

# Relationship between Finnish Teacher Training and Linguistically and Culturally Responsive Practices in Classrooms.

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Master's thesis

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### **Abstract**

This thesis examines Finnish teachers' reports on their participation in training related to second language learning and multicultural education, and how it relates to supporting students in the classroom through linguistically and culturally responsive practices. It also examines the connection between teachers' reported practices and their professional status. The teachers' backgrounds, particularly their prior experience working with linguistically and culturally diverse students (LCDS), as well as the percentage of LCDS in the class, are investigated since they may have an effect on both training and linguistically and culturally responsive classroom practices. This study is based on cross-sectional data collected from 820 schoolteachers across all Finnish municipalities who responded to an online survey that was conducted in 2016. The likelihood of teachers supporting students through linguistically and culturally responsive teaching practices is estimated using logistic regression with average marginal effects. The findings indicated that teachers who took part in training related to second language learning and multicultural education are more likely to support students using linguistically and culturally responsive techniques than teachers who did not take part in either training. While being an essential component of culturally responsive teaching, utilizing LCDS' home language in the classroom to support their learning is the technique that Finnish teachers use the least. Depending on their professional status, the teachers reported varying degrees of linguistically and culturally responsive practices. However, the amount of LCDS in schools and the teachers' experiences teaching them had little impact on the relationship between their reported training and their reported linguistically and culturally responsive practices. The results of this study may contribute to develop strategies for teacher training programs that focus on second language learning and multicultural education.

**Key words:** linguistically and culturally diverse students, language awareness, linguistically responsive teaching, culturally responsive teaching, teacher education.

## 1 Introduction

Rapid and growing immigration in Finland in the last years has been a key factor in increasing the frequency of foreign languages such as Russian, Somali, Estonian, and Arabic in today's Finnish society (Statistics Finland, 2019, 2021). Statistics from Finland (2018) show 86000 minors with foreign backgrounds, and of them, 39 % had been born abroad belonging to the first-generation immigrants' group and 61% were born in Finland belonging to the second generation. As a result, the number of students who speak other languages than Finnish or Swedish in comprehensive schools has more than doubled from 3.2% in 2010 to 6.8 % in 2018 (Vipunen, 2020).

While Finland has procured an international reputation as having one of the most successful education systems, the results from PISA 2012 (Harju-Luukkainen & McElvany, 2018) and 2018 (Leino et al., 2019), and the findings of a national center for evaluating education (KARVI, 2023) revealed that linguistically and culturally diverse students (LCDS) with immigrant backgrounds are falling behind their peers with non-migrant backgrounds. The learning gap remains remarkably similar between the first and the second generation of students from immigrant background (Harju-Luukkainen & McElvany, 2018). In the long run, they may become more susceptible to social risks such as lower educational attainment, unemployment, poverty, or poor health (Mannila & Reuter, 2009).

A recent research study revealed these students struggle with strong language-based school subjects such as mathematics, science subjects, Finnish, Swedish, and English in comprehensive schools in Finland (Kaukko et al., 2022). As their language of instruction is in the developing phase, it poses a great challenge for them while pursuing advanced courses in schools (Kuukka & Metsamuronen, 2016). These students with developing language tend to seek help mainly from teachers and other tutors as well as peers (Kaukko et al., 2022). In an attempt to address this issue, the Finnish new national curriculum for basic education requires teachers to be linguistically and culturally supportive which means that every teacher needs to pay attention to language in teaching all subjects to ensure that all groups of students are appropriately served to excel in their academic activities (National Agency of Education, 2014).

A wide variety of international experts have established that teachers require skills and expertise to assist language learners to learn the content of all subjects (Cummins, 2021; Lucas & Villegas 2008, 2013; Fillmore & Snow 2018; Werner et al., 2016). But do Finnish teachers have enough education on cultural diversity and second language learners? Scholars from Finland argue that there is no uniform teacher training that equip them to teach in a classroom with students from diverse backgrounds (Aalto, 2019; Alisaari et al., 2019; Harju-Autti & Sinkkonen, 2020). In this context, this study focuses on examining how Finnish teachers who reported training that includes second language learning and multicultural education relate to their reported linguistically and culturally responsive practices in the classroom. The purpose of this thesis is to offer some guidance for teachers' professional growth based on the findings of the association between teachers' reported training and abilities to help LCDS overcome their language barriers and learn all contents.

Recent academic evidence suggests that Finnish teachers have positive attitudes towards cultural diversity and diverse learners (Alisaari & Heikkola, 2020; Harju-Autti & Sinkkonen, 2020; Kimanen et al., 2019; Vigren et al., 2022) and have an understanding and knowledge of students' additional language needs and linguistically and culturally responsive pedagogy (Alisaari & Heikkola, 2020; Heikkola et al., 2022a). Likewise, a recent study showed that teachers who had a better understanding of students' language needs were more likely to support them through linguistically and culturally responsive classroom practices (Heikkola et al., 2022b). However, there are not many studies that have examined Finnish teacher education, which would ensure their preparedness to respond to the increasing diversity in their classrooms. Thus, this thesis seeks to fill this research gap and attempts to investigate the direct relationship between teachers' participation in the training related to second language learning and multicultural education in relation to their reported linguistically and culturally responsive practices.

In Finland, one class teacher teaches almost all or most subjects from grades 1 to 6, and thereafter subject teachers are introduced to students to coach different content (Harju-Autti et al., 2022). In many cases, special education teachers also work with multilingual students in many schools (OwalGroup, 2021), although usually special education teachers are those who provide educational arrangements and assistance for students with special needs such as reading and learning difficulties (Takala et al., 2009). Therefore, every school in Finland has one or more special education teachers. Teachers have different functions depending on their

roles and responsibilities in Finnish comprehensive schools. Previous research showed that teachers' professional status had a significant effect on their orientation toward cultural and linguistic diversity (Kimanen et al., 2019). Depending on the type of teacher, their training varies and leads to different knowledge, which can also affect their ability to deliver linguistically and culturally responsive classes.

Moreover, the teachers' backgrounds may also have a significant impact on their training and classroom practices, including their experience and the type of students they need to cater to. For example, a previous study (Alisaari et al., 2022a) confirmed that teachers experienced in teaching multilingual students feel more responsible towards LCDS and engaged when they teach larger numbers of multilingual students in their schools. Similarly, another study found that more experienced teachers use their knowledge and skills better than less experienced ones (Basturkmen, 2012). Therefore, it may be expected that if there are more LCDS present in the classroom and/or if more teachers have experience with LCDS, they may be encouraged to seek training in multicultural education and second language learning. The use of more linguistically and culturally responsive practices by teachers may also be encouraged by teachers' experience with LCDS or by the increased prevalence of LCDS in schools. However, some studies show that experience may not automatically guarantee a higher level of achievement for professionals and instead other factors may contribute to competence development (Ericsson, 2006; Heikkola et al., 2022a). It may make sense to look into how teachers' experience teaching LCDS and the rise in LCDS may conflict with their training and linguistically and culturally responsive teaching methods given the divergent theories about experience and the likelihood that other factors will have an impact on enhancing professionalism.

The aim of this thesis is to examine how teachers' reported participation in training considering second language learning and/or multicultural education prepares them to face the growing diversity in their classrooms, keeping the teacher type and their background in the realm of things as they cannot be separated to understand their professional needs. The research questions in this thesis are as follows: How do Finnish school teachers' reported participation on training related to second language learning and multicultural education relate to reported linguistically and culturally responsive practices in their classrooms? What teacher type reported using linguistically and culturally responsive practices the most? Do background factors such as experience teaching LCDS or percentage of LCDS in school

change the relationship between teachers' reported training and use of practices? The answers to these questions will expand our understanding of teachers' professional development based on their roles and background to acquire the expertise to become linguistically and culturally responsive in their increasingly diverse classrooms.

## 2 Theoretical backgrounds

This study is based on the sociocultural theory of Vygotsky (1978), which advocates learning as a social process in which more knowledgeable individuals assist less knowledgeable individuals in learning. A language is a key tool in the learning of all content and also plays an important role in the cognitive development of students (Vygotsky, 1978). The theory also emphasizes cultural aspects of learning, underscoring the influence of language and culture in shaping individual identities (Teemant, 2015; Tharp et al., 2000). Hence, language alone cannot be separated from how individuals think and feel (Smagorinsky, 2013), and thus learning is both language and culture-based (Nasir et al., 2021; Smagorinsky, 2013; Vygotsky, 1997). Since learning occurs through communication between teachers and students (Nasir et al., 2021; Teemant, 2015; Tharp et al., 2000), this section offers insights into various theories about teachers' language awareness, linguistically and culturally responsive pedagogy, scaffolding techniques, and teacher education.

### 2.1 Language Awareness and linguistically responsive teaching

Language awareness as a term was initially introduced in Wales which advocated the need for pedagogical initiatives to better understand the dynamics of the English language in learning and teaching (White & Finkbeiner, 2017). It is essentially a process that emphasizes knowledge about language, its nature, and the role of language in people's lives (Donmall-Hicks, 1997). Van Lier (1995) defined language awareness as understanding the potentiality, power, and magnitude of language in human lives in terms of learning, teaching, interacting, and acknowledging other cultures.

According to Adger et al. (2018), language awareness also entails the teacher being aware of the vocabulary and grammar used in a particular subject area and alert to the factors that influence how simple or difficult a text is for students to understand. Additionally, there is a

need to create awareness amongst teachers about linguistic diversity in communities, understanding of academic languages, and acknowledgment of cultural diversity that would empower teachers to educate students in more equitable ways (García et al., 2017). Hence, teachers' language awareness would provide skills to develop better planning and strategies for teaching subjects, a better understanding of subject contents, as well as skills to self-reflect and analyse their own performances (Andrews, 2001). A teacher who is aware of the language is sensitive to students' linguistic needs and is better prepared as they have the skills to understand the potential struggles and difficulties of students who are learning in second language (Wright, 2002).

To raise awareness of language-related issues in teacher education and in the classrooms of multilingual students, Lucas et al. (2008) introduced a linguistically responsive teaching framework. It takes into account the different orientations and pedagogical skills teachers should have when teaching LCDS (Lucas & Villegas, 2012). The main aim is to understand students' language needs and provide them with the techniques to learn content while learning the language (Lucas et al., 2008). Linguistically responsive teaching advocates for the need for teachers to have an understanding of the structure of the language of instructions and the process of second language teaching, as well as the necessity of possessing skills to apply this knowledge in teaching in their classrooms (Adger et al., 2018; Walqui, 2007).

Lucas and Villegas (2011) further expanded a more comprehensive version of the framework for Linguistically responsive teaching which are in two parts: the first part has endorsement for socio-linguistic consciousness, value for linguistic diversity, and inclination to advocate LCDS. The second part consists of learning about students' linguistic and academic backgrounds, identifying language demands of classroom contents, applying the principle of second language learning, and scaffolding instruction to develop students' learning. This study investigates teachers' responsive teaching based on mainly the second part of the framework by Lucas and Villegas (2011) specifically through understanding what scaffolding techniques (see section 2.3) they apply to empower LCDS.

## 2.2 Culturally responsive teaching

An important part of linguistically responsive teaching is acknowledging students' cultural and linguistic diversity (Lucas et al., 2008; Lucas & Villegas, 2010, 2011). The cultural aspect of learning a language in education has been given utmost priority in recent years



which advocates understanding and acknowledging students' home culture, experiences, skills, and backgrounds (Gay, 2010; Nasir et al., 2021; Richards et al., 2006).

A previous study by Bui and Fagan (2013) showed that implementing culturally responsive teaching increased students' reading, grammatical and storytelling skills, and along with this skill development, there was a promotion of connectedness between the school learning environment and students' personal experiences. Thus, acknowledging diversity and supporting LCDS through culturally responsive teaching have a positive effect on their educational potential, in particular for those at risk of marginalization (Dee & Penner, 2017).

The main idea of culturally responsive teaching is to incorporate students' culture into the classrooms and improve their learning in the process (Landson-Billings, 1995). Tharp et al. (2000), advocates the use of home language as one of the effective pedagogies that increases the confidence and feeling of acceptance amongst LCDS. Similarly, the use of students' home language and the language of instruction together in teaching may encourage both native and non-native students' collaborations and enhance the overall academic participation and development of all kinds of students (Cummins, 2007; Ganuza, & Hedman, 2019; Kibler, 2010; Relyea & Amendum, 2020). Thus, activities to support language learning through students' home language (e.g., translating text or giving reference to their culture) become an important part of pedagogy or culturally responsive teaching strategies (Cummins, 2007; Calderon et al., 2011; Lucas & Villegas, 2010; National Agency of education, 2014).

Even though the use of LCDS' home language in their learning has been specifically advocated for culturally responsive teaching, it has been not applied effectively in Finland as well all over the world (Alisaari et al., 2019; Tarnanen & Paliviainen, 2018; Taylor et al., 2008). Based on this reality, translating key concepts and information in LCDS' home language in classrooms is taken as one of the predictors to investigate culturally responsive teaching for this study.

### 2.3 Linguistic Scaffolding in Classrooms

Linguistic scaffolding in classrooms is one of the main frameworks of linguistically responsive teaching (Hammond & Gibbons, 2005; Lucas & Villegas, 2011; Walqui, 2006). The term "scaffold" essentially refers to a temporary formation to support and protect the construction of the building, and it is disassembled after completion (Boblet, 2012). Similar to

this, the idea of linguistic scaffolding refers to an interactive, planned, and structured method of assisting students in their learning (Wood, 1988; Bruner, 1978). It is about teachers' readiness to go the extra mile to help students when they encounter linguistic demands and challenges. Teachers play the central role in linguistic assistance for students and effective teaching is more of a collaborative and arranged social process rather than just the transferal of ideas and knowledge between individuals (Hammond & Gibbons, 2005).

The classroom practices employed by teacher to support students' learning are heavily emphasized in the scaffolding macro and micro model created by Hammond and Gibbons (2005). As opposed to macro-level models, which deal with designing the teaching instructions and taking into account students' prior knowledge, micro-level models focus on actual classroom practices (such as underlining texts, explaining key concepts in oral and written form, using graphics and figures that convey important ideas and concepts, vocabularies, summaries, etc.) and instruction that takes into account students' knowledge and abilities as learning occurs.

Additionally, hands-on activities including exhibitions, tactile exercises, demonstrations, plays, dramas, and group projects can help students and serve as an assessment tool (Walqui, 2006). Furthermore, structured, simple-to-understand language is believed to be very beneficial for students in the classroom (Teemant et al., 2011). According to Lucas and Villagas (2010) and Teemant et al. (2011), providing linguistic scaffolding through modeling, rephrasing, and language modification may improve LCDS' reading and comprehension of text. It is important for teachers of various contents (such as math, literature, physics, history, or geography) to consider the language employed in each discipline while transferring knowledge and information to their students.

In Finland, schoolteachers mainly practice structured linguistic scaffolding by reading slowly and loudly, repeating important texts and information, and through multiple hands-on activities such as singing, events, and games to encourage both language learning and content learning (Harju-Autti et al., 2022). The importance of linguistic scaffolding in the Finnish context like elsewhere in the world is identified based on the significance of language as a meaning-making tool that is used in studying different contents, drawings, and visualization of knowledge and information, learning through group interactions and activities, and action-based learning that comprises of practical lessons (Aalto & Mustonen, 2022). Social

interaction between peers and students is one of the main bases of learning in general and language learning in particular; and through it, the students are equipped with self-belief, motivation, and social and cognitive skills to learn and progress in life (Teemant et al., 2011; Tharp et al., 2000; Vygotsky, 1978).

For this study, I aim to analyze three of the Finnish teachers' reported teaching practices from the perspective of pedagogical scaffolding (Lucas & Villegas, 2011; Teemant, 2015; Tharp et al., 2000; Viesca et al., 2019) to promote LCDS learning which is: assessing LCDS through the hands-on activities, highlighting texts to show important information such as main ideas, concepts, vocabularies, or summaries, and modifying important texts to make them easy for students to read.

#### 2.4 Teachers' professional needs

Teachers should be language aware and understand the linguistic and cultural diversity in their classrooms (Tharp et al., 2000; Ladson-Billings, 1995). Therefore, subject teachers must also be language teachers in classrooms, which means that every teacher, whether class teacher, subject teacher or other educator, should have at least some knowledge of language teaching and learning methodology (Alto, 2019; National Agency of Education, 2014). However, reports from Nordic countries and the USA show that teachers are not well equipped with skills to provide lesson to increasing diversity in their classrooms (Aalto, 2019; Alisaari et al., 2022b; Sullivan, 2016). The professional requirements of teachers must therefore be determined, and the necessary training must be provided.

Several scholars have shared that there are challenges for educational institutions and teachers to improve the educational achievement of children from different cultures, and while teachers are aware of the challenges and have a positive attitude towards diversity, this does not necessarily lead to successful educational support (Erling et al., 2022; Harju-Autti & Sinkkonen, 2020; Kim, 2020; Lorenz et al., 2021; Postholm, 2018). Previous studies have shown that training related to cultural diversity and language education can lead to a better understanding of students' identities and their language needs and can provide teachers with better skills to support students' learning through the language of instruction (Kimanen et al., 2019; Cummins, 2007). Therefore, the appropriate professional training can help develop teachers' knowledge and skills to understand students' language needs, the expertise to reflect their teaching practices, and develop mechanisms to support their students through

appropriate pedagogy (Egert et al., 2018; Heikkola et al., 2022b; Kirsch & Aleksic, 2018; Werner et al., 2016).

In order to better understand and analyse what professional development is required to provide teachers with skills to support students with linguistically and culturally responsive pedagogies, my work will attempt to find answers on how current teacher training translates into skills to implement linguistically and culturally responsive teaching practices in classrooms. I will also seek answers as to whether teachers' professional status is related to linguistically and culturally responsive teaching in their classes. Finally, I will attempt to understand whether teacher background, such as experience teaching multilingual students and the percentage of LCDS in school, influence the association between teachers' reported training and their linguistically and culturally responsive teaching methods.

### 3 Data and methods

I use cross-sectional data which is extracted from a research survey conducted by researchers at the University of Turku, Finland. The data were collected using an online survey of the schoolteachers (N=820) in all municipalities in Finland in 2016. The purpose of this survey was to obtain teachers' views on LCDS and the reported linguistically and culturally responsive practices. The survey questionnaires about teachers' attitudes and responsive practices were based on Lucas and Villegas' (2011, 2013) theory of linguistically responsive teaching and the culturally responsive theories by Gay (2010) and Ladson- Billings (1995). A major part of the survey contained Likert-scale questions and a small part of open-ended questions. The variables in this study represent the answers to the Likert-scale items.

#### 3.1 Methodology

I analyse four different classroom practices applying two main independent variables and two control variables. Thus, this study will have 4 dependent variables with the same independent variables for each analysis. The main target group of educators is those teachers who regularly teach LCDS in the classroom. Therefore, as a sensitivity check, I have excluded principals, counselors, and other educators who had 116 observations. As a result, I will be checking the

relationship between class teachers, subject teachers, and special education teachers' reported training and their reported linguistically and culturally responsive classroom practices. Each analysis has different sample sizes (n) after skewed missingness. Table 1. shows the summary statistics of the final samples of explanatory and control variables and the dependent variables. The main outcome variables are dichotomous, and all explanatory variables are categorical. Logistic regression is applied as the method best fits the dichotomous variables. I express the associations between the outcome variables and the explanatory variables in the logistic regression models in terms of percentage point differences with reference to average predicted outcome probability using Average Marginal Effects (AME) (Norton et al.,2019).

### 3.2 Dependent variables

I have four dependent variables which are different teachers' reported pedagogical classroom practices: a) Assessing LCDS through hands-on activities and it is represented as "Assess through hands-on activities", b) Highlighting texts to show important information such as main ideas, concepts, vocabularies, or summaries and it is represented as "Highlight texts", c) Translating importation information into students' home language and it is represented as "Translate home language", d) Modifying important texts to make them easy for students to read and it is represented as "Modify texts".

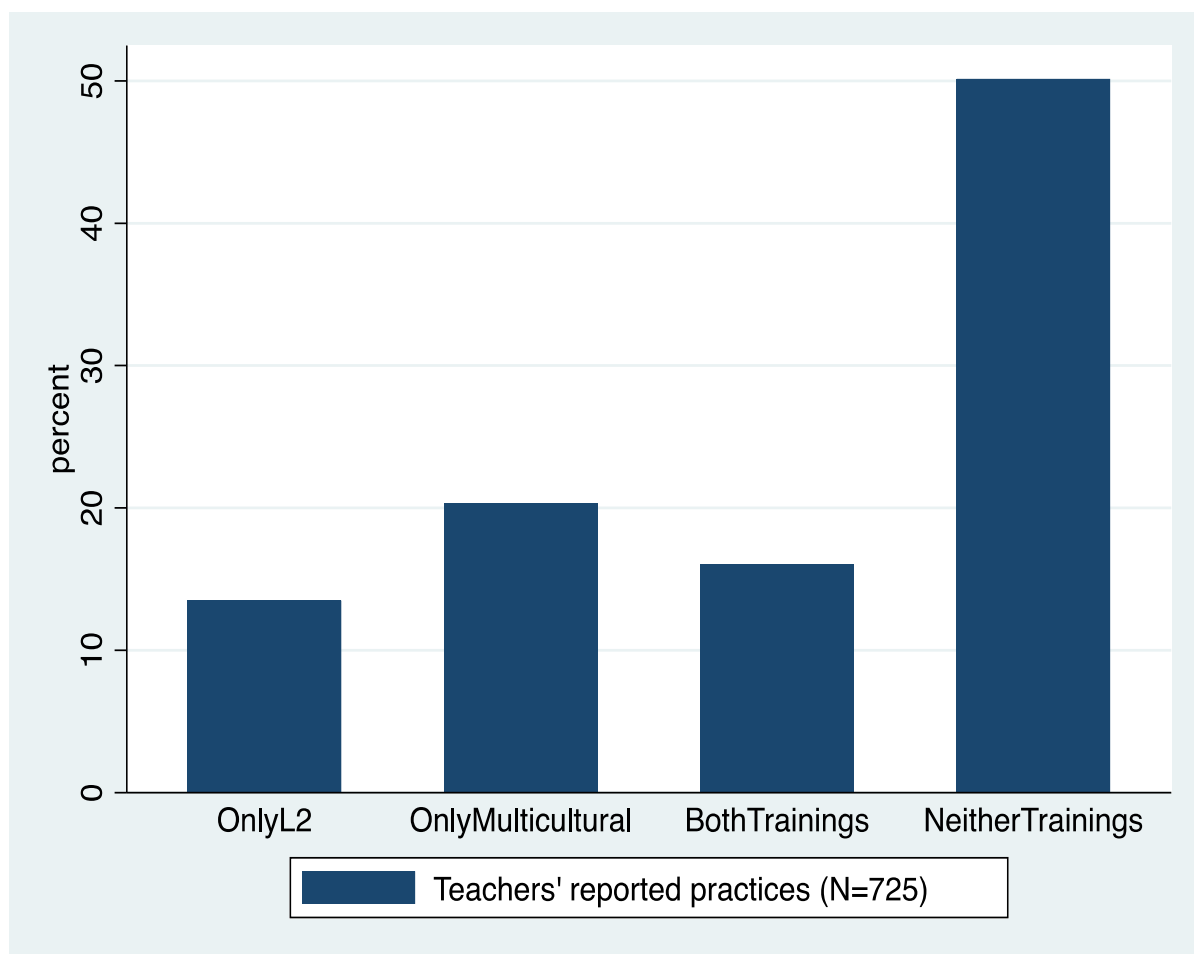
These dependent variables provided an answer to the question, "How often do the teachers use linguistically and culturally responsive practices in a typical week?" given the options "never", "once", "two to three times", and "four or more times". These options have been separated into the categories "never" and "yes," with "never" remaining exactly as it is and the remaining options being combined into "yes." As a result, for this thesis, my dependent variables are binary indicators of whether or not teachers employ the aforementioned linguistically and culturally responsive classroom practices.

### 3.3 Key independent variables

Teachers' reported training and their professional roles are key explanatory variables. For the teachers' training, it was asked whether they have training related to second language learning training or multicultural education and provided with the following eleven options: 1) I have had Finnish as a second language studies in a university; 2) I have had Finnish as a second language studies at an open university; 3) I have had Finnish as a second language studies as in-service training; 4) I have studied Finnish at the university in my home country; 5) I have

participated in some courses which had L2 as a topic; 6) I have had multicultural studies in university; 7) I have had multicultural studies in an open university; 8) I have had multicultural studies as in-service training; 9) I have participated in some courses which had multicultural education as a topic; 10) I have not studied issues related to L2 learning; 11) I have not studied issues related to multicultural education.

Fig 1. Percentage distribution of the teachers' reported training.



I measure teachers' self-reported training related to second language learning acquired from any institutions under one category L2; multicultural studies either acquired in-service or outside from any institutions under the category multicultural training; and no studies related to either of the issues as no training. There were respondents who either had both a second language training and multicultural studies or neither of the training. Thus, I have re-coded these eleven options into four values which are: 1. Only second language and combined

option no.1 to option no.5 and excluded those respondents who also had multicultural education from the category; 2. multicultural education which comprised option no.6 to option no.9 and excluding respondents who also had second language education from the category; 3. respondents who had both training and 4. those who had neither of the education. Figure 1. presents the percentage distributions of their teachers' reported training. It is evident from the figure that approximately 50% of the teachers do not have either of training, and under 20% of them have reported to have acquired both trainings.

Another independent variable is the teacher type, which is broken down into the three categories of class teacher (27%), subject teacher (56%) and special education teacher (17%) from the sample (N=725). This variable is used to investigate how teachers' professional roles and responsibility may impact their reported classroom practices.

### 3.4 Confounding variables

To find answers to the research question regarding the association between teacher training and reported responsive practices, the variables related to teachers' experience teaching LCDS and percentage of LCDS in the school are controlled for as they may confound the relationship of the variables of interest. Teaching experience is a categorical variable with four categories "not at all", "0-5 years", "5-10 years", and "over 10 years". Similarly, the number of LCDS is also categorized into four values "less than 1%", "1-5%", "5-10%" and "over 10%".

## 4 Results

Looking at the descriptive statistics (Table.1), it is evident that using the LCDS home language in Finnish classrooms is the least common practice adopted by teachers.

Approximately 60% of teachers indicated that they had never attempted to translate key concepts or information into the students' native language. And about 40% or more of the teachers said they had never used other practices, which is still a significantly high number. I apply logistic regression using average marginal effects to estimate the probabilities of the influence of teacher-reported training and teacher background on the linguistically and culturally responsive classrooms practices.

Table.1 Descriptive statistics of the percentage of the final samples.

<b>Explanatory variables</b>	<b>Categories</b>	<b>(%)</b>	<b>Hands on activities (n=557)</b>	<b>(%)</b>	<b>Highlight texts (n=557)</b>	<b>(%)</b>	<b>Translate in home language (n=559)</b>	<b>(%)</b>	<b>Modify texts for readability (n=567)</b>
	never		44.34		44.34		59.75		39.51
	yes		55.66		55.66		40.25		60.49
<b>Training</b>	only L2		14.18		14.00		14.31		14.29
	only multicultural		20.83		21.18		21.29		21.16
	both		17.41		17.60		17.53		17.11
	neither of training		47.58		47.22		46.87		47.44
<b>Teachers' Professional roles</b>	class teacher		24.78		25.13		25.04		25.75
	subject teacher		57.27		56.91		57.25		56.97
	special edu teacher		17.95		17.95		17.71		17.28
<b>Experience teaching LCDS</b>	no experience		13.11		12.93		12.88		14.81
	0-5 years		44.17		43.81		44.01		43.03
	5-10 years		19.00		19.39		19.50		18.87
	over 10 years		23.70		23.88		23.61		22.28
<b>Number of LCDS in school</b>	less than 1%		28.55		28.55		28.26		29.10
	1-5%		34.83		34.83		34.88		34.74
	5-10%		15.62		15.62		15.74		15.52
	over 10%		21.00		21.00		21.11		20.63



I have presented logistic regression models in (Table.2). I used three models of predicted probabilities for each of the four dependent variables. The first model (M1a, M2a, M3a and M4a) has outcomes of the relationship between teacher education and their reported practices. The second model (M1b, M2b, M3b and M4b) shows the assignment of teacher types to their reported practices. Similarly, the third model (M1c, M2c, M3c, and M4c) indicates the teacher trainings' relationship to the reported practices controlling for teachers' experiences teaching LCDS and percentage of LCDS in school.

Observing teachers' assessment of LCDS through hands-on activities, it is evident that there is a strong and positive association with their reported training (M1a). Compared to teachers who reported having received neither of the training, teachers who reported having acquired training in both second language learning and multicultural education are on average 36.8 percentage points more likely to assess their students through hands-on activities in the classroom.

In comparison to subject teacher in lower or upper secondary education, class teachers who teach practically all subjects in primary schools are, on average, 12.3 percentage points more likely to evaluate students through hands-on activities (M1b). The association between teacher training and reported practice is still very significant (M1c) even after taking into account teachers' experiences with LCDS and the proportion of LCDS in classroom.

Highlighting texts with key concepts and details shows a pattern resembling earlier model, which suggests that teachers who report having both types of training have a positive and significant association with reported practice compared to those who report having neither type of training (M2a). Interestingly, special education teachers are more likely to highlight important ideas and information for LCDS compared to subject teachers as well as class teachers (M2b). When controlling for teacher experience and the proportion of LCDS in school, the association between teacher training and supporting students through highlighting important ideas continues to follow a similar pattern (M2c), but the relationship between only second language learning and only multicultural education and reported practice deteriorates.

Table 2. Logistic regression with marginal effects. Predicted probability of the reported practices.

Variables	Assess Hands-on	M1a	M1b	M1c	M2a	M2b	M2c	M3a	M3b	M3c	M4a	M4b	M4c
Training (Neither)													
Only L2	0.243*** (0.061)	0.254*** (0.061)	0.216*** (0.059)	0.230*** (0.062)	0.222*** (0.062)	0.184** (0.061)	0.063 (0.062)	0.068 (0.062)	0.051 (0.062)	0.211*** (0.060)	0.199*** (0.059)	0.202*** (0.060)	
Only Multi-cultural	0.206*** (0.054)	0.218*** (0.054)	0.151** (0.054)	0.200*** (0.054)	0.187*** (0.055)	0.127* (0.055)	0.121* (0.054)	0.128* (0.055)	0.092 (0.055)	0.265*** (0.051)	0.246*** (0.051)	0.235*** (0.052)	
Both	0.368*** (0.052)	0.371*** (0.052)	0.288*** (0.057)	0.406*** (0.049)	0.393*** (0.050)	0.318*** (0.056)	0.247*** (0.058)	0.248*** (0.058)	0.213*** (0.061)	0.294*** (0.053)	0.271*** (0.054)	0.263*** (0.057)	
Position (Subject Teacher)													
Class teacher		0.123** (0.047)	0.163*** (0.045)	0.066 (0.048)	0.106* (0.047)	0.061 (0.050)	0.078 (0.050)	0.123** (0.046)	0.125** (0.047)				
Special Edu		0.031 (0.055)	0.055 (0.053)	0.145** (0.055)	0.157** (0.052)	0.011 (0.055)	0.021 (0.055)	0.238*** (0.052)	0.245*** (0.052)				
Experience (not at all)													
0-5 years			0.273*** (0.067)	0.303*** (0.065)	0.189** (0.064)	0.011 (0.062)	0.040 (0.054)	0.040 (0.052)	0.011 (0.062)				
5-10 years			0.368*** (0.079)	0.373*** (0.077)	0.251** (0.078)	0.021 (0.078)	0.134 (0.076)	0.021 (0.078)	0.021 (0.078)				
Over 10 years			0.315*** (0.080)	0.363*** (0.077)	0.134 (0.076)	0.074 (0.066)	0.074 (0.066)	0.074 (0.066)	0.074 (0.066)				
Number of LCDS in school (under 1%)													
1-5 %			0.1104 (0.053)	0.048 (0.052)	0.048 (0.052)	0.048 (0.052)	0.048 (0.052)	0.048 (0.052)	0.048 (0.052)				
5-10 %			0.138* (0.068)	0.059 (0.066)	0.059 (0.066)	0.059 (0.066)	0.059 (0.066)	0.059 (0.066)	0.059 (0.066)				
Over 10%			0.121 (0.065)	0.059 (0.064)	0.059 (0.064)	0.059 (0.064)	0.059 (0.064)	0.059 (0.064)	0.059 (0.064)				
Observations	557	557	557	557	557	557	557	559	559	559	567	567	567
Pseudo R-squared	0.063	0.072	0.130	0.073	0.082	0.131	0.025	0.027	0.049	0.055	0.083	0.086	0.086

Standard errors in parentheses

\* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

In comparison to teachers who claimed having neither training, those who reported having both training is on average 24.7 percentage points more likely to support students by translating important ideas into their native tongues (M3a). Similarly, compared to teachers who reported having neither of the training, teachers who reported having training related to only second language learning had no association with supporting students in their home language (M3a). Comparatively to those who teacher said they received neither of the training, teachers who reported having received only multicultural education also had a weaker association with classroom practice that employed use of students' home language (M3a). In addition, it's intriguing to note that none of the teacher types exhibit a substantial link with the practice of translating key concepts in the LCDS' home language in classrooms when compared to subject teachers (M3b). The relationship between teacher training and reported practice is similar even after taking into account the teachers' experience and the percentage of LCDS in schools (M3c).

Likewise, compared to teachers who reported to have neither of the training, teachers who reported to have received trainings show high association with their reported classroom practice regarding the modification of challenging texts to increase students' readability (M4a). When compared to the subject teachers, the likelihood that the class teachers and special education teachers would modify challenging texts for LCDS in their classrooms was higher by 12.3 and 23.8 percentage points, respectively (M4b). The association between teachers' reported training and their reported practices did not change as a result of the addition of teaching experience with LCDS or the increased prevalence of LCDS in schools (M4c).

## 5 Discussion

I have analysed the relationship between teachers' reported training related to second language learning and multicultural education, and four different linguistically and culturally responsive teaching practices (assessing students through hands-on activities, highlighting important texts, translating key concepts into the LCDS home language, and difficult texts to improve the LCDS readability). I have found a positive and significant association for all four. The classroom teachers who teach almost every subject in primary schools are more inclined to support students through hands-on activities, and the special

education teachers support them by highlighting important ideas and modifying difficult texts to improve readability. Subject teachers who teach content in lower and upper secondary education are less likely to support their students through linguistically and culturally responsive practices compared to other educators. The teacher reported training's relationship with their reported practices was not highly influenced by their experiences teaching LCDS or the prevalence of LCDS in their schools.

Of all four practices reported, supporting students in their home language is the practice least reported by the teachers. Indeed, this is consistent with the previous research findings (Alisaari et al., 2019; Tarnanen & Palviainen, 2018; Taylor et al., 2008) indicating that supporting LCDS in their home language is certainly not used effectively in Finnish schools as well as in other parts of the world. The teachers who reported having both trainings are more likely to become linguistically and culturally responsive towards LCDS compared to those who have neither training nor only have training either in second language learning or in multicultural education. This result is in agreement with the findings of Egert et. Al. (2018), Kirsch and Aleksic (2018) and Werner et al. (2016) that proper professional training promotes teachers' understanding of students' language needs and abilities in order to support them. The combination of second language learning and multicultural education helps teachers recognize the language intensity of study content and develop techniques that help students learn with minimal challenge.

On the other hand, the result showed that the teachers who indicated that they had training only in second language education are not equipped with proper skills to support students with culturally responsive instruction. The teachers who reported having only multicultural education more probably translated important information into the LCDS home language, however, the result does not show a strong relationship between multicultural training and the practice. Only teachers with both trainings were likely to be able to translate key concepts into the students' home language, and this is fully consistent with earlier research (Cummins, 2007; Kimanen et al., 2019), which argued that professional training that relates to both cultural diversity and second language learning can provide teachers with a better understanding of students' identity and language needs. This emphasizes how important it is for teacher to receive the proper training that acknowledges both cultural diversity and the process of language learning.

The results indicate that teachers' professional roles affected their teaching practices, as classroom teachers and special education teachers were more likely to deliver linguistically, and culturally responsive classes compared to subject teachers. This partially supports a finding from earlier research (Kimanen et al., 2019) that teachers' attitudes toward linguistic and cultural diversity are influenced by their roles. However, the teacher's role did not relate to the use of the LCDS' home language. The teachers' background factor such as their experience with LCDS and the percentage of LCDS in their school did not change the association between teacher training and their skills in supporting their students through linguistically and culturally response practices in classrooms. This confirms findings from earlier studies (Heikkola et al., 2022a; Sullivan, 2006) that experience alone may not boost a professional's skill and that a variety of other elements play a part in fostering their competence. Similarly, the higher percentage of LCDS in school may increase their commitment but that may not alone increase teachers' competence rather a proper professional training is needed to cater increasing demands of LCDS. It is unclear, therefore, whether the higher frequency of LCDS in school encourages teachers to seek for training in multicultural education and second language learning or encourages them to adopt a more linguistically and culturally responsive pedagogy. The association between teachers' reported training and practices did not change significantly even after taking into account teachers' experiences with LCDS or the prevalence of LCDS in schools, which may support the claim made by Heikkola et al. (2022a) that teachers need appropriate training to keep up with the demands of increasing diversity in the classrooms.

Class teachers were more likely to assess students through hands-on activities compared to subject teachers and special education teachers. Since class teachers in primary schools teach almost all subjects, the inclusion of activity-based teaching may be more compatible for them. Special education teachers are more inclined to employ linguistic techniques such as highlighting important texts and modifying the language to improve readability. They may be because they are better trained to help students with challenges in literacy skills and learning difficulties. On the other hand, subject teachers were less likely to support students through linguistically and culturally responsive pedagogies. They teach important content such as mathematics, science subjects or history to the pupils of the upper and lower secondary level. Given that prior study (Kaukko et al., 2022) strongly suggests that LCDS struggle to absorb content while their language of instruction is still developing, the role of subject teachers in this setting becomes even more crucial. On the other side, after completing secondary school,

pursuing higher academic performance depends largely on LCDS grades and skills. If LCDS don't get the grades and abilities necessary to continue their education, they become more vulnerable and may experience social risks, as Mannila and Reuter (2009) noted that they are more likely to experience social risks such as inadequate education, unemployment, poverty, and bad health. Therefore, secondary school subject teacher must have the necessary training in order to properly support LCDS in the classroom. While keeping this sensitivity at the forefront, it is important to consider how subject teachers may better support students who are learning content and language at the same time by providing them with appropriate training related to second language learning and cultural diversity.

The results showed that some teachers are already better prepared than others. Therefore, it can be concluded that teachers' training varies based on the role of teachers and leads to different types of knowledge, which also affects teachers' ability to deliver linguistically and culturally responsive lessons. It is therefore necessary to think about what kind of training would benefit all teachers in order to acquire sufficient skills to support all learners. Teacher background has a limited impact on the relationship between teachers' training and linguistically and culturally responsive practices. Therefore, holistic professional training related to second language learning and multicultural education is recommended to develop the competence of teachers regardless of their role and background. All teachers should have the ability to support their students through linguistically and culturally responsive pedagogies.

### 5.1 Limitations and recommendations

The use of a cross-sectional data is one of the major weaknesses of this thesis since it precludes the research from evaluating changes over time in teacher training and linguistically and culturally responsive practices. Therefore, for analysing teachers' professional strengths and weaknesses and developing strategies to improve them, longitudinal data that documents the teachers professional progress over time might have been more reliable.

This study analysed the practices reported by teachers and some of their responses may be due to social desirability and therefore may not reflect reality (Chung & Monroe, 2003). Also, the number of participating teachers may not represent the entire teaching community in Finland. This survey was conducted in 2016 prior to the launch of the new national core curriculum. As a result, teachers may not have been well equipped with the right kind of

training in terms of second language learning and motivation for linguistically and culturally responsive practices. For this reason, further research studies on the same topic would be needed, especially after the implementation of the core curriculum which advocates the use of linguistically responsive pedagogy and in particular the use of LCDS' home language resources for teaching.

## 6 Conclusion

The descriptive statistics of the participants show that almost half of the participating teachers reported that they were not trained in either second language learning or multicultural education, which is alarming considering the new core curriculum requirements for teachers to deliver linguistically and culturally responsive pedagogies practice. This is in line with previous studies (Aalto, 2019; Alisaari et al., 2019; Harju-Autti & Sinkkonen, 2020) that highlighted a lack of consistency in professional teacher education. Furthermore, the results of this study showed that teachers with either only L2 studies or only multicultural studies had a strong and positive association with all three practices, but not with the practice related to the use of LCDS home languages. Whereas teachers with both qualifications had a significantly positive relationship with all practices. This result suggests that teachers acquire skills and expertise to support LCDS when they receive appropriate training related to second language learning and multicultural education. Therefore, this study advocates for the need for holistic teacher training that provides better knowledge of second language learning and cultural diversity.

This thesis endorses the Finnish Constitution's primacy clause (Finnish Constitution Language Act 423/2003) that everyone has the right to maintain and prosper in their own language. However, the results suggest that Finnish teachers have adopted relatively monolingual practices, where students' language resources are not considered important pedagogical practices in learning. Therefore, the responsible authorities need to make more efforts to promote teachers' professional development in order to ensure that all groups of students are properly addressed through appropriate linguistically and culturally responsive pedagogies.

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