiştên xwarinê ne.	87%	13%	1.7	2.0
Berf reş e, û germ dike.	87%	13%	1.7	2.0
Diran bi qelemê tê şuştin.	84%	16%	1.7	2.0
Av wek kevir hişk e.	97%	3%	1.9	2.0

Li dibistanê mamoste heye.	90%	10%	1.8	2.0
Masî li ezmanan dijîn.	81%	19%	1.6	2.0
Kitêb penîr dixwin.	93%	6%	1.9	2.0
Çêlek şîr didin me.	87%	13%	1.7	2.0
Dema nexweş dibim diçim doxtorî.	93%	6%	1.9	2.0

As in some other tasks, the internal reliability of set was also in the “questionable” category, with the measurement of 0,649 Cronbach’s Alpha value, yet according to the data, the large majority of the attending children recognized the logicity, managed reasoning the statements and thus demonstrated high listening comprehension. On average, more than 87% of children (27 out of 31) were able to determine whether each statement made sense correctly. However, despite the average majority who answered correctly, it was found that some items in the task received relatively smaller percentage of correct answers. For example, “Masi li ezmanan dijîn.” (The fish live on the sky) was responded erroneously by almost 20% of the participants. The result for this particular item may stem from the rarity of the word “masî” across the dialects, as borrowings from other languages mostly replace this word. Other difficulties and ambiguities in the sentence might have been involved.

4.3.10 Word chain task

This word chain test is basically a sort of screening tests that aims to measure children’s ability to decode, and separate the words from each other. The test was standardized to measure the lexical abilities in the Kurdish language. The test will thus provide insights into reading difficulties such as dyslexia as well. The task includes only ten items due to Kurdish-specific language input and exposure limitations that may cause additional challenges regarding HL and test practicalities. Each item is a combination of three words, preferably short and common across the local dialects, and are not morphologically suitable for forming a meaningful combined word. Therefore, a possible confusion with a meaningful combined word was aimed to be prevented. Also, each of these word chain includes at least one Kurdish-specific letter, aiming to diminish the letter similarities between Finnish and Kurdish alphabets. During the item development, numbers from 0 to 3 were assigned, in order to show the amount of the words the participant were able to recognize. Thus, the number 1 was assigned when he or she recognized only one word in the chain; and 2 when the participant recognized 2, and 3 when all words were recognized. It was also easier to format the items and therefore it is thought that it would provide feasibilities during the evaluation process.

Therefore, during the data collection, the students needed to draw a straight line between the words, meaning that each chain would require at most two straight lines, one coming after the first word and the other coming after the second word. However, with this method, the third word in the chain would also appear even the student recognized only two words, as the dashes would separate the third word automatically. For example, the first chain “*zeytunhesprast*” would have to be separated as -zeytun|hesp|rast- with two lines. In order to minimize the effect of this limitation, the researcher asked additional verbal questions to those participants who found out all three words to confirm if they recognized all words. With such a format of the items, the collected data can be visualized as follows:

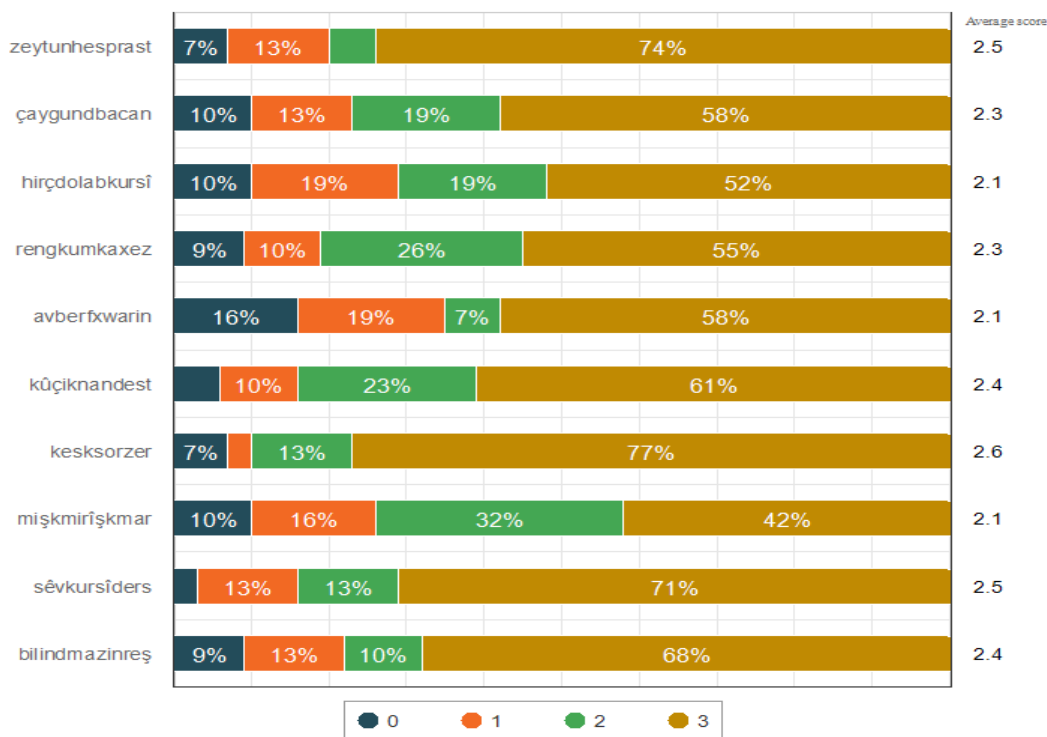


Figure 3: Word Chain Test results

As in the *Figure 3* can be seen clearly, most of the chains have been successfully decoded into three pieces by the majority of respondents with an average of 60%. Moreover, median score which was 3,0 for 90% of the chains, suggests a piece of consistent evidence that more than half of the 31 participants managed to decode all three words in the chain. Also, chains like *kesksorzer* were fully decoded by 77%, followed by *zeytunhesprast* decoded by 74% of all participants. On the other hand, the chain *mişkmirişkmar* appears to be more challenging with

2.0 median score. The abundance of the Kurdish letters i, ş, î may have caused additional confusion for the children during the test.

The scoring of this task was challenging due to the nature of answering the questions, as the two dashes created complexities in terms of reliability, especially during the evaluation. However, in order to tackle this problem, 2 points were assigned when all words in the chain recognized (two vertical lines are drawn); 1 point when only one word recognized (one vertical line was drawn) and 0 points when no words were identified in the corresponding word-chain.

5 Further Analysis, Discussion and Limitations

In this chapter, I will further discuss the interpretation of the findings, limitations, implications of the study and future perspectives for the research in the topic.

5.1 The interpretation of the *input survey* results

Our data was collected through two different instruments of which the first one was for input information collected from the parents and the second one was a literacy test for measuring literacy skills made with their children. The first instrument was composed of five categorical data about the child, including basic information about the parents, information about other people in the same household, information about other linguistic sources, and information about the amount of exposure. The instrument consisted of 54 questions, which was quite comprehensive and extensive, covering numerous facets of the linguistic background of the children. The purpose of such an extensive instrument was to cover the most important factors that play a role in the child's language development. With such large data, I desired to be able to explore the hidden variables and dynamics regarding the linguistic situation of the Kurdish children in Finland. As for the literacy test, the scope and extent was designed to be large enough to cover different aspects of literacy. The literacy test comprised the eight sections: Letter recognition, picture-word cognation, reading fluency, phonetic efficiency, vocabulary depth (antonyms, synonyms and hypernyms), reading comprehension, listening comprehension, word-chain deciphering.

In total 22 different families were involved in the data collection. Seven out of these 22 families had multiple children between the age 6 to 15, that suited the target group. The participant children were all healthy and did not have any detected motivational or linguistic challenges, according to their parent's statements. This empowers the reliability of the data, yet a possible case of language disorder remains outside of the scope of the present study. In fact, in particular, language disorders might have been interesting to explore within the complexity of the other variables.

A significant amount of the families migrated to Finland after the year 2014, when the ISIS attacked Kurdistan. Therefore 35% of the participant children were born in Kurdistan and moved to Finland after that. Evidently, the data shows that approximately 35% of them were exposed to the Finnish language for the first time when they were older than 3 years old, consistent with the effects of the migration wave that occurred during the year 2014-2015.

One of the most interesting findings were that fact that those children who participated any sort of formal education regarding Kurdish, did not received significantly better scores in the literacy test but rather, the father effect was more significant. Considering that one of the main purpose was to investigate the impact of the HL in the development of their literacy skills in Kurdish, these findings argues critically that any sort of formal education would be a significant influence by itself on the language development, including the literacy skills. Apart from the HL instructions settings in Finland, there are also other courses organized by Kurdish associations and other organizations in the diaspora. Sometimes, few families agree to arrange 2 week language courses in which an adult with literacy skills in Kurdish teaches the children how to read and write in Kurdish. For instance, in the Lahti City of, Finland, 3 families have attempted to educate their children by visiting each other's houses every weekend. One of the parents was teaching the children the Kurdish language while the other parents were enjoying the company. The families were also eating and cooking during these activities, involving their children and their peers, creating an intense learning environment for the kids regarding the Kurdish language.

As a general phenomenon for the case HL, the mother tongue does not necessarily mean the strongest language, even in spoken level. According to the data, more than half of the parents think that their children's most robust language being Finnish, despite the different linguistic environments in the household. This is obviously the effect of the dominant language to which the children are exposed to during their daily life at schools and everywhere else outside their home. Those children who speak Kurdish as their strongest language are generally those born in a Kurdish-dominated town and migrated to Finland several years later. The data also disclosed that five children speak Turkish as their strongest language regarding the strongest language. However, not all of these kids learned Turkish because they born and grew up there, in fact, they learned Turkish from their Kurdish parents who have lost their mother language. A family from Turkey had very strong sense of identity for the Kurdish, however their home language was Turkish, because both parents have lost their languages long ago in Turkey. During my conversations with some of these parents, I asked whether they have attempted to learn Kurdish, and they reminded the challenging conditions of being an immigrant in Finland and argued that they do not have time and facilities to learn Kurdish, despite their high desires to do so. Two families has learned Kurdish to an excellent level after they have moved to Finland. They have claimed that they learned it through self-studies, using mostly the internet and communicating with their family members in Kurdistan. There

were also parents who think that knowing Kurdish is not of high importance for them, but rather the Kurdish political case is important. One father told that Kurdish is just a language, that can be learned any time, any where when the liberation of the people happens. Thereof, each parents have different motivational states, different circumstances and attitudes towards this language, however, the vast majority of the participants had very high motivation and positive attitudes towards Kurdish and for them it was the matter of priority and high importance that their children would speak in this language fluently.

The data shows that when the parents speak more in Kurdish with the children, the children reciprocally speak more in Kurdish with them. For instance, 71% of the mothers answered that they speak the most in Kurdish with their children, while only 55% of the children responses in same language. However, when 84% of the fathers speak the most in Kurdish, they also receive over 70% of Kurdish responses from the children. Despite their lower educational level in general and lower Finnish proficiency compared to the fathers, interestingly mothers attempt to communicate more in Finnish. This might have certain psychological reasons that go beyond the present study's scope. However, the data clearly indicates that fathers have better proficiency in Finnish, partly because the fathers arrived in younger ages in Finland (42% of mothers arrived Finland after the age of 30, while only 36% arrived after that age). Another interesting fact is that fathers were more humble in their responses while answering the question about their own Finnish level. Some fathers also were generous about their wife's Finnish proficiency. Thus, the data indicates that the number of those mothers who have "excellent" Finnish are slightly higher than that of the father's who have "excellent" level in Finnish. However, the number of fathers who speak "quite well" is more than the number of mothers who have that level. Therefore, it is concluded that fathers have in general, better Finnish proficiency when compared to the mothers. There was only two intercultural families (intercultural family refers to those families that either father or mother is Finnish, and the other one is native Kurdish). Of these two families, only one mother and one father was native Finnish, that is the vast majority of the participant families consisted of two native Kurdish parents.

We also have observed that the number of children in the family closely correlates with the amount of the language input each child receives. Parents of these kind of families also speak more Kurdish at home. It was also detected that families with lower socioeconomic conditions, such as those who newly arrived in Finland, may have more children in some occasions. Depending on the original place they migrated from, those parents who have

recently moved from Rojava (Northern Syria) show a stronger and more widespread use of Kurdish when compared to the other participating families. As previously stated, Kurdish remains the most common language in all dialogs between parents and children; however, it becomes less common (only about 40%) among the participating children their siblings and peers. Especially regarding other Kurdish children outside the family, Finnish significantly becomes the predominant language, covering almost 60% of all dialogs. At this point I have realized that the participant parents are keener to see their children speak more Kurdish than their peers and cousins. When they were asked about the dominating language of dialogs occurring between their child and other children outside of the household, 58% of them claimed that their child speaks to other children in Kurdish; however, only 48% of them claimed that other children reply to their children in Kurdish. Such inconsistency may be stemmed from prejudice, or perhaps it is because of the parent's presence in that environment because a child may attempt to speak in Kurdish when his or her parents are there. Thus, children who don't have their parents observing them may speak in more in Finnish, which is the strongest language for many children.

language exposure amount was also measured by drawing and scheduling a timetable for regular weekdays, weekends, and different holidays on which the time amount spent in a Kurdish-speaking environment was cumulatively collected. The exposure was quantified by calculating the time spent with the prominent people (mother, father, siblings, peers, and other adults) in the participating child's life throughout time categories across the year, such as regular weekdays, weekend days, summer holidays, winter holidays and other holidays (*See: 4.2.1 input Survey*). The time of the exposure was previously explained in *Chapter 4*, its not practical delving into the calculations regarding the hourly intervals here, but rather, further data patterns are presented such as descriptives.

Table 24: Descriptive statistics of the amount of time during which the child was exposed to the Kurdish language

Time Vs the person in child's environment	N	Minimum	Maximum	Mean	Std. Deviation
Weekdays with mother	31	,00	7,00	4,1935	3,18768
Saturday with mother	31	,00	16,00	8,7742	5,33360
Sunday with mother	31	,00	16,00	8,8387	5,60415
Weekdays with father	31	,00	7,00	5,0000	2,44949
Saturday with father	31	,00	14,00	7,0323	4,06189

Sunday with father	31	,00	16,00	7,1613	4,64110
Weekday with siblings	31	,00	15,00	4,1613	3,65237
Saturday with siblings	31	,00	16,00	6,7097	6,20856
Sunday with siblings	31	,00	16,00	6,7742	5,88053
Weekday with other family members	31	,00	4,00	,2581	,85509
Saturday with other family members	31	,00	,00	,0000	,00000
Sunday with other family members	31	,00	,00	,0000	,00000
Weekdays with other adults	31	,00	6,00	1,3871	1,52047
Saturday with other adults	31	,00	16,00	3,6129	3,48021
Sunday with other adults	31	,00	16,00	3,8710	3,53781
Weekday time	31	1,00	15,00	7,3548	3,45975
Saturday time	31	2,00	16,00	12,3871	4,07985
Sunday time	31	2,00	16,00	12,2581	3,82071
All times with the mother	31	,00	65,00	38,5806	25,22931
All times with the father	31	,00	63,00	39,1935	19,47549
All times with the siblings	31	,00	97,00	34,2903	28,39858
All times with the other family members	31	,00	20,00	1,2903	4,27546
All times with the other adults	31	,00	62,00	14,4194	13,57884
All times in total	31	8,00	104,00	59,7742	23,14262
Hol_time	31	1,00	8,00	6,2581	1,86132
OHol_time	31	1,00	8,00	6,4194	1,94549

According to the findings, fathers are the most important person as a language source and summer holidays are the most active times in terms of Kurdish language exposure. During these times, children receive linguistic input abundantly from various environments, including other adults, family friends, peers, etc.

5.2 The interpretation of the *Literacy Test* results and data patterns

As previously mentioned, each task had a specific scoring system, of which aimed to measure the participants' skills quantitatively. Due to the nature of the tasks, it was not practical to assign same grading system to each task because some of the tasks needed to be larger than the others only by the number of the items, although the items were smaller, such as letter tasks, phonetic decoding, and word chain tests. For instance, for the letter reading task, covering all letters that have distinctive features was aimed to read, such as letters that are common in both languages (Finnish and Kurdish) or those that are specific to each language

and so forth, so that the dimensions of the participants' letter knowledge could be understood. Thus, 16 letters added to the task, counting each of them as one item in the set. Since each of the letter indicates different strength in children's letter knowledge, each letter was also scored differently, and analysed accordingly (*see: 4.3.1.1. Phonetic Proficiency Test results*). Further research is necessary for more exploration regarding the internal features of each of these tasks.

Table 25: Descriptive statistics

The test	N	Minimum	Maximum	Mean	Std. deviation
Kurdish alphabet Letter recognition	31	,00	16,00	5,8710	3,54722
Picture to word	31	3,00	10,00	8,0645	1,69185
Kurdish word reading	31	3,00	20,00	15,1613	4,37490
Phonemic decoding	31	,00	20,00	13,6129	5,80619
Antonyms	31	3,00	10,00	7,9032	2,10325
hypernyms	31	4,00	10,00	8,5484	1,70956
synonyms	31	2,00	10,00	7,9032	2,30007
reading comprehension	31	3,00	10,00	8,4194	1,80322
listening comprehension	31	4,00	10,00	8,9677	1,49407
word chain test	31	7,00	20,00	16,9677	3,45913
Valid N (listwise)	31				

The second part of the dataset was the literacy test comprising 10 main tasks. Each task was meticulously developed and piloted among a few students to ensure high reliability and validity. However, in the main data collection, the reliability appears not as high as expected.

Table 26: Internal reliability values of the item sets (Cronbach's Alpha)

The name of the task (item set)	The number of items in the task	Internal reliability value (Cronbach's Alpha)	Interpretation
Kurdish alphabet Letter recognition	16	,863	Good reliability
Picture to word	10	,534	Poor reliability
Kurdish word reading	20	,853	Good reliability
Phonemic decoding	20	,920	Excellent reliability
Hypernyms	10	,657	Questionable reliability
Synonyms	10	,761	Acceptable reliability

Antonyms	10	,726	Acceptable reliability
Reading comprehension	10	,653	Questionable reliability
Listening comprehension	10	,649	Questionable reliability
Word chain	10	,750	Acceptable reliability

As it is shown in *table 26*, the Kurdish alphabet Letter recognition, Kurdish word reading, and phonemic decoding tasks have the highest values for reliability regarding internal consistency. These tasks constitute basic literacy skills which are the fundamental elements of this leading research. On the other hand, reading and listening comprehension, picture-to-word, and together with hypernyms, synonyms and antonyms have relatively lower reliability measures in Cronbach's Alpha scale. Most of these tasks are related to vocabulary depth, the other element of general literacy skills. Consequently, it can be said that the instruments were more suitable for measuring basic literacy skills rather than lexical and semantical skills. Some reasons can be the wide variety of the backgrounds of the participants, different age ranges, family constructions, etc.; with deeper explorations, such variabilities could be explained in more detail.

In order to find the underlying construct among the 10 tasks, factor analysis was conducted and therefore two main components were extracted from the data. These two components explain more than 70% of all the tasks presented in the literacy test. This high proportion also represents the common ground underlying in the data. The first component had a high loading from the tasks *Picture to word*, *Antonyms*, *Hypernyms*, *Synonyms*, *Listening* and *reading comprehension* tasks. Among these tasks, the three (*Antonyms*, *Synonyms* and *Hypernyms*) measures vocabulary skills. When these are combined with *picture-to-word* and *listening skills*, it was concluded that all these tasks measure vocabulary and semantic depth. Thus, this first component was named as “**vocabulary and semantic depth**” (**VSD**). The second component on the other hand, included *Kurdish alphabet Letter recognition*, *Kurdish word reading*, *Phonemic decoding*, and *Word chain*. Since all of these task measures are more related to general reading ability, it was decided to name this component “**Reading Depth**” (**RD**), due to the underlying construct, within the literacy skills' scope.

Table 27: Rotated component matrix results for the tasks (The method: Varimax with Kaiser Normalization)

The name of the task (item set)	Component 1 (VSD)	Component 2 (RD)
Kurdish alphabet Letter recognition	-,004	,892

Picture to word	,820	,223
Kurdish word reading	,145	,920
Phonemic decoding	,306	,873
Hypernyms	,714	,309
Synonyms	,892	,116
Antonyms	,874	,034
Reading comprehension	,585	,459
Listening comprehension	,747	-,018
Word chain	,106	,704

When reliability check applied for each variable (item set), it can be seen that all of the tasks contribute to the scale's reliability when the Cronbach's Alpha values are calculated. In other words, they are high contributors to the general reliability scales, in the "item-total correlations. Some item sets, such as Letter recognition, word reading, hypernyms, synonyms and antonyms tasks have particularly higher value regarding their contribution. Also, when removed, the reading and listening comprehension tasks seem to have higher Chronbach's Alpha values, which means these tasks have relatively lower consistency. Despite these high-reliability values, further refinements can be performed in possible future research to strengthen internal consistency.

Table 28: Variability statistics for the Vocabulary and Semantic Depth (Component 1) and for the Reading Depth (Component 2)

Components	Name of the variables (tasks)	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Component 1: Vocabulary and Semantic Depth	Picture to word	41,7419	57,065	,771	,853
	Antonyms	41,9032	51,890	,769	,851
	Hypernyms	41,2581	59,198	,666	,869
	Reading comprehension	41,3871	60,178	,579	,882
	Listening comprehension	40,8387	63,140	,600	,879
	Synonyms	41,9032	48,024	,825	,842
Component 2: Reading Depth	Word chain	34,6452	165,903	,540	,908
	alphabet Letter recognition	45,7419	144,531	,807	,827
	Kurdish word reading	36,4516	121,656	,883	,782
	Phonemic decoding	38,0000	97,267	,830	,826

As previously seen in *Table 28*, most of the variance in the literacy skill tasks can be summarized by using the abovementioned two components. For further insights in terms of the relationships between these components and other elements, the necessary correlations were calculated as well. The elements of the second component were clustered more closely when compared to that of the first component, which indicates the consistency among the tasks related to the reading depth. See the table below:

Table 29: Descriptive statistics for the two components.

	N	Minimum	Maximum	Mean	Std. Deviation
Component 1: Vocabulary and Semantic Depth	31	19,00	72,00	51,6129	15,03258
Component 2: Reading Depth	31	22,00	60,00	49,8065	8,92345
Valid N (listwise)	31				

The variability among the first component (VSD) is diversified due to the range of the tasks, especially the reading, listening, and picture-to-word tasks, which may have skewed the standard deviation, because vocabulary depth tasks (antonym, synonym, and hypernyms) are clustered slightly differently and share more of the underlying ground.

5.3 Main Correlations

In this session, I will go through the most important correlations between the variables and item sets. Since the data that was collected was obtained with a total of two volumetric measurement tools, it was quite comprehensive and included various variables in a wide spectrum. Of course, explaining the relationships between all of these variables would be too large to fit into the scope of this study. Therefore, I will only focus on the relationship between the most significant variables. Perhaps one of the most important of these relationships would be the correlation of the two main underlying factors (VSD and RD) that are found before with some variables. For example, the time categories, in which the underlying factors are more dominant with a certain person in a child's environment, will help us to obtain essential findings.

Table 30: Correlation coefficients between components (VSD and RD) and the days of the week with people in the child's environment

Time categories (days of the week) (N=31)	Component 1 (Vocabulary and semantic depth" (VSD).		Component 2 (Reading Depth) (RD).	
	Pearson Correlation	Sig. (2-tailed)	Pearson Correlation	Sig. (2-tailed)
Weekdays with mother	-,261	,157	,183	,324
Weekdays with father	-,054	,772	,467**	,008
Weekdays with siblings	-,247	,181	-,028	,883
Weekdays with other family members	,293	,109	,129	,489
Weekdays with others	-,088	,638	,011	,955
Saturday with mother	-,265	,150	,233	,207
Saturday with father	-,095	,612	,374*	,038
Saturday with siblings	-,021	,910	,295	,107
Saturday with other family members	.a	.	.a	.
Saturday with others	-,218	,238	,146	,434
Sunday with mother	-,343	,059	,195	,292
Sunday with father	-,050	,791	,358*	,048
Sunday with siblings	-,065	,728	,154	,408
Sunday with other family members	.a	.	.a	.
Sunday with others	-,198	,286	,185	,319
** Correlation is significant at the 0.01 level (2-tailed).				
* Correlation is significant at the 0.05 level (2-tailed)				
"a" Cannot be computed because at least one of the variables is constant.				

Table 30 represents the correlation between the underlying components and the days of the week with the closest people around the child who has joined the literacy test. In the table, "weekdays" represent the regular school days from Monday to Friday. These days are separated because there is the variability of the school, and the parents are at work on these days, which significantly affects the exposure amount. Also, Saturdays and Sundays have different activities that involve linguistic exposure for the children; for instance, some of the children whose parents are divorced change their environment during the weekends. In *Table 30*, the linear relationships between different pairs of these variabilities are measured.

According to the findings, Component 1 (VSD) does not have a positive correlation with the time spent with the mother during the regular weekdays, including weekend days, meaning that children's vocabulary and semantic skills are not necessarily increased while the time spent with the mother is increased in terms of quantity. The positive father correlations

perhaps cause this, that is, the simultaneous presence of the father when the mother is also in interaction with the children. As shown in *Table 30*, the correlations are not statistically significant with any of the family members for any time categories. However, the linear relation between time spent on Sunday with the mother and vocabulary-semantic depth VSD is slightly high with the value 0.059 of the p-value.

As for the second component, which was comprised of the reading depth (RD) regarding literacy skills, a moderately positive correlation is observed with the time spent with the fathers during the weekdays, and with less positive significance for the weekend days, indicating a 0.05 p-value. One reason for fathers being influential in terms of their children's reading skills may be their education level in Kurdish when compared to the mothers. Also, the father is more dominant in the traditional Kurdish family, meaning that children avoid speaking in a different language when the father is present.

As for the cumulative time categories with certain people in the child's environment, the data presents interesting correlations with the underlying factors VSD and RD. First of all, most of the total-time categories have negative correlations with the VSD, although none of these negative correlations are significant but still meaningful to a certain degree. This shows that vocabulary and semantic competencies are less related to the amount of time children were exposed to the Kurdish language. Especially with the mother, the p-value of 0,297 shows even more disparity in terms of relevance, which requires further investigation. In addition, when all of the family members, such as mother, father, siblings, grandparents, uncles, aunts, etc, are altogether considered, a slightly positive correlation was observed. Although these figures are not statistically significant, it may still be concluded that spending more time with Kurdish-speaking people increases children's VSD levels.

Table 31: Correlation coefficients between components (VSD and RD) and the cumulative time categories with people in the child's environment.

Time categories (N=31)	Component 1 (Vocabulary and semantic depth" (VSD).		Component 2 (Reading Depth) (RD).	
	Pearson Correlation	Sig. (2-tailed)	Pearson Correlation	Sig. (2-tailed)
Week times	-,085	,649	,295	,107
Saturday times	-,207	,263	,471	,008
Sunday times	-,197	,289	,436	,014
Other Holiday times	-,267	,147	,385	,032
All times	-,131	,483	,365	,044

All times with mothers	-,297	,105	,208	,261
All times with fathers	-,066	,725	,457	,010
All times with siblings	-,177	,342	,079	,674
All times with other family members	,293	,109	,129	,489
All times with others	-,157	,400	,091	,625
<i>**Correlation is significant at the 0.01 level (2-tailed).</i>				
<i>*Correlation is significant at the 0.05 level (2-tailed).</i>				

The second component, the RD, on the other hand, has several significant positive correlations with Saturday, Sunday, other holidays, and especially with the time spent with the father. As previously said, the fathers are the most critical person in the child's environment regarding language input. In particular, for reading abilities, fathers have significant roles. This may have stemmed from the higher educational levels of the father, their stronger national identity, or their attitudes (previously, it was found out that fathers have positively stronger attitudes towards Kurdish).

Regarding the correlation coefficient values between the two underlying factors (VSD and RD) and a few other variables such as the number of children over 1.5 years old, their age, grade, and whether they have ever joined HL instructions provides interesting insights as well. For instance, none of the values is statistically significant in terms of the linear correlations. As for the first component, the findings show that the number of children over 1,5 years is positively correlated, yet it is not statistically significant, which means that having more siblings over 1,5 years at home contributes to the participant children's vocabulary and semantic skills, but not significantly. However, the age of the participant child itself is more significant (p -value=0,082) which is understandable and hypothetically expected. Being increases parallel to the age, the grade also has a positive correlation with VSD, but it is less significant. However, more interestingly, there was a negative correlation between the VSD and whether the child has ever joined HL instructions, which is almost against the hypothesis because the expectation was that those children who have joined HL instructions will perform better in almost all tests, yet the findings show that it is not the case and joining HL is not a significant determinant for the vocabulary and semantic skills.

Table 32: Correlation coefficients between underlying components and a few crucial variables.

	The number of the children over 1,5 years old	The age of the child	Grade of the child	Whether the child ever joined HL instructions
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Component-1 (Vocabulary and semantic depth" (VSD).	Pearson Correlation	,141	,317	,293	-,331
	Sig. (2-tailed)	,448	,082	,109	,069
Component-2 (Reading Depth) (RD).	Pearson Correlation	,083	,014	-,035	-,086
	Sig. (2-tailed)	,657	,940	,853	,647

As for the second component representing general reading skills, no meaningful correlation was found with any of the variables provided in *Table 32*. This is also an unexpected result from the point of the hypothesis because general reading skills are strongly related to the given variabilities.

In conclusion, the correlational relationship for the VSD **age** seems to have the highest positive correlation with the p-value of 0,448, being almost statistically significant. However, the most interesting result of the present study is perhaps the negative correlation between VSD and the participation status of the respondent child in HL instructions, meaning that those children who participated in HL instructions at some point in their lives are less successful in recognizing words and performing other lexical tasks. Possible reasons for this finding remain undiscovered in the present study; however, it provides an opportunity for future explorations in the field.

For further correlations, the relationship between the underlying components and several questions related to the parent's linguistic skills and attitudes towards the language were checked. Parental proficiency in both Kurdish and Finnish would have a significant impact on the children's performance. Therefore, the data about their skills in both languages was collected through the input survey and considered the findings in the results. The table below summarizes the linear correlation.

Table 33: Correlations between the underlying factors and the language skills of the parents

Variabilities	Component-1 (Vocabulary and semantic depth" (VSD).		Component-2 (Reading Depth) (RD).	
	Pearson Correlation	Sig. (2- tailed)	Pearson Correlation	Sig. (2- tailed)
How well does mother speak Finnish?	-,255	,167	-,074	,690
How well does father speak Finnish?	-,204	,271	,346	,056
How well does mom speak Kurdish?	-,125	,501	,254	,167
How well does dad speak Kurdish?	-,114	,540	,521**	,003

How well does mother read and write in Kurdish?	-,162	,383	-,169	,364
How well does the father read and write in Kurdish?	-,049	,793	,065	,728
How important is it to you that your child can read and write in Kurdish?	-,028	,883	,038	,838
To what extent are you worried about your child losing his Kurdish language skills?	-,084	,653	-,076	,686
<i>** Correlation is significant at the 0.01 level (2-tailed).</i>				

Interestingly, the mothers' linguistic skills in both languages negatively correlate with children's VSD skills, yet mothers' proficiency in only Kurdish positively correlates with RD skills (p -value=,254). The strongest negative correlation with the children's VSD skills (-,255) comes from the mothers' Finnish proficiency; that is, while mothers speak better Finnish, they tend to speak more in Finnish with their children, and thus the children's vocabulary and semantic capacity in Kurdish shrinks. Despite the negative effect on VSD, mothers' ability in Kurdish has a slightly positive impact on general reading skills (RD), which indicates that mothers' Kurdish skills contribute to general literacy to some extent. As for the attitudes about the importance of the Kurdish and their concerns about language loss, a slightly negative correlation appears with VSD again.

As previously presented, the fathers seem to have a significant effect in the linear relationship with general reading skills (RD) as well. However, fathers do not have the same significant effect on children's VSD capacity, which may indicate the language is used more colloquially in the household. Although the time fathers spend with their children is not quantitatively more than the time mothers spend with their children, the impact of the father's Kurdish proficiency is significant in the data. The reason may have stemmed from the fathers' relatively higher educational levels and better proficiency in Kurdish as shown in previous chapters.

5.4 Limitations, Implications, and suggestions for future research

This chapter comprehensively presents limitations, implications and suggestions for future research. Since the study includes many variables depending on many factors and their relationships with each other are incredibly complex, what is explained in this section is of relatively higher importance. Also, by acknowledging the limitations in this research, it is aimed to establish a transparent and balanced overview of the scope and limitations in order to

allow a cautious approach with a more nuanced interpretation of the findings and propose recommendations for further studies on the issue.

Some potential limitations regarding the methodology of the current research include the validity and reliability of the assessment tools that were used. The literacy test and the parental input survey were specifically prepared for this research and apart from a small-scale pilot study, they were never used before. However, the reliability and the validity controls were made via SPSS and the results were applicable. Also, the data collection instruments were developed with limited resources, and such important instruments had to be made by at least more than one expert with common opinions about certain phenomena, especially when the case is Kurdish, a field that has not been studied thoroughly before. In future research, it is essential to invest more time and resources in the preparation of instruments.

The data collection instruments were too large, leading to economic and practical feasibility difficulties. The input survey that was aimed to collect data from the parents consisted of 54 items, which was too long and took almost one hour to answer for the participating parents. Some parents were reluctant to continue and desired to quit filling out the forms. These uncompleted surveys are excluded in order to ensure reliability. However, the longevity of the instrument may have affected the parents' attitude towards the study, and therefore, they might have answered some questions in a rush, just to finish it as soon as possible. Some inconsistencies with the answers they gave to the last few questions were detected, which may indicate their inattentive responses stemming from haste and hurry. Similarly, The literacy test also was very large with approximately 35 questions in various lengths. The literacy test was also exhaustive, leading to the loss of concentration during the implementation. The test supervisor needed constant interventions in order to keep the test takers focused. Despite all efforts, some participants did not complete the tests due to fatigue. The uncompleted data was excluded; however, the extensiveness of the tests might have influenced the quality of the answers they provided. Implementation of such large volumed tests could have been more practical and economical if the tests were split into different parts and applied in different times, yet such resources were not available to engage the participants multiple times to the study. The families live in remote parts of the city and finding a suitable time lapse for such a serious execution was very challenging. In future research, the tests may be more applicable if they are split into different parts and applied at different times to avoid fatigue.

Also, part of the input survey aimed to measure the hours spent in a Kurdish-speaking environment. In order to fully understand the quantity of the exposure, different timetables were drawn for different intervals of time. Parents provided us with information regarding the place where the children spent that time and the person the time is spent with across the timetables. The timetables were created by considering an ordinary year in a holistic sense, then this time period was divided into groups according to day types and finally specified these day types with hour intervals. Day types were, for example, normal working days of the week, weekend days, summer holidays, seasonal holidays, and other holidays. However, as in such arrangements, each day types are supposed to be similar, the data will be monotonous and perhaps erroneous. For instance, such a timetabling system will assume that each weekend has the same or similar schedule, yet each weekend may have different conditions. In some weekends, the children might have been at their grandparents' home and thus exposed to more Kurdish, while in some weekends, they spent the entire time in a Finnish-spoken environment. The parents who answered these questions considered the most regular and normal daily programs regarding those day types.

The participants were children of the age range from 6 to 15 years who had a wide range of other varying parameters such as different family sizes, different HL speakers in the family, diverse developmental processes, varying durations of stay in Finland, etc. The fact that group members show different characteristics in such a wide range makes it difficult to make generalizations. Moreover, the study aims to uncover the unique sociocultural, linguistic, and pedagogical context of the children who have the Kurdish language as their HL, and therefore, the findings will not be generalizable to other HL communities. Hence, the specificity of the context in the current study restricts the applicability of the results beyond the frame of the Kurdish Kurmanji HL. This is perhaps needed and essential due to the special position of the Kurdish language.

The current study captures an instantaneous state of the participants' language skills and input amount. Some of the participants had joined HL instructions long ago while the others were active students in various HL courses. The design is unsuitable for following up and observing the development of literacy skills throughout time or making a conclusion about the long-term impact of the HL instruction. The data was collected during the Spring semester of 2022, and some of the participants had joined HL instructions long before, while some were still active students in HL classrooms. For further research, the sample's characteristics regarding similarities and differences must be considered to ensure more precise outcomes.

Another limitation may be that the parental input survey was made via personal interviews with the parents, and this set of data relies on their self-reported information. As for the majority of the Kurdish people, language is a matter of identity, and conveying the language to the children is considered as a kind of “national duty”. Thus, some parents might have provided incorrect numbers, especially regarding how many hours children are exposed to the Kurdish language. Because they do not want to seem indifferent or unconcerned about their children’s language development. Another example of this was when the researcher asked a father whether they have Kurdish books in their household he answered yes but his child claimed that to be wrong and they do not possess any Kurdish books at home, otherwise, he would definitely notice. Upon his son’s objection, the father acknowledged that they do not possess any Kurdish books at home for the time being. Therefore, for possible future research, such an attitude should be considered to collect the most precise information.

An important limitation of the present study is to exclude the role of the respondent parent. As the data collection process was very complex, detecting which parent would answer the questions was almost impossible. Generally, the researcher visited the participant's family’s household, joined dinner or lunch with them, and collected the data from one of the parents. Sometimes the other parent also joined to answer certain questions, but mostly only one parent answered all the questions, including those that are about the other parent. Therefore, the input survey was mostly made only with one parent, that is, the participating parent answered on behalf of the other parent as well. This might have created an unreliability, especially when the researcher asked about the proficiency levels regarding the Kurdish and Finnish languages. For example, the data’s general conclusions show that fathers have a better Finnish skills; however, in specific responses about that, fathers seem to be more humble in their responses. In other words, only 23 have “excellent” Finnish, while 26% of mothers seem to have that level. Despite these figures, on the other hand, more fathers have the “quite good” (%42) compared to the mothers who have only 32 of the same answers. In further studies, when a question about another family member is asked to a respondent, the researchers may need to consider the respondent’s attitude toward that family member and even their very personal relationships because some parents may be divorced and already dislike each other, and that may influence their answers about each other.

The parents who joined the investigation and answered the questions about the linguistic background of the household were mainly fathers because most of the mothers were deprived of literacy skills, and therefore, they were not able to answer the written questions. Although

they were previously told about the details of the research via phone calls, the researcher still asked them in which language they wished to perform the survey, and accordingly translated the survey forms for them, however, the majority of the participants were fathers. Perhaps the mother's perspective would be different, especially regarding the attitudes towards the Kurdish language, because mothers were observed to be more practical and less ideological in this matter. Their priority was to ensure a safe and secure future for their children. Of course, the different attitudes may also have something to do with the education level. Fathers are generally more educated than mothers, which is understandable considering the sociopolitical and socioeconomic circumstances of the Kurdish people in the Middle East.

Due to its political position, the Kurdish language is often linked with political perceptions, creating additional challenges for researchers studying Kurds. Some of them have severe concerns in terms of data protection and security risks. During the data collection, some families refused to participate in the study, while some showed reluctance, although they participated eventually. Some of them openly stated that due to possible side effects, including security risks, they do not want to participate in the research. This attitude was more common among those who regularly visited Iran and Turkey, the two most totalitarian states, regarding the civil rights of the Kurdish people. During the fieldwork, their concerns were mostly appeased by providing them with information about ethical considerations and research regulations.

Perhaps the present study's most salient limitations derived from the participants' cultural background contained a wide range of differences. The design might not fully cover the influence of the cultural factors that affect the procedures related to language development, such as intergenerational transmission, cultural assimilation, and the role of the home country's sociopolitical culture on the family. Therefore, despite the large volume of the data collection instruments, the study design may not have covered all of the variables that have certain impacts on the HL development and the input amount. For example, children's cognitive abilities, motivational factors, HL acquisition strategies, detailed family dynamics, and the quality of the HL instructions are mostly excluded from the data, remaining to be considered in further investigations.

Part of the input survey aimed to measure the hours spent in the Kurdish-spoken environment. In order to fully understand the quantity of the exposure, different timetables for different intervals of time were composed. Parents provided the information regarding the place where

the children spent that time and the person the time is spent with across the timetables. The timetables were created by considering an ordinary year in a holistic sense, then this period was divided into groups according to day types and finally specified these day types with hour intervals. Day types were, for example, standard working days of the week, weekend days, summer holidays, seasonal holidays, and other holidays. However, as in such arrangements, each day types are supposed to be similar, the data will be monotonous and perhaps erroneous. For instance, such a timetabling system will assume that each weekend has the same or similar schedule, yet each weekend may have different conditions. On some weekends, the children might have been at their grandparents' home and thus exposed to more Kurdish, while on some weekends, they spent the entire time in a Finnish-spoken environment. The parents who have answered these questions considered the most regular daily programs regarding those day types.

Perhaps the study's most significant implication was exploring the HL instructions' impact in the context of a "stateless" language such as The Kurdish language. Investigating a well-standardized national language, i.e., Turkish, Greek, Russian, Korean... and so forth, in the diaspora may differ significantly in terms of both methodology and implications. However, a "stateless" language like Kurdish presents multi-facets of diverse factors and includes strong political, economic, geographical, and linguistic aspects. Thus, the present study extends the scope of the research in the field of HL to a broader context that encloses a language that can be similar in many ways to an "indigenous" language. From the perspective of being a "stateless" language, Kurdish shares a lot with indigenous languages, which are abundant worldwide. However, even indigenous languages do not possess most of the characteristics of the sociopolitical ground that the Kurdish language stands on.

Similar studies on other HL communities in the West especially for those communities that share similar sociopolitical and linguistical conditions with the Kurdish, such as indigenous languages, are essential. Such research could help to understand deeper the HL dynamics in the context of differences among the immigrant communities. Also, other factors influencing HL instructions and language development, or comparative studies about the experiences in HL instructions regarding different learner groups, could contribute to the field immensely. The particular position of the Kurdish language provides wide insights for other types of research fields, ranging from education to linguistics. All in all, the present investigation provided evidence, that the educational studies in the context of immigrant languages, may

require a further extension, especially when it comes to pedagogics related to HL and its dimensions.

The present study also provided insights regarding HL instruction pedagogics regarding “stateless languages” such as Kurdish. In particular, the proficiency test findings present numerous phenomena that require HL teachers to commit further attention in the classroom. One of these properties is the unstandardized spoken language that they strive to teach in a standardized form. Dialectical variants, borrowings from the dominant languages in the home country as well as in the host country, assorted amounts of language input from households, various exposure times and conditions, different family constructions, other languages in the family, etc. all together comprise a significant impact over the entire learning process in the classroom. The impact of these characteristics may not be limited to only the subject of the HL, but it may extend further to other subjects, such as math, science, and especially language classes, from the perspective of language awareness and language-aware pedagogy.

6 Conclusion

The objectives of the present study were to investigate the central dynamics underlying language development of the Kurdish-backgrounded elementary school-aged children in Finland. Therefore, I explored the extent to which the Kurdish HL lessons and family dynamics provide language input for children with Kurdish backgrounds in Finland. The following sub-questions were formulated within this context: 1) Does the familial environment contribute to children's literacy skills?; 2) Does HL education in Kurdish, as it is organized within the Finnish schooling system, contribute to Kurdish children's literacy skills? 3) What underlying factors lay behind the different areas of the literacy skills these children possess?

In order to provide the most extensive description of the findings, the main statistical results for the most essential variabilities are provided and evaluated. Then, more complex relationships between underlying factors and significant elements are provided throughout the discussion session. The purpose of implementing such a deductive analysis method was to avoid the complexity and present the interconnectivity of findings within a facile flow. As for the descriptive analysis of the results, I began with the input survey results by providing the most essential findings for each question individually and commenting on the results when needed. Therefore, I started by presenting the age of the participants and continued one by one until the entire input survey results were demonstrated. After that, the results of each task in the Literacy test are given individually by providing main statistical descriptions.

The ages of 31 participant children were distributed from 7 to 15, mostly around 10-14. A large portion (32%) of them were exposed to the Finnish language when they were one to two. Among them, 39% had never joined formal education to learn Kurdish, yet this was not the fundamental determinant of their language development. As for the birthplace of these children, the data shows that more than half of them (54%) were born in Finland, while the remaining were distributed between various places. Almost half of the children were the first children in the birth order, which impacts both the quality and the quantity of the linguistic input. However, the birth order did not significantly influence their literacy skills when correlations were calculated. In fact, most parents (51%) claimed that their child knows Finnish as their best language.

As for the parent's origins, most of them are from Rojava (%35) and Bakur (%29), while the rest remains from other locations. A significant majority of these parents stated their Finnish skills to be moderate and their Kurdish proficiency to be excellent. The same number of fathers and mothers (about %6) responded to not being able to speak Finnish at all, as they recently migrated to Finland. In addition, about %12 of the mothers and %3 of the fathers could not speak Kurdish at all. When their literacy level was asked, the data showed that fathers have a higher educational level, with fathers showing around %55 being able to read in the Kurdish language. Although the literacy skills are close to each other, fathers were more influential in children's literacy skills. This might have something to do with the attitudes toward the Kurdish language because when their stance regarding their children's proficiency in Kurdish was asked, a significant amount of the parents (%77) responded that they are "highly concerned" if their kids cannot read and write in their mother language, and those parents who responded this question were mostly the fathers. More than half of these parents also claimed that they are "very worried" that their kids will lose their mother language. Within the household, siblings construct another linguistic dynamic regarding language development. When the parents were asked about the language used in the conversations between the siblings at home, around %30 claimed that the most used language between the siblings was Finnish and around %40 Kurdish. There were also households where other languages such as Turkish and Arabic, were the communication language among the siblings. Regarding the interaction between children and other adults in the household, Kurdish was chosen as the "most spoken language" between all adults -including the grandparents- and children. While Kurdish appears to be the prominent language in the household, Finnish was more commonly used outside the household among the participant children and their Kurdish-background peers. One possible explanation for this is the peers' different levels stemming from their familial background and the linguistic complications. Since all the children join the same formal education in the Finnish language, their Finnish levels are closer to each other, making it more comfortable to utilize this language. Regarding active or passive exposure to the Kurdish language, watching television and videos in Kurdish seems to be the most common, with an average of four hours per child in a week. The second most common activity was listening to music in Kurdish and only then came interaction with other Kurdish-background peers. Kurdish music is one of the most vital elements in the Kurdish culture, and therefore, it is one of the most significant input sources for linguistic development.

An essential part of the background survey with the parents covered the time measurements in which their child is exposed to the Kurdish language. An ordinary year was divided into different time categories, such as weekdays, weekends, summer holidays, and other holiday times. Then, each of these categories is partitioned into smaller pieces, such as pieces of two or more hours in accordance with the most regular routines. Consequently, the data observed that the children (n.31), interact most with their fathers with a total of 156 hours during the regular weekdays, from Monday to Friday. This is closely related to the convenience of daily routines as the children and fathers spend most of the day outside of the home, and in the evenings, they spend more time together while the mother is busy with housework. It is also important to note that the peak of interaction time for the mother, father, siblings, and other speakers is between 18:00 and 19:00, indicating that the family and the community members are most active during these times in the household. As for Saturdays and Sundays, the findings suggest that children spend more time in a Kurdish-spoken environment, especially with the participation of relatives, other family friends, and peers native to Kurdish. The peak time for the interactions was observed to be in the morning and early evening, possibly during mealtimes when the family members are in close contact, and the most interaction was made with the mothers on weekend days. For the summer holidays, the results indicate that each child in the sample group spends the most time with their fathers (9.16 hours) during the summer vacation. A possible reason might be some sort of summer school or courses that mothers participate in when the fathers have summer holidays and spend more time with the children. Other holiday times such as winter and semester holidays, present parallel findings with the summer holidays.

The second instrument used during the data collection was the literacy test that aimed to collect children's literacy skills and more general linguistic proficiency. This test consisted of 8 main tasks aimed at revealing the literacy skills of the children whose linguistic environment was depicted by their parents via input survey. The first task was phonetic proficiency, through which participants were asked about 16 letters from the Kurdish Latinic alphabet. According to the results, the letters Ş, Ç, Ê, and X were recognized by more than %60 of the participating children. All of these letters are Kurdish-specific letters that are unique in their appearance and sound. Thus, it was concluded that most of the participants could recognize at least some of the Kurdish-specific letters regardless of having any formal education in the Kurdish language. The second task, Word to Picture, which aimed to find the ability to connect written words and pictures, revealed a similar performance with most of the

other tasks, with over %60 success rate. Through this task not only the correct words but also the incorrect words were considered as part of the analysis, because, in terms of the analysis, the words that were assumed to be correct could be associated phonetically or semantically with the right words. The third task, measuring real word reading, included the 20 most commonly used words across all Kurmanji dialects and included Kurdish-specific letters to minimize the effect of Finnish literacy skills, which all participants possessed. Although more than half of the children managed to read the words, some respondents did not know or remember the meaning of the given word, which shows their literacy skills prevail over their lexical repertoire, as shown in further factor analysis and correlations. In order to cover all dimensions of their literacy skills, a phonemic decoding task was developed as the fourth task, which contained 20 fake words in total, all including at least one Kurdish-specific letter. The results displayed a lower average for general success rate as lexical resources were out of use throughout this task. Regarding the lexical depth, three tasks were formulated in addition to the previous ones: Antonyms, synonyms, and hypernyms tasks, each consisting of 10 items. Among these vocabulary measurement tasks, the biggest success was shown for the antonyms while the hypernyms remained the most challenging for the participating pupils. The concrete nature of the antonyms is thought to be easier to perceive the logic behind antonyms for children of that age. To measure the literacy skills in further dimensions, a pictured reading comprehension task was also applied. Each item in this task included a short sentence and four corresponding pictures, each defining the given sentence. The percentage of correct answers was highly impressive, ranging from 74% to 94%, which is seen in the tasks related to more general reading abilities, such as letter recognition, word reading, phonemic decoding, and word chain tasks. One of the last applied tasks, listening comprehension, aimed to measure children's understanding capacities when they hear a Kurdish sentence. The task included ten morphologically correct sentences, half of which have apparent illogicality. A high proportion of the participants were able to determine whether each statement made sense correctly.

After conducting the factor analysis, it was noticed the two main underlying constructs among the ten tasks, explained the majority of all the tasks presented in the literacy test. The first component consisted of the tasks Picture to word, Antonyms, Hypernyms, Synonyms, Listening, and reading comprehension tasks. Thus, it was concluded that all these tasks measure vocabulary and semantic depth and named this first component as "vocabulary and semantic depth" (VSD). The second component, on the other hand, covered the Kurdish

alphabet Letter recognition, Kurdish word reading, Phonemic decoding, and Word chain, the tasks measuring more of the general reading ability, which could be named as "Reading Depth" (RD), due to the underlying construct, within the literacy skills' scope. The findings show that component 1 (VSD) negatively correlates with the time spent with the mother during the regular week and weekend days. As for the second component (RD), a positive and significant correlation with the time spent with the fathers during the weekdays is seen, including the weekends; one reason for fathers being influential in terms of their children's reading skills may be their education level in Kurdish when compared to the mothers. Also, most of the total-time categories had negative correlations with the VSD, although none were significant, indicating that vocabulary and semantic competencies are less related to the amount of time children were exposed to the Kurdish language. Especially mothers seemed to have the most negligible contribution to their children's vocabulary depth, which requires further investigation. On the other hand, when all family members collectively contribute to the VSD development. The findings also indicate that the second component, the RD, has several significant positive correlations with the time spent with the father.

The father is the most critical person in the child's environment regarding language input. In particular, for reading abilities, fathers have significant roles. This may have stemmed from the higher educational levels of the father, their stronger national identity, or their attitudes (previously, it was found out that fathers have positively stronger attitudes towards Kurdish). Especially regarding RD development, the fathers seem to have crucial roles.

The age of the children seems to be another determinant, especially with its contribution to the VSD. However, most interestingly, the data found no correlation between VSD and the participation status of the respondent child in HL instructions, meaning that participating in HL instructions at some point in their life did not contribute significantly in recognizing words and performing other lexical tasks.

Moreover, mothers' proficiency in only Kurdish positively correlates with children's RD skills but not with their VSD capacities. However, when mothers speak better Finnish, they tend to speak more in Finnish with their children, and thus, the children's vocabulary and semantic capacity in Kurdish decreases, but their RD skills slightly improve. Parents' attitudes towards the importance of the Kurdish and their concerns regarding language loss have no significant contribution to literacy development.

In conclusion, the fathers and the age of the children seem to have a significant influence, especially on the children's reading abilities. However, the lexical-semantic development of the children remains connected to other variabilities yet with minor significance. Insufficient written language sources arguably cause the children's relatively small capacity for vocabulary depth and lack of standard language, which is one of the foundations of literacy in a language.

Although the current study has many limitations due to its large size, the abundance of variables, and the extensive background spectra of the participants who are the source of the data, it aims to lead aspirations for conducting more comprehensive and specific studies in this field for the future.

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Appendices

Appendix 1. INPUT AND EXPOSURE SURVEY

INPUT AND EXPOSURE SURVEY

- This survey will be used only for research, and the data will be destroyed within six months. I confirm to join this survey by my own will.

A. ABOUT THE CHILD WHO JOINS THE LITERACY TEST

1 How many children do you have older than 1,5 years, in total? (_____)

2 What is the birth order of your child who joins the literacy test?

1. 1st child

2. 2nd child

3. 3rd child

4. 4th child

5. Other (_____)

3 The name (First two letters) _____

4 The age _____

The grade _____

The gender (sex) _____

5 Any detected language disorder such as dyslexia in your child?

Yes

No

6 Where your child was born?

1. In Finland

2. In a Kurdish-dominated city back in homeland

3. Somewhere else (Where? _____)

7 At what age then he/she start receiving regular exposure to Finnish? When the child was:

My child born in
Finland

0-1 years-old

1-2 years old

2-3 years old

3-4 years old

4-5 years old

5-6 years old

7-8 years old

8-9 years old

9-10 years old

10-11 years old

11-12 years old

12-13 years old

13-14 years old

1 What language does **the mother speak to** the child the most?

- Kurdish
- Finnish
- Other

2 What language does **the child speak to the mother** the most?

- Kurdish
- Finnish
- Other

3 What language does **the father speak to** the child the most?

- Kurdish
- Finnish
- Other

4 What language does **the child speak to the father** the most?

- Kurdish
- Finnish
- Other

5 Who spends more time with the child at home?

- The mother
- The father
- Grandparents
- Other (_____)

A. PARENTAL CONDITIONS

6 What is the parental marital status?

- Parents live together
- Separated

7 Are the parents native Kurdish speakers?

1. Only mother is native

1. Rojhilat (Western Iran)
2. Qafqas&Soviet (Armenia, Azerbaijan and Former Soviets)
3. Other (_____)

1 Which part of Kurdistan is the **mother** originally from?

4. Bakur (Eastern Turkey)
5. Rojava (Northern Syria)
6. Bashur (Northern Iraq)
7. Rojhilat (Western Iran)
8. Qafqas&Soviet (Armenia, Azerbaijan and Former Soviets)
9. Other (_____)

2 How old was the mother when she arrive in Finland?

1. 1-10 years old
2. 10-20 years old
3. 20-30 years old
4. After 30 years old
5. Born in Finland

3 How old was the father when he arrive in Finland?

6. 1-10 years old
7. 10-20 years old
8. 20-30 years old
9. After 20 years old
10. Born in Finland

4 With who does the child live (only adults)?

- With both parents
- With the mother
- With the father
- With someone else (_____)

5 How well does the **mother** speak **Finnish**?

- not at all

1 How well does the **mother read and write** in Kurdish?

1. Can not read nor can write
2. Can read but not write
3. Both reads and writes

2 How well does the **father read and write** in Kurdish?

4. Can not read nor can write
5. Can read but not write
6. Both reads and writes

3 Do you have Kurdish books in your home?

- Yes
 No

4 How important is it for you that your child reads and writes in Kurdish?

- Very important
 Important
 Not important

5 To what extent do you worry that your children will loose Kurdish language?

- I worry a lot
 I occasionally worry
 I don't worry

A. OTHER HOUSEMATES

6 In what language do the siblings speak to the child the most?

1. Kurdish
2. Finnish
3. Other (-----)

7 In what language does the child speak to the siblings the most?

4. Kurdish
5. Finnish
6. Other (-----)

A. OTHER INPUT SOURCES

- 1 How many Kurdish speaking friends or cousins does your child have in Finland?
(_____)

- 2 In what language does **the friends and cousins of your child** who live in Finland speaks to him/her when they are together in general?
 1. Kurdish
 2. Finnish
 3. Other (_____)

- 3 In what language does **your child** speak mostly to her/his friends and cousins in Finland when they are together?
 4. Kurdish
 5. Finnish
 6. Other (_____)

- 4 Which of the following native relatives of the family lives in Finland?
 1. Grandfather
 2. Grandmother
 3. Uncles
 4. Aunts
 5. Other (_____)

- 5 **How many hours does your child spend time in a Kurdish language course per week**
(_____ hours)

- 6 **How many hours does your child speak in Kurdish with other Kurdish speaking children per week?**
(_____ hours)

E. EXPOSURE & INPUT

47. Please describe who spends time with the child in Kurdish on an average day during the week?

Please put a cross (X) in the relevant boxes. If more than one person is with the child at the same time, circle the cross to show who is interacting more with the child.

	Mother	Father	Siblings	School	Other adults (specify person) _____
7 am – 8 am					
8 am – 9 am					
9 am – 3 pm					
3 pm – 4 pm					
4 pm – 5 pm					
5 pm – 6 pm					
6 pm – 7 pm					
7 pm – bedtime					

48. Please describe who spends time with the child in Kurdish on an average day during Saturdays?

Please put a thick (✓) the relevant boxes. If more than one person is with the child at the same time, circle the tick to show who is interacting more with the child.

	Mother	Father	Siblings	School	Other adults (specify person) _____
7 am – 8 am					
8 am – 9 am					
9 am – 3 pm					
3 pm – 4 pm					
4 pm – 5 pm					
5 pm – 6 pm					
6 pm – 7 pm					
7 pm – bedtime					

49. Please describe who spends time with the child in Kurdish on an average day during Sundays?
Please put a thick (✓) in the relevant boxes. If more than one person is with the child at the same time, circle the tick to show who is interacting more with the child.

	Mother	Father	Siblings	School	Other adults (specify person) _____
7 am – 8 am					
8 am – 9 am					
9 am – 3 pm					
3 pm – 4 pm					
4 pm – 5 pm					
5 pm – 6 pm					
6 pm – 7 pm					
7 pm – bedtime					

50. Please describe who spends time with the child in Kurdish on an average day during the summer holiday?

Please put a thick (✓) in the relevant boxes.. If more than one person is with the child at the same time, circle the tick to show who is interacting more with the child.

	Mother	Father	Siblings	School	Other adults (specify person) _____
7 am – 8 am					
8 am – 9 am					
9 am – 3 pm					
3 pm – 4 pm					
4 pm – 5 pm					
5 pm – 6 pm					
6 pm – 7 pm					
7 pm – bedtime					

51. Please describe who spends time with the child in Kurdish on an average day during the other holidays.

Please tick the relevant boxes. If more than one person is with the child at the same time, circle the tick to show who is interacting more with the child.

	Mother	Father	Siblings	School	Other adults (specify person) _____
7 am – 8 am					
8 am – 9 am					
9 am – 3 pm					
3 pm – 4 pm					
4 pm – 5 pm					
5 pm – 6 pm					
6 pm – 7 pm					
7 pm – bedtime					

Appendix 2. LITERACY TEST

1

1. Kurdish Alphabet Knowledge (2 min, teacher listens)

Ş ş

Ç ç

Ê ê

Ee

Î î

Ii

Yy

Jj

Cç

S s

Zz

U u

Û û

W w

Q q

X x

 _____/21

2. Picture to Word (5 min, independantly)



leymûn	meymûn	ezmûn	beybûn
--------	--------	-------	--------



şev	kev	dev	rev
-----	-----	-----	-----



şepal	tofan	qertal	gopal
-------	-------	--------	-------



kûçik	biçûk	hûrik	gurçik
-------	-------	-------	--------



dan	nan	şan	ban
-----	-----	-----	-----



duh	gur	guh	gul
-----	-----	-----	-----



serî	herî	perî	derî
------	------	------	------



qesp	keşp	heşp	çeşp
------	------	------	------



guman	deman	zeman	ziman
-------	-------	-------	-------



tifi	tiri	guli	milfi
------	------	------	-------



qefes	meqes	nekes	seqet
-------	-------	-------	-------



şax	neh	şeh	meh
-----	-----	-----	-----

3. **Kurdish Word Reading Fluency and The Sight Word Efficiency** (3 min, teacher listens)

Zer
sor
mar
germ
derman

Çav	çûk
xêr	merc
şîr	ciwan
qut	xwarin
şêr	hindik
jan	yekşem
kêr	çarşem
jin	şekir
yar	cîran
xuya	jiyan

_____/20

4. Phonemic Decoding Efficiency (3 min, teacher listens)

buj
tem
vaba

kertu
defuk
tukage
remihut

şê	çûjnim
sec	jeyên
cik	xwaj
çêj	çiqûwaz
yûq	jêrînde
wuş	qayteji
zêş	êşxare
şêlt	eswîrz
cisqu	xewşazîr
zexîç	mirjayok

_____/20

5. Vocabulary Depth

a. Antonyms (2 min, teacher just tells, without showing the paper)

	Stimulus word (peyva destpêkê)	Student's answer (bersiva xwandekar)	Comment (şîrove)
	dirêj	kurt	
	sîpî	reş	
	birçî	têr	
1	mezin		
2	tarî		
3	jar		
4	baş		
5	fireh		
6	germ		
7	hişk		
8	zuha		*
9	bilind		
10	feqîr		

_____/10

*this task was conducted only orally in Ganuza & Hedman (2019)

b. Hypernyms (2 min, teacher just tells, without showing the paper))

	Stimulus word				Student's answer	Possible Answers	Comments
	Erebe	otobis	metro	balafir		wesayît	Example Mînak
	sêv	pirteqal	moz	mandarîn		fêqî	
	Espo	Helsinki	Tampere	Turku		bajar	
1	Nan	Mast	Bîrinc	Savar		Xwarin	
2	Şîr	Dew	Çay	Av		Tîştê vexwarinê	
3	Yekşem	Çarşem	Înê	şemî		Navên rojan	
4	Hesp	Mar	Berx	Ker		heywan	
5	Kesk	Sor	Zer	Sipî		reng	
6	Dest	Ling	Mil	Pîşt		laşe	
7	Bihar	Havîn	Payîz	Zivistan		demsal	
8	Kitab	Qelem	Defter	Jêbir		Tîştên dibistanê	
9	Kenîn	Girin	Tirsîn	Qehirîn		Hest	
10	pantor	gore	pêlav	kum		cilik	

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*this task was conducted only orally in Ganuza & Hedman (2019)

c. **Synonyms** (2 min, teacher reads and shows the paper)

A	Axiftin	Rûniştin Girêdan Bêhnkirin Xeberdan	
B	Xanî	Mai Sol Pez erd	

1	Kêmbûn	Sor bûn Hindik bûn Xilas bûn Azad bûn	
2			
3	Birrin	Hilgirtin Kom kirin Jê kirin rakirin	
4			
5	Hiş bûn	Aciz bûn Westî bûn Nexweş bûn Bêdeng bûn	

6	Yaz kirin	Rêz kirin Rast kirin Xêz kirin Nivîs kirin	
7	Xebitîn	Baz dan Vekirin Kar kirin Sekinîn	
8	Fêhm kirin	Avêtin zanîn çinîn vexwarin	
9	Lêxistin	Lêdan Neman Girêdan Gez kirin	
10	Lênêrîn	derxistin Mêze kirin Hilweşandin Birêxistin	

 /10

*synonym test is to be presented both visually and orally - the instructor read all the choices out aloud.

6. Reading Comprehension (10 min, independently)

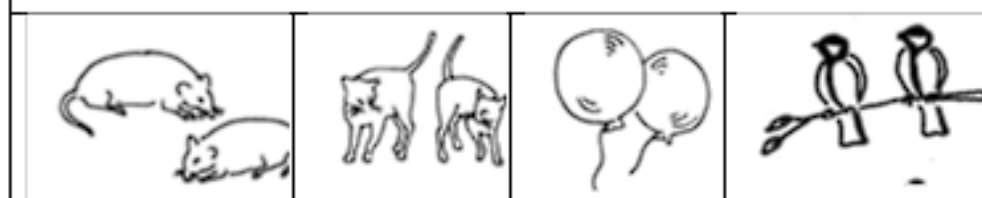
A

Azad tişteki dinivîse.



B

Tu du mişkan dibînî.



1

Leyla rûniştîye ser kursî.







2





Serhad xwarinê dixwe.



3 Min séva xwe xwariye.

			
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4 Zeyneb li hespî siwar buye.

			
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5 Zarok li ber derê dibistanê dileyîzin.

			
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6 Xalê min du masiyên baş hene.

			
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7

Pêlava birayê Hesenî qet buye.



8

Diya Rûkenê jibo mêvanan şivê çêdike.



9

Xaltiya Zozanê li ser doşekê razaye.



10

Sibe ye, roj derketiye û zarok diçin dibistanê.



7. Listening Comprehension (2 mins, teacher reads only)

A	Zivistanê derve sar e.	R	X
B	Nan ji kevir çêdibe.	R	X
1	Doşek jibo razanê ye.	R	X
2	Bacan û zebeş tiştên xwarinê ne.	R	X
3	Berf reş e, û germ dike.	R	X
4	Diran bi qelemê tê şûştin.	R	X
5	Av wek kevir hişk e.	R	X
6	Li dibistanê mamoste heye.	R	X
7	Masî li ezmanan dijîn.	R	X
8	Kitêb penîr dixwin.	R	X
9	Çêlek şîr didin me.	R	X
10	Dema nexweş dibim diçim doxtorî.	R	X

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8. Word Chain test (5 min independently)

Put a dash (—) between the three combined words.

~~îsareta_das~~ (|) ~~deyax_aybera~~, ~~her_sê_ewwêna_bêberce~~.

gulkuçikmast

dirêjdikanpisik

zeytunhesprast	...../3
çaygundbacan	...../3
hirçdolabkursî	...../3
rengkumkaxez	...../3
avberfxwarin	...../3
kûçiknandest	...../3
kesksorzer	...../3
mişmirîşkmar	...../3
sêvkursîders	...../3
bilindmazinreş	...../3

_____/30

