

**Association of language proficiency and leisure time language use among the children who speak Finnish as an additional language**

Master's Degree Programme in Inequalities, Interventions and New Welfare State (INVEST)

Master's thesis

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## **Abstract**

This study investigates the relationship between Finnish language proficiency and its use during leisure activities among children who speak Finnish as an additional language. Using data from the Finnish Education Evaluation Centre (FINEEC), the study analyzes the language use patterns of 1,530 ninth-grade students from 242 schools. Language proficiency, measured through the Common European Framework of Reference for Languages (CEFR), is examined in relation to online activities and verbal interactions in Finnish. The analysis employs linear regression to evaluate the impact of various factors, including years of basic education, family language, mother tongue instruction, attitudes towards Finnish, and parental education. The findings reveal a significant positive association between Finnish language proficiency and the use of Finnish in online activities and verbal communications. Children with higher proficiency are more likely to engage in online activities such as chatting with friends and following social media, as well as speaking Finnish in various settings. Although no significant gender effect is observed in both online and verbal communication. Participants with Somali or Arabic as their mother tongue show a stronger tendency to use Finnish online and in verbal interactions, while Estonian-speaking children exhibit lower engagement in Finnish language use. Longer durations of basic education correlate positively with online Finnish use, as well as with speaking frequency. Interestingly, higher parental education levels are associated with decreased online Finnish use and verbal communication of their children, suggesting complex socio-economic dynamics. Non-participation in mother tongue instruction is linked to both more online use and higher speaking frequency in Finnish, emphasizing the potential trade-off between mother tongue and Finnish language proficiency. The study underscores the importance of fostering positive attitudes towards the Finnish language to enhance its use and proficiency. These insights provide valuable

implications for policymakers and educators in supporting language acquisition and integration among multilingual adolescents in Finland.

Key words: Finnish, language, online, speaking, use, children, leisure time

## **Introduction**

The use of additional languages has gained high value on the policy agenda of European Union for the last two decades. It is a matter of question that why some additional language users speak the language (of the host country) more fluently when some other additional language users experience difficulty of using it. In the research field of additional language use, these two are important questions (Bean & Stevens, 2003; Espinosa & Massey, 1997; Portes & Rumbaut, 2024). Study on additional language acquisition is very important as it is directly connected with the economic prosperity of the additional language users specially for the immigrants: People who are highly proficient in additional language have better chances to get employed and have greater chance to gain economic prosperity (Chiswick, 2018; Shields & Price, 2002). Moreover, use of additional language is studied on the field of additional language research to examine how learning and using a new language can help migrants integrate into the culture of their new country (Alba et al., 2002; Portes & Rumbaut, 2024).

Linguistic skills and language proficiency are one of the most important social capital for the people who speak language of the surrounding society (Dustmann & Soest, 2001). For most of the additional language users, speaking in additional language is a challenging task (Masuram & Sripada, 2020). For instance, even if someone calls themselves as a fluent user of additional language, they might not be fully sure about the grammar and right word at a time (Hammerly, 1991). Proficiency in a language and language use are the both sides of a coin: They are interconnected to each other (Bergmann et al., 2015).

On the other hand, language use is one of the basic tools to integrate in host society (Fukuda, 2017). In last two decades, Finland has witnessed an increased flow of immigration. The main purposes of immigration in Finland are work opportunities, study and family relations (Martikainen, 2013). From the data of Statistics Finland (2024), from total population, approximately 8.5 percent people living in Finland have foreign background. Majority of these

people have different language as their mother tongue and they use Finnish as an additional language (Taylor et al., 2023). Increasing migration has led to adapt multilingualism in educational institutions and workplaces. But it is, however, crucial to learn the language of the surrounding culture (Alisaari et al., 2019; Järnlström et al., 2020). Apart from the formal institutions, additional language use in leisure time activities can be a medium of learning the language of a host country for a successful integration (Mulé et al., 2022). For example, children might practice additional language through online chat with their friends in leisure time. This informal language use in leisure time enhances the proficiency on targeted language (Wang & Chen, 2007).

There have been a number of research on language proficiency of additional language learners. Still there is a notable gap in the literature concerning the specific context of leisure time language use of adolescents who speak Finnish as an additional language. Previous studies have explored acquisition of Finnish as an additional language, in relation with the integration in academic life and labor market (Itani et al., 2015; Jasinskaja-Lahti, 2008). Besides, previous studies also have explored different dynamics of socioeconomic and demographic backgrounds and language proficiency in Finnish specially related to children of immigrants (Jasinskaja-Lahti, 2008). This gap in the literature need to gain a further understanding through more studies of how language proficiency and leisure time activities related to language use are connected.

This study aims to explore children who speak Finnish as their additional language and the association between proficiency in Finnish and tendency to use Finnish in the leisure time. Here, additional language speakers mean people who speak different language in their home environment, and who have potentially learned Finnish outside of the home environment. For example, the children having family background of speaking their language of origin. The term additional language was used in this study instead of second language avoiding categorizing them in a deficit way that would emphasize the picture of them as lacking language skills (Lunneblad & Carlsson, 2009; Siekkinen, 2021). Besides, this study also aims to find out the association of some factor variables to the use of Finnish language as they were found significant in some previous studies. The variables are gender, how many years they have attended at basic education, family language, years of basic education, participation in mother tongue instruction, attitude towards Finnish language and parental education.

## **Research questions**

1. How is language proficiency in Finnish as an additional language related to the use of Finnish language in leisure time?
2. How different factors such as gender, family language, years of basic education, participation in mother tongue instruction, attitude towards Finnish language and parental education are associated with leisure time language use among the children who use Finnish as an additional language?

## **Language learning and language use**

Language learning is always treated as the learning of new skills. For every children learning it's language is as easy as they tie their own shoes (O'grady, 2005). But it is not as easy for the adolescent and adults (Gullberg et al., 2010). Children learn language for their desire to communicate with their surroundings (Rusman et al., 2018). However, leaning language is much more complicated when it comes to the question of learning additional language (Larsen-Freeman, 2006). Additional language learning is a complex and multifaceted process that involves cognitive, social, affective, and linguistic dimensions: learners must navigate these various aspects to develop proficiency in a new language (Ellis & Yuan, 2004). The research on additional language acquisition is a multidisciplinary area that focuses on how people acquire and use an additional language. It takes into account a variety of elements, such as age, input, social interaction, motivation, and individual variance, to comprehend the complicated process of learning a new language (Gitsaki, 1998).

Van Lier (2002) in his ecological-semiotic approach to language acquisition where he highlighted the importance of the interactions between individuals and their environments, as well as how meaning is generated and comprehended within these interactions. This perspective emphasizes the dynamic association between language learning and its practical application within the broader socio-cultural and environmental setting (Van Lier, 2008).

Children actively engage in language use during their leisure time as a medium for communication and expression (Mulé et al., 2022). For example, during play, study, and social interactions, they not only reinforce linguistic skills but also apply language in meaningful ways within their

immediate environments. The ecological perspective of the language learning theory highlights the importance of understanding language use in all situations, including leisure time activities (Van Lier, 2002). During their leisure time, children are immersed in a dynamic environment where language becomes a tool for socializing, negotiating, and expressing creativity. The leisure time activities offer diverse opportunities for language exploration, contributing to a more holistic language learning experience.

Within the ecological-semiotic approach, language use is viewed as a dynamic and adaptive process (Gullberg et al., 2010). For children, classroom plays a role of semiotic mediator where children socially engage to each other to construct knowledge on language (Haneda & Wells, 2008). It can be happened also outdoors where children engage in leisure activities: the way they use language is not static or rigid but rather dynamic and adaptable, influenced by the context and the ever-changing nature of communication in different social and cultural environments. Individuals navigate through various activities, adjusting their language to suit different situations and social interactions (Van Lier, 2008). This adaptability fosters not only linguistic competence but also social integration and effective communication during recreational pursuits (Rutherford & Tuntivivat, 2024). Moreover, language use, both in leisure time activities and in other contexts, contributes to the construction of a child's identity (Peluso, 2020; Vorobel, 2017). For instance, through language use and shared activities, children express themselves, establish social roles, and negotiate their place within peer groups and community.

Language is not merely a medium of communication but a means for meaning-making (Vygotsky, 2012). Children engage in the creation and interpretation of meaning through signs and symbols, enhancing their understanding of the communicative function of language in a relaxed and enjoyable setting (Schwartz & Deeb, 2021). For example, children can use the symbolic form of language in their online activities such as online chats with friends. The activities they choose, the interactions they partake in, and the creativity they express all contribute to a meaningful linguistic environment (Schwartz & Deeb, 2021). By recognizing and embracing the interplay between language learning and, for example, leisure-time language use, educators and caregivers can provide a more comprehensive and engaging language learning experience for children. For instance, online chatting with friends in leisure time helps individual to learn additional language (Mahfouz & Ihmeideh, 2009; Michel, 2018). A study of Blake (2009) found that text based online

chatting with friends improve oral fluency in an additional language. Moreover, playing online games, listening audios and streaming videos in online in leisure time help to learn additional language (Zhang et al., 2021).

### **Language proficiency**

In terms of integrating children with immigrant backgrounds, who are also additional language learners, language proficiency has counted as the most important element (Stanat & Edele, 2015). The method of instruction is mainly the first language of the host society not the first language of an additional language learner (Alisaari et al., 2019). Moreover, proficiency in host language is one of the basic requirements for academic success and successful social integration for the children who are immigrant and speak different language in their home (Rienties et al., 2012).

In the realm of additional language learning, a standard framework named “Common European Framework of Reference for languages (CEFR)” is commonly used in European setting as well as all over the world as a language proficiency evaluation standard (Brunfaut & Harding, 2020). Council of Europe (2001) categorizes the framework for language proficiency into six consecutive levels: A1, A2, B1, B2, C1, and C2, which ranged from beginner (A1) to proficient (C2). Each level is defined by specific descriptors related to the learner's ability in four different language skills: reading, speaking, listening, and writing. For instance, at the level A1, a user can understand and use ordinary expressions and very elementary phrases aimed at the pleasure of needs of a tangible type. As proficiency increases through the levels, learners demonstrate greater competence and complexity in their language skills, culminating in the ability to recognize and yield complex texts and engage in fluent and spontaneous communication at the C2 level. This framework is widely used in language education, curriculum development, assessment, and certification across Europe and globally. It provides a clear and structured way to assess and communicate language proficiency, aiding learners, educators, employers, and policymakers in understanding and comparing language skills effectively (Council of Europe, 2001).

Language proficiency is directly associated with the economic prosperity as it has a link to get employed in host society where economic phenomenon plays a weak role in the case of language use. Side by side, language use is also associated with the cultural integration (Portes & Rumbaut, 2024). High language proficiency and use of language indicates successful integration in a host



society and it fosters social relations among the people living a society (Isphording, 2015). Most of the researchers studying acquisition of additional language claimed that opportunities to use the additional language is the predominant factors to learn and use the language (Ellis, 2015). Outdoor activities in leisure time and language proficiency can be interconnected to each other (Fägerstam & Grothéus, 2018). Children can take part in authentic play in outdoor environment during their leisure period where they get chance to use language. Through this, their skill over the language is fostered (Miller et al., 2013). Children use language in outdoor activities as it organized in random setting where there has no performance pressure and encourage communication (Jarman, 2008). On the other hand, leisure time activities also have many positive outcomes and it helps to improve additional language proficiency (Szczepanski, 2008). However, studies concerning leisure time language use of the children who speaks additional language are scarce in Finland as well as internationally. Moreover, studies looking both use of language in online and verbal are also less. So, to address this gap, this study is significant.

### **Factors affecting language proficiency and use**

Previous studies mostly focused mainly on the learning of additional language instead of communicative use of it (Ellis, 2015). Specially studies from Finland are scarce. Most of the studies on additional language use have been conducted on English as an additional language from where majority of these studies are from the USA and other English-speaking countries (Kubota & Lin, 2009). Overall, purpose of using additional language is to communicate with the other speakers using targeted language. It depends on communicative competency where language use is the main condition of communicative competency (Derwing, 2017). Language use depends on the fluency of the language which is considered as the unavoidable part of communicative competency (Housen & Kuiken, 2009).

Besides, previous studies found many factors which might determine the language use of the additional language users. For instance, Ellis (2004) explained that positive attitudes towards additional language plays a crucial role in language learning, as individuals who are highly motivated tend to persist and achieve greater proficiency. Studies on additional language acquisition have shown that gender might play a significant role in linguistic behavior. For example, in terms of additional language learning in general, girls tend to do better than boys to

gain proficiency due to cognitive and social difference (Denies et al., 2022; Pavlenko & Piller, 2008). On the contrary, the study of Guiller and Durndell (2007) found no significant difference of the frequency of online communication between girls and boys but they found a gender difference of type of conversation such as boys expressed authoritative communication where girls expressed supportive communication in a group. In the context of Finnish as an additional language, it is crucial to examine whether similar patterns exist. Family language practices play a vital role; as De Houwer (2007) points out that children who are regularly exposed to a second language in their home environment typically attain greater proficiency in that language. Besides, previous studies found duration of basic education in additional language might have an impact on children language learning and use. Such as the study of Unsworth et al. (2015) found that children who spend more time in early foreign language learning program had higher language proficiency than the control group. Educational level of parents often counted as an important factors of children additional language learning and use. For instance, children with more educated parents may have access to resources that support language learning. Similarly, the study of Kormos and Kiddle (2013) indicated that higher parental education and SES trigger students to learn English as an additional language. This statement also matches with the studies of (Iwaniec, 2020; Lamb, 2012). Immigrant parents with higher education levels might be more actively involved in their children's English language learning process (Mirici et al., 2013).

This review underscores the multifaceted nature of language proficiency and use, emphasizing the importance of various factors such as attitudes, gender, family language practices, duration of education, and parental education. These variables are crucial in understanding how children who speak Finnish as an additional language develop their proficiency and use of Finnish in their daily lives. By examining these factors in the context of Finnish language acquisition, this study aims to fill the gap in the existing literature and provide insights into the specific factors on language use among multilingual children in Finland.

### **Finnish educational context**

Finnish is the main official language of Finland along with Swedish. Approximately 4.9 million people use Finnish as their first language in Finland. On the other hand, nearly 0.5 million people use Finnish as an additional language (Federick, 2020). Most of them are immigrants who are from

other countries of Europe, Africa and Asia (Hietalahti, 2022). At school, diverse language skills of students can be a resource in different ways when studying subject content. The schoolchildren are able to use their language repertoire to support the learning of the content and at the same time strengthen their knowledge of both Finnish and their own mother tongue (Finnish National Agency for Education, 2024). Bilingualism and multilingualism have a positive impact on a child's linguistic, cognitive and educational development (Quinteros Baumgart & Billick, 2018). It has also been established that the level of a children mother tongue skills strongly predicts his learning of a second language, which is why supporting one's native language skills also benefits other learning (Quinteros Baumgart & Billick, 2018). However, developing the language of schooling is crucial for academic success.

### **Instruction of Finnish as an additional language (F2)**

The syllabus of Finnish as an additional language and literature (F2) is the part of mother tongue and literature syllabus. A student can study Finnish as an additional language and the literature curriculum if his mother tongue is not Finnish, Swedish or Sámi or if he otherwise has a multilingual background (Finnish National Agency for Education, 2024).

Additional language instruction must be offered to students if their guardians choose it. According to a report by Tainio et al. (2019), F2 instruction is provided to an average of 46 percent of Finnish language learners. Availability has been highest in southern Finland (70.4%) and lowest in eastern Finland (54.6%). In 2018, 25,272 students in Finnish primary schools received F2 instruction, which is 6.8 percent of the total number of primary school students (Vipunen, 2020). However, Tainio et al. (2019) did not investigate the language proficiency levels of the students in their study.

Teaching Finnish as a second language (F2) is dedicated to students who do not have native-level proficiency in Finnish. F2 follows a curriculum similar to that of the native language and literature courses, replacing them partially or entirely. The goal of F2 education is to comprehensively enhance the student's Finnish language abilities, enabling them to understand and be understood in various contexts and to facilitate age-appropriate language learning. F2 education continues until the student achieves native-level proficiency in all aspects of Finnish language skills. This instruction is distinct from remedial or special education (Ryynänen-McEwan & Poletaeva, 2015).

The report by Kuukka and Metsämuuronen in 2016 conducted under the auspices of Karvi, explored Finnish language skills among students completing their basic education. The findings revealed that most students reached an adequate proficiency level in Finnish, particularly excelling in reading comprehension and writing. However, the study also uncovered notable performance gaps, with boys generally lagging behind girls, and students from immigrant backgrounds encountering more difficulties than their native counterparts (Harju-Luukkainen & McElvany, 2018). These results underscore the necessity for targeted educational strategies to support these groups and to ensure equitable language skill development for every student by the end of basic education.

### **Mother tongue instruction**

The teaching of one's mother tongue supports and enhances language proficiency, understanding of cultural background and development of cultural identity (Cummins, 2001). Under the Finnish Constitution (11.6.1999/731, Chapter 2, Section 17), all individuals living in Finland have the right to preserve and practice their own language and cultural heritage. Proficiency in one's mother tongue supports the development of multilingualism, lifelong development of language skills, linguistic awareness, and critical thinking; it also promotes learning the language of education at educational institutions and learning in other subjects through the language of education, predicts success in other language subjects for the student, and supports their identity (Creese & Blackledge, 2015; Cummins, 2001; Salö et al., 2018). In a study Cummins (2000) advocated that bilingual education system which integrate with mother tongue instruction are far effecting in enhancing both foreign language proficiency and academic success in comparison to submerge students in the foreign language at the cost of their mother language. Additional language which comes at the expense of mother tongue, can affect the students negatively in terms of cognitive development and success in the academic activities. So, in terms of Finnish language learning and use, for this study, mother tongue instruction could be an important factor.

In Finland, the teaching of immigrants' own mother tongue is supplementary to basic education. It is not specified in the Basic Education Act but is provided through separate state funding (Finnish National Agency for Education, 2024). Funding can be granted for their own mother tongue (other than Finnish or Swedish) or another language used at home, as well as for teaching Saami and

Romanian languages. In 2017, 36 percent of Finnish language learners participated in mother tongue instruction across Finland (Tainio et al., 2019). Tainio et al. (2019) recommend increasing mother tongue instruction in multiple municipalities and expanding the range of languages offered. In the context of early childhood education, in Finland there is a significant focus on nurturing the mother tongue studies and learning, which is essential for children's holistic development and aids to learn Finnish when they start preparatory education (Finnish National Agency for Education, 2024). In Finland, schools provide bilingual education that teach in both the students' mother tongue and Finnish. This approach assists non-Finnish-speaking students in gradually transitioning to Finnish while preserving their native language skills. So, it is expected that along with use and instruction in mother tongue children could take part in leisure time language use such as use in online and speaking in friends, shops and hobbies could lead to an improve of learning Finnish language.

## **Data and method**

The data for the current study was taken from the Finnish Education Evaluation Centre (FINEEC). They conducted an evaluation of the educational achievements in the Finnish as an additional language (F2) syllabus for mother tongue and literature at the final stage of primary education, at the 9th grade. The assessment aimed to generate trustworthy information regarding the attainment of goals outlined in the F2 syllabus within the national core curriculum (FNBE 2004), alongside assessing educational equity and students' readiness for future studies. The evaluation comprised 1530 children from 242 schools. The evaluation also included children who had been approved intensified or special assistance. In the final evaluation, the total number of pupils participating was 1530 of whom 727 were girls and 803 boys and all were the students of 9th grade. The standards for the 9<sup>th</sup> grade in the final evaluation of the F2 curriculum is defined in terms of language skills of the pupils, cultural skills and language learning skills. The focus of this assessment was primarily on language skills.

This current study explores language proficiency levels using a dataset that ranges from level 1 to 5, which corresponds to CEFR (Common European Framework of Reference for Languages) levels A1, A2, B1, B2, C1: it is important to establish clear equivalencies between the dataset's numeric scale and the CEFR framework. CEFR provides a standardized way to describe language

ability across Europe and beyond. Level 1 in the dataset corresponds to CEFR A1, indicating basic proficiency and understanding of everyday expressions. Level 2 (A2) represents elementary proficiency where individuals can handle simple communication tasks. Level 3 (B1) aligns with threshold or intermediate proficiency, allowing for more fluid interaction and understanding in familiar situations. Level 4 (B2) signifies upper-intermediate proficiency, enabling comprehension of complex texts and discussions. Level 5 (C1) corresponds to advanced proficiency, demonstrating a high level of language skills and nuanced expression. Additionally, information was collected from pupils about their schooling in Finland, their language background and their language skills, resources, socio-economic background and F2 learning. This information is also used in the present study.

In the present study, language proficiency was the independent variable. Proficiency had been measured through Common European Framework of Reference for Language (CEFR). Different modes of language use were the main dependent variables of the study. Children's language use during leisure time activities such as online use of Finnish language, and speaking in Finnish language were the main dependent variables of the study. Watching movies, programs, videos from TV or internet, listening to music, following and participation in social media, reading online magazines and other online publications, speaking and chatting with friends in Finnish language were considered as the online use of Finnish language. Besides, the dependent variable "speaking" has been computed from the variables speaking with friends, speaking in shops and other service sectors and speaking in hobbies.

To measure the extent to which children use the Finnish language in online during their leisure time, a composite variable named "Online use of Finnish language" was constructed based on four variables such as watching movies, programs, videos from TV or the internet, following social media such as blogs, Instagram, and Twitter, participation in discussions on different commonly used social media such as blogs, Instagram, and Twitter, and reading online magazines. Each of these variables was measured on a 5-point scale, with responses ranging from 1 ("Never in Finnish") to 5 ("Always in Finnish"). To ensure the reliability of this composite measure, a Cronbach's alpha analysis was conducted. The results indicated an overall alpha of 0.8134, which suggests good internal consistency among the variables. The item-test correlations ranged from 0.7548 to 0.8424, and the item-rest correlations ranged from 0.5537 to 0.7024, indicating that each

variable has a strong relationship with the total scale. Additionally, the average inter-item correlation was 0.5214, further supporting the cohesiveness of the items. After confirming the reliability, a composite variable was computed named "Online use of Finnish language" by taking the mean of the standardized scores of the four items. This composite score effectively captures the frequency and extent of Finnish language use in various online contexts by the children.

Similarly, to quantify the frequency of speaking in Finnish across different contexts, three specific variables were utilized: I speak with my friends, I speak in shops and other service situations and I speak in hobbies. These variables were subjected to an internal consistency reliability test using Cronbach's alpha. The alpha command was employed to evaluate the reliability of the scale both individually and collectively. Firstly, each item was standardized, and Cronbach's alpha was calculated for the set of items. The analysis yielded a Cronbach's alpha of 0.7403 for the combined scale, indicating acceptable internal consistency. The item-test correlations ranged from 0.8030 to 0.8192, and the item-rest correlations ranged from 0.5423 to 0.5738, demonstrating that each item contributed adequately to the overall scale reliability. The interitem correlations ranged from 0.4686 to 0.5087, reflecting moderate correlations among the items. Following the reliability assessment, the three variables were aggregated into a single composite variable named "Speaking frequency in Finnish" by calculating the mean of the standardized items. This composite variable was then used in further analyses to represent the frequency with which children spoke Finnish in various contexts.

In the same way, the factors father and mother education had been computed and named parents education where average interitem correlation was 0.557 and scale reliability coefficient was 0.715. The other factors were gender, mother tongue, years of participation in basic education, participation in mother tongue instruction, parents' education level and attitude towards Finnish language. The factors variable had been considered theoretically as it was found significant in the previous studies. The effects of different factors are measured using linear regression model.

## **Analysis**

This study aims to investigate the association between language proficiency and leisure time language use among children who speak Finnish as an additional language. The research questions

are structured to explore how language proficiency in Finnish relates to the use of Finnish during leisure time activities and to identify factors that are related to language use in this context.

To address the first research question, linear regression analysis was conducted to examine whether higher language proficiency in Finnish is associated with an increased likelihood of using Finnish during leisure time among adolescents with Finnish as an additional language. For the second research question, several factors were considered: years of basic education, family language spoken at home, participation in preparatory education program, instruction in the mother tongue, attitudes towards the Finnish language, and parental education. These factors were included in the linear regression model separately to assess their individual relationship with leisure time language use. After measuring the individual relations of each factor with the dependent variables, the results of the factors were displayed in a single table to make it more comprehensive.

Linear regression was chosen as the primary statistical method due to its suitability for analyzing binary outcomes (i.e., language use during leisure time) in relation to multiple variables. This approach enables the examination of the strength and direction of associations between language proficiency, associated variables, and leisure time language use among children with Finnish as an additional language. The linear regression model will allow for assessing the independent contributions of each factor, thereby providing comprehensive insights into the factors related to language use patterns in leisure settings within this specific population.

### Descriptive statistics

In the following section, the descriptive statistics are presented. First, the background variables were presented (Table 1), and then different aspects related to language use (Table 2).

**Table 1. Background variables**

Variable name	Frequency	Percentage
<b>Finish language sum (mean &amp; std.)</b>		4.207 & .677
<b>Gender</b>		
Boy	803	52.48
Girl	727	47.52
<b>Mother tongue</b>		
Russian	295	19.29
Estonian	187	12.23
Somali	218	14.26



Arabia	104	6.80
Others	725	47.42
<b>Years of basic education</b>		
1-2 years	140	9.22
3-5 years	373	24.57
6-8 years	217	14.30
9-10 years	788	51.91
<b>Father education</b>		
No education	33	2.16
Primary or vocational education	382	24.97
Higher education	500	32.68
No answer	615	40.20
<b>Mother education</b>		
No education	73	4.77
Primary or vocational education	421	27.52
Higher education	570	37.25
No answer	466	30.46
<b>Finnish language is useful in everyday situation</b>		
Completely disagree	23	1.65
somewhat disagree	50	3.60
I cannot say	233	16.76
somewhat agree	402	28.92
completely agree	682	49.06
<b>Participation in mother tongue teaching</b>		
Yes	858	57.20
No	642	42.80

Table 1 depicts that the mean of language proficiency in Finnish among the children was 4.20 and standard deviation was .68. The dataset comprises a balanced gender distribution with 52.48% boys and 47.52% girls. Mother tongue diversity is evident, with 47.42 percent speaking languages categorized as "Others," which means they have different origin and different languages followed by Russian (19.29%), Somali (14.26%), Estonian (12.23%), and Arabic (6.80%). The majority of children (51.91%) have 9-10 years of basic education, while the rest have varying lesser amounts. Regarding parental education, 32.68% of fathers and 37.25% of mothers have higher education, though a significant portion of respondents did not provide information on their parents' education. A large majority (77.98%) agree to some extent that Finnish is useful in everyday situations, while 57.20% participate in mother tongue teaching. This data highlights a diverse linguistic background and varied educational experiences, underscoring the importance of Finnish language proficiency and mother tongue support in the educational context.

**Table 2. Language use of the children**

Variable name	Frequency	Percentage
<b>Watch movies, programs, videos from TV or internet</b>		
Never in Finnish	189	12.90
Less frequently in Finnish than in another language	411	28.05
Equally often in Finnish as in another language	388	26.48

More frequently in Finnish than in another language	266	18.16
Always in Finnish	211	14.40
<b>Following social media (blog, Instagram, twitter)</b>		
Never in Finnish	136	9.35
Less frequently in Finnish than in another language	213	14.65
Equally often in Finnish as in another language	335	23.04
More frequently in Finnish than in another language	348	23.93
Always in Finnish	422	29.02
<b>Participation in discussion in social media</b>		
Never in Finnish	163	11.27
Less frequently in Finnish than in another language	219	15.15
Equally often in Finnish as in another language	364	25.17
More frequently in Finnish than in another language	354	24.48
Always in Finnish	346	23.93
<b>Read online magazine and other online publications</b>		
Never in Finnish	176	12.15
Less frequently in Finnish than in another language	236	16.29
Equally often in Finnish as in another language	335	23.12
More frequently in Finnish than in another language	303	20.91
Always in Finnish	399	27.54
<b>Read books or magazines</b>		
Never in Finnish	143	9.83
Less frequently in Finnish than in another language	268	18.43
Equally often in Finnish as in another language	354	24.35
More frequently in Finnish than in another language	323	22.21
Always in Finnish	366	25.17
<b>Speak with friends</b>		
Never in Finnish	45	3.09
Less frequently in Finnish than in another language	131	9.00
Equally often in Finnish as in another language	280	19.24
More frequently in Finnish than in another language	430	29.55
Always in Finnish	569	39.11
<b>Speak in the shops and other service situations</b>		
Never in Finnish	20	1.38
Less frequently in Finnish than in another language	49	3.37
Equally often in Finnish as in another language	159	10.94
More frequently in Finnish than in another language	342	23.52
Always in Finnish	884	60.80
<b>Speak in hobbies</b>		
Never in Finnish	112	7.79
Less frequently in Finnish than in another language	83	5.78
Equally often in Finnish as in another language	237	16.49
More frequently in Finnish than in another language	289	20.11
Always in Finnish	716	49.83

The descriptive table 2 provides insights into the frequency and language preferences of children engaging in various activities in Finnish versus other languages. For watching movies, programs, and videos, a significant portion (28.05%) did so less frequently in Finnish than in another language, while 14.40 percent always use Finnish. In social media following, 29.02 percent always used Finnish, and 23.93 percent used it more frequently than other languages. Participation in

social media discussions showed a more balanced distribution, with 25.17 percent using Finnish equally often as another language and 23.93 percent always in Finnish. Reading online magazines and publications saw 27.54 percent always in Finnish, with 23.12% using Finnish equally often. When it comes to reading books or magazines, 25.17 percent always used Finnish, and 24.35 percent used it equally often as other languages. Speaking with friends primarily occurred in Finnish, with 39.11 percent always using it and 29.55 percent doing so more frequently. In shops and service situations, a substantial majority (60.80%) always used Finnish. Finally, in hobbies, 49.83 percent always used Finnish, and 20.11 percent do so more frequently than other languages. This data indicated a strong preference for using Finnish in verbal communication, especially in service situations and with friends, while media consumption showed more varied language use.

### Inferential statistics

To measure the association between dependent and independent variables, through linear regression both bivariate and multivariate results were presented to see the difference of independent and adjusted association.

**Table 3 Factors associated with online use**

Online use of Finnish language	Bivariate model			Multivariate model		
	Coefficient	Std. err.	P> t	Coefficient	Std. err.	P> t
<b>Finnish language proficiency</b>	.401	.029	0.000	.274	.0384	0.000
<b>Gender (male) ref.</b>						
Girl	-.037	.041	0.373	-.118	.040	0.004
<b>Mother tongue</b>						
Russian (ref.)						
Estonian	.026	.074	0.726	.038	.074	0.604
Somali	.403	.072	0.000	.313	.072	0.000
Arabia	.375	.092	0.000	.291	.089	0.001
Others	.169	.055	0.002	.164	.055	0.003
<b>Years of basic education</b>						
1-2 years (ref.)						
3-5 years	.283	.077	0.000	.208	.077	0.008
6-8 years	.457	.085	0.000	.221	.088	0.012
9-10 years	.655	.071	0.000	.249	.083	0.003
<b>Participation in mother language study (yes) ref.</b>						
No	.121	.042	0.004	.120	.041	0.003
<b>Parents education</b>	-.124	.023	0.000	-.096	.023	0.000
<b>Attitudes towards Finnish language</b>						
Completely disagree (ref.)						
Somewhat disagree	.204	.197	0.300	.244	.186	0.190

I cannot say	.117	.171	0.493	.236	.161	0.143
Somewhat agree	.321	.168	0.056	.331	.158	0.036
Completely agree	.542	.166	0.001	.464	.157	0.003

The regression analysis (see Table 3) aimed to explore the relationship between Finnish language proficiency) and online use of the Finnish language. The results indicate a significant positive association between Finnish language proficiency and online language use (coefficient = 0.274,  $p < 0.000$ ). This means that individuals with higher Finnish language proficiency scores are more likely to engage with online activities using the Finnish language. Additionally, it's important to note that the relationship between Finnish language proficiency and online language use may also work in the opposite direction, suggesting that engaging in Finnish language use in online activities could potentially lead to increased proficiency in the language. Gender also played a role, with females showing a lower likelihood of online Finnish language use compared to males (reference category) ( $\beta = -0.118$ ,  $p = 0.004$ ). Furthermore, individuals whose mother tongue was Somali ( $\beta = 0.313$ ,  $p < 0.001$ ) or Arabic ( $\beta = 0.291$ ,  $p = 0.001$ ) demonstrated a stronger tendency to use Finnish in online activities. Education was another significant factor, where longer participation in basic education (6-8 years:  $\beta = 0.221$ ,  $p = 0.012$ ; 9-10 years:  $\beta = 0.249$ ,  $p = 0.003$ ) was positively related to online use of Finnish language where 1 to 2 years was in the reference category. Conversely, higher levels of parents' education were associated with a decreased likelihood of online Finnish language use ( $\beta = -0.096$ ,  $p < 0.001$ ). Attitudes towards the Finnish language were also significant, with participants who completely agreed with positive attitudes being more likely to use the language online ( $\beta = 0.464$ ,  $p = 0.003$ ). The children who showed negative attitudes towards Finnish language and who remained neutral were not statistically insignificant.

**Table 4 Factors related to Speaking frequency in Finnish**

Speaking (Finnish language)	Bivariate model			Multivariate model		
	Coefficient	Std. err.	P> t	Coefficient	Std. err.	P> t
<b>Finnish language proficiency</b>	.515	.028	0.000	.409	.036	0.000
<b>Gender (male) ref.</b>						
Girl	-.045	.042	0.278	-.047	.038	0.220
<b>Mother tongue</b>						
Russian (ref.)						
Estonian	-.123	.076	0.105	-.172	.071	0.016
Somali	.196	.073	0.008	.066	.069	0.339
Arabia	.245	.094	0.009	.144	.085	0.092
Others	.147	.056	0.009	.135	.052	0.010
<b>Years of basic education</b>						

1-2 years (ref.)						
3-5 years	.295	.078	0.000	.136	.074	0.067
6-8 years	.500	.085	0.000	.113	.084	0.178
9-10 years	.700	.072	0.000	.086	.079	0.278
<b>Participation in mother language study (yes) ref.</b>						
No	.173	.042	0.000	.178	.039	0.000
<b>Parents education</b>	-0.075	.021	0.002	-.042	.022	0.057
<b>Attitudes towards Finnish language</b>						
Completely disagree (ref.)						
somewhat disagree	.288	.192	0.134	.324	.178	0.069
I cannot say	.224	.167	0.181	.343	.154	0.026
somewhat agree	.533	.163	0.001	.520	.151	0.001
completely agree	.858	.162	0.000	.724	.150	0.000

The analysis presented in Table 4 examines the relationship between Finnish language proficiency and the likelihood of using Finnish language during speaking which includes speaking with friends, speaking in shops and other service sectors and speaking in hobbies. Firstly, Finnish language proficiency itself ( $\beta = 0.409$ ,  $p < 0.001$ ) emerged as a strong factor of speaking frequency, indicating that individuals with higher Finnish language skills tend to exhibit better speaking frequencies overall. Gender (Girl) did not reach statistical significance ( $\beta = -0.047$ ,  $p = 0.220$ ), suggesting that gender may not significantly influence speaking frequency in this model when boys were in reference category. Regarding mother tongue, children whose mother tongue was Estonian exhibited lower speaking frequency ( $\beta = -0.172$ ,  $p = 0.016$ ). However, the frequency associated with Somali ( $\beta = 0.066$ ,  $p = 0.339$ ), Arabic ( $\beta = 0.144$ ,  $p = 0.092$ ), and other languages ( $\beta = 0.135$ ,  $p = 0.010$ ) did not reach statistical significance except for the "Others" category where Russian were in the reference category. Years of basic education did not show a consistent pattern of association on speaking frequency, as none of the categories (3-5 years:  $\beta = 0.136$ ,  $p = 0.067$ ; 6-8 years:  $\beta = 0.113$ ,  $p = 0.178$ ; 9-10 years:  $\beta = 0.086$ ,  $p = 0.278$ ) reached statistical significance at conventional levels. Years of basic education from 1-2 years were in the reference category. The lack of participation in the mother tongue instruction was associated with higher speaking frequency ( $\beta = 0.178$ ,  $p < 0.001$ ), indicating that those who did not participate tended to have higher Finnish speaking frequency where the category 'yes' (indicating participation in mother tongue instruction) was in reference category. Parents' education showed a marginal negative effect on speaking frequency ( $\beta = -0.042$ ,  $p = 0.057$ ), suggesting that children with more educated parents tended to have slightly lower speaking frequency. Attitudes towards the Finnish language

demonstrated notable effects. Individuals who somewhat agreed ( $\beta = 0.520$ ,  $p = 0.001$ ) or completely agreed ( $\beta = 0.724$ ,  $p < 0.001$ ) with positive attitudes towards Finnish exhibited significantly higher speaking frequency compared to those with other attitudes where completely disagree was in reference category. Additionally, those who could not decisively state their attitude (I cannot say) also showed increased speaking frequency ( $\beta = 0.343$ ,  $p = 0.026$ ).

## **Discussion**

This study aimed to explore children who speak Finnish as their additional language and the association between proficiency in Finnish and tendency to use Finnish in the leisure time. In order to answer the first research question regarding how language proficiency in Finnish is related to the use of Finnish language in leisure time, the result of linear regression model stated that there was a significant positive association between Finnish language proficiency and online language use in leisure time. Children with higher proficiency levels are more likely to engage in online activities in Finnish in their leisure time such as chatting with friends, following social media, read magazines and dailies suggesting that language competence facilitates participation in Finnish-speaking online communities and content consumption. Additionally, the relationship between Finnish language proficiency and online language use and speaking Finnish in different settings may also work in the opposite direction, suggesting that engaging in Finnish language use in leisure time could potentially lead to increased proficiency in the language. The positive relationship between Finnish language proficiency and reported speaking frequency (speaking with friends, in shops and hobbies) underscores the relation between language proficiency and verbal communication. This can be due to either that higher proficiency supports communication or that more frequent communication leads to better proficiency. A number of previous studies had found that online chatting and activities help individual to learn additional language (Mahfouz & Ihmeideh, 2009; Michel, 2018). Another study in 2009 found that text based online chatting with friends improve oral fluency in an additional language. Moreover, playing online games, listening audios and streaming videos in online help to learn additional language (Zhang et al., 2021).

The second research question was “how are different factors such as years of basic education, family language, instruction in mother tongue, attitude towards Finnish language and parental education related to language use in leisure time”. The data indicated that there was an observed

gender disparity, with females demonstrating a lower prospect of online Finnish language use in their leisure time compared to males: boys spent a lot of time in online activities chatting with friends, listening music, reading news and magazines. In the case of speaking frequency, gender did not play a significant role. In terms of additional language learning in general, girls tend to do better than boys (Denies et al., 2022). On the contrary, the study of Guiller and Durndell (2007) found no significant difference of the frequency of online communication between girls and boys but they found a gender difference of type of conversation such as boys expressed authoritative communication where girls expressed supportive communication in a group. Findings of this study may reflect societal dynamics or differences in online behavior patterns between genders which could involve targeted interventions to encourage girls' participation in Finnish language in online space.

Participants with Somali or Arabic as their mother tongue showed a stronger inclination towards using Finnish in online activities as well as in speaking frequency. Somali and Arabic speakers may have a strong motivation to learn Finnish, perhaps due to immigration or economic opportunities in Finland. Motivation and exposure are crucial factors in language learning success (Stefánsson, 2013). Language proficiency is directly associated with the economic prosperity as it has a link to get employed in host society where economic phenomenon plays a role in the case of language use. Side by side, language use is also associated with the cultural integration (Portes & Rumbaut, 2024). The first and massive wave of Somali people arrived in Finland on 1990s and the Arabic on 2000s who came with their children (Fingerroos, 2016; Masoud et al., 2023). So, the linguistic integration of 1st and 2nd generation Somali and Arabic children is probably depicted in this study. On the other hand, Estonian children were not significant users of Finnish language in online platform which was a surprising outcome. The observed lower speaking frequency among children whose mother tongue was Estonian highlights the influence of linguistic background on speaking frequency. Estonian language is very similar to Finnish. It might be that they use their first language more due to the close geographical location of Estonia or because of the big group of peers with the same language in Finland.

The positive association between longer participation in basic education and online Finnish language use suggests that educational experiences play a significant role in shaping language behavior online. Children with extended periods of basic education are more likely to utilize

Finnish in digital communication, potentially due to enhanced language proficiency or exposure to Finnish-language content during schooling. Besides, longer participation in basic education may indicate longer duration of inhabitation in Finland which might lead to higher proficiency in Finnish. Similarly, the study of Unsworth et al. (2015) found that children who spend more time in early foreign language learning program had higher language proficiency than the control group. Along with online use of Finnish language, there had been a consistent association between years of basic education and speaking frequency suggests that formal education might be a factor of verbal use of Finnish.

Interestingly, higher levels of parents' education were associated with a decreased likelihood of online Finnish language use among participants. Similarly, the marginal negative effect of parents' education on reported speaking frequency suggests a complex relationship between socioeconomic factors and language behavior. Children with more educated parents may have access to resources that support language learning. Similarly, the study of Kormos and Kiddle (2013) indicated that higher parental education and SES trigger students to learn English as an additional language. This statement also matches with the studies of (Iwaniec, 2020; Lamb, 2012). Immigrant parents with higher education levels might be more actively involved in their children's English language learning process (Mirici et al., 2013). They may have preference and access to resources and strategies to support their children's language development in other languages rather than Finnish, but this cannot be proven based on the data of this study.

Current study also found that children who did not participate in the mother tongue instruction used Finnish language more frequently in their daily online activities in leisure time. Similarly, association between non-participation in mother tongue instruction and higher speaking frequency in Finnish implies that individuals who did not participate in such studies might have better Finnish speaking abilities. It depends on several factors such as differences between first and additional language, background knowledge and the structure of additional language (Halasa & Al-Manaseer, 2012). Previous studies have found that proficiency in one's mother tongue supports the development of multilingualism, lifelong development of language skills, linguistic awareness, and critical thinking. It also promotes learning in the language of instruction at school and learning in other subjects through the language of instruction, predicts success in other language subjects for the student, and supports their identity (Creese & Blackledge, 2015; Cummins, 2001; Salö et



al., 2018). However, the finding of the current study may suggest that focusing on Finnish language acquisition might lead to improved speaking skills, potentially at the expense of proficiency in their mother tongue or maybe for the lack of willingness to participate in mother tongue instruction. Children are highly influenced by their social environment. If they are predominantly surrounded by peers who speak Finnish, either at school or in their local community, they might be more likely to use Finnish in their interactions, including online activities. However, this association of the study went against of above previous studies which need further concentration.

The significant relationship between attitudes towards the Finnish language and its online use highlights the importance of fostering positive perceptions and attitudes towards the language. Besides, children who hold positive attitudes towards Finnish were more likely to engage in frequent spoken interactions, reflecting their motivation and enthusiasm for using the language in everyday communication. Similarly, the study of Richards (2015) claimed that people who have positive attitude towards the target language and its culture are likely to be more successful in their language acquisition endeavors. Moreover, proficiency in host language is one of the basic requirements for academic success, economic prosperity and successful social integration (Portes & Rumbaut, 2024; Rienties et al., 2012). This motivation might have triggered children to learn and use Finnish language not merely in their leisure activities but in other daily activities.

The study's cross-sectional design may limit the ability to draw causal conclusions about the relationships between variables. It's challenging to determine the direction of causality or whether observed associations between language proficiency, leisure time language use, and other factors are truly causal or influenced by other factors. While the study examined several factors related to leisure time language use among children who speak Finnish as an additional language, there may be other relevant factors not included in the analysis. For example, factors related to family dynamics, peer influences, parental involvement in language learning, exposure to media in different languages, or cultural attitudes towards language use could also play a significant role but were not addressed in the study. Moreover, this study only included students who study Finnish as an additional language, i.e., not all of those who speak Finnish as an additional language. Therefore, those students who have switched to studying the mainstream Finnish curriculum are excluded. By acknowledging these limitations, future research can build upon the study's findings

and address gaps in understanding the relationship between language proficiency, leisure time language use, and various predictors among children who speak Finnish as an additional language.

## **Conclusion**

This study has illustrated the intricate relationship between language proficiency in Finnish and its use in the leisure time activities of adolescents who speak Finnish as an additional language. Through a comprehensive exploration of various factors including gender, family language, participation in mother tongue instruction, parental education levels, and attitudes towards the Finnish language, significant insights have been garnered into the factors related to language behavior in both online and spoken interactions. The findings underscore a significant relationship between language proficiency and participation in Finnish-speaking online communities and content consumption. Notably, adolescents with higher proficiency levels in Finnish demonstrate a greater propensity for engaging in online activities in Finnish, such as chatting with friends, following social media, and consuming digital media content in their leisure time. Furthermore, the positive association between Finnish language proficiency and speaking frequency might point to the importance of verbal communication in reinforcing language skills and fostering confidence among additional language users. On the other hand, the relationship between Finnish language proficiency and online language use and speaking Finnish in different settings may also work in the opposite direction, suggesting that engaging in Finnish language use in leisure time could potentially lead to increased proficiency in the language.

Gender disparities were observed, with males exhibiting a higher likelihood of online Finnish language use compared to females. This underscores the need for targeted interventions to encourage girls' participation in Finnish language activities online. Moreover, participants with Somali or Arabic as their mother tongue showed a stronger inclination towards using Finnish in both online and spoken interactions, highlighting the relationship between linguistic background and motivation on language behavior. Surprisingly, Estonian children were not significant users of Finnish language in online platform and had lower speaking frequency which needs further study to find out the actual scenario. Educational experiences also play a significant role in shaping language behavior, with longer durations of basic education positively associated with online Finnish language use. However, the lack of consistent association between years of basic education

and speaking frequency suggests that formal education may not be the sole predictor of verbal communication frequency in Finnish.

Interestingly, higher levels of parental education were associated with a decreased likelihood of online Finnish language use among participants, indicating a complex interplay which needs further study. Additionally, non-participation in mother tongue instruction was linked to higher speaking frequency in Finnish, suggesting that focusing on Finnish language acquisition may lead to higher motivation to speak in Finnish. The significant impact of attitudes towards the Finnish language on language behavior underscores the importance of fostering positive perceptions and attitudes towards the language, which in turn, may enhance motivation and enthusiasm for language acquisition and integration. In essence, this study contributes valuable insights into the multifaceted dynamics of language proficiency and language use among adolescents with Finnish as an additional language. By recognizing the interplay of various factors, policymakers and educators can develop targeted strategies to support language learning and use as well as social integration among diverse linguistic communities.

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