

This is an electronic reprint of the original article. This reprint may differ from the original in pagination and typographic detail.

Requirements meet reality

Heikkola, Leena Maria; Alisaari, Jenni; Vigren, Heli; Commins, Nancy

Published in:
Journal of Language, Identity and Education

DOI:
[10.1080/15348458.2021.1991801](https://doi.org/10.1080/15348458.2021.1991801)

Published: 24/01/2022

Document Version
Final published version

Document License
CC BY-NC-ND

[Link to publication](#)

Please cite the original version:

Heikkola, L. M., Alisaari, J., Vigren, H., & Commins, N. (2022). Requirements meet reality: Finnish teachers' practices in linguistically diverse classrooms. *Journal of Language, Identity and Education*, 1–17. <https://doi.org/10.1080/15348458.2021.1991801>

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.



Requirements Meet Reality: Finnish Teachers' Practices in Linguistically Diverse Classrooms

Leena Maria Heikkola, Jenni Alisaari, Heli Vigren & Nancy Commins

To cite this article: Leena Maria Heikkola, Jenni Alisaari, Heli Vigren & Nancy Commins (2022): Requirements Meet Reality: Finnish Teachers' Practices in Linguistically Diverse Classrooms, Journal of Language, Identity & Education, DOI: [10.1080/15348458.2021.1991801](https://doi.org/10.1080/15348458.2021.1991801)

To link to this article: <https://doi.org/10.1080/15348458.2021.1991801>



© 2022 The Author(s). Published with license by Taylor & Francis Group, LLC.



Published online: 24 Jan 2022.



Submit your article to this journal [↗](#)



View related articles [↗](#)



View Crossmark data [↗](#)

Requirements Meet Reality: Finnish Teachers' Practices in Linguistically Diverse Classrooms

Leena Maria Heikkola ^{a,b}, Jenni Alisaari^c, Heli Vigren^c, and Nancy Commins^c

^aÅbo Akademi University; ^bUniversity of Oslo; ^cUniversity of Turku

ABSTRACT

The current Finnish core curriculum requires all teachers in basic education to be linguistically responsive. However, studies on the linguistically responsive practices used by teachers are scarce. The frequency with which teachers ($N = 820$) use 21 linguistically responsive practices was investigated through data that were gathered via an online survey. Based on factor analysis, teachers' practices formed four categories: identifying language demands, linguistic scaffolding, explicit attention to language, and additional semiotic systems scaffolding. Teachers reported using the latter the most. Of teachers' background factors, teaching experience of 2–5 years was linked to more frequent use of students' interests to plan teaching compared to 0–2 or more than 10 years of experience. The results point out a need for more training in linguistically responsive teaching practices for in-service teachers, as experience is not linked to growth trajectories.

KEYWORDS

Finnish core curriculum; in-service teachers; linguistically responsive teaching; practices

Introduction

Increasing diversity introduces new perspectives to schools. Teachers' preparedness to respond to this diversity is essential since it can profoundly affect the academic outcomes and future lives of their students (Villegas, 2016). In Finland, the current core curriculum for basic education (National Agency of Education, 2014) reflects the needs of diverse classrooms by requiring teachers to be linguistically responsive (Lucas & Villegas, 2013). The core curriculum was revised as a response to studies that show lower academic outcomes for students with immigrant background (Alisaari, 2020; Harju-Luukkainen et al., 2014; Kuukka & Metsämuuronen, 2016; Leino et al., 2019; OECD, 2015). Evidence suggests that these students' language skills are not sufficient for successfully navigating academic subjects (Kuukka & Metsämuuronen, 2016).

As language is both the instrument for and target of learning for immigrant students, teachers must be able to make content comprehensible while supporting the development of language skills (Cummins, 2000; Gibbons, 2002; Villegas, 2016; Wong Fillmore & Snow, 2018). This kind of instructional support includes utilizing relevant materials and activities in ways that optimize language learning, regardless of students' skills (Wong Fillmore & Snow, 2018). Furthermore, the socio-constructive approach frames language learning to happen in contextually appropriate social interaction (van Lier, 2000; Vygotsky, 1978), as language plays a central role in making meaning and constructing knowledge (Halliday, 1978; Vygotsky, 1978).

The literature reveals that when teachers lack confidence in their ability to teach multilingual learners, they tend to place the responsibility for low academic performance on the students (Hutchinson, 2013; Yoon, 2008; Youngs & Youngs, 2001). Further, when teachers do not see teaching multilingual learners as their responsibility, they typically make little or no effort to scaffold instruction, which is necessary to support multilingual learners' learning (Villegas, 2016). In addition, it has

been shown that many mainstream teachers' have deficit perspectives of language learners (Lee et al., 2007; Lucas et al., 2018; Rodriguez et al., 2010), emphasizing what students cannot do rather than what they can (Nieto & Bode, 2011; Villegas, 2016). This leads to low academic expectations for these students, which impedes learning (Fang, 1996; Madom et al., 1997; Nespors, 1987). In this study, the term *multilingual learners* is used to refer to students, generally of immigrant background, who have home languages other than Finnish, Swedish, or Sami, the national languages of Finland, and who are learning Finnish or Swedish as the language of their schooling.

While the Finnish teacher education is already globally acclaimed, the main goal of this study was to find ways to improve it further, mainly by investigating teachers' linguistically responsive teaching practices in order to promote the development of these through teacher education. Specifically, this study, which is part of a larger project examining Finnish in-service teachers' beliefs and practices regarding linguistically and culturally responsive teaching, investigated Finnish teachers' ($N = 820$) perceptions of their linguistically responsive practices.

Background: Teaching multilingual learners

Because multilingual learners are simultaneously learning the language and learning *through* the language, attention must be paid to the language of the content (Aalto, 2019). A linguistically responsive environment, which is optimal for language learning, requires three things: (a) comprehensible affordances, (b) learner's attention to language, and (c) learner's production of language (Lucas & Villegas, 2011; van Lier, 2000). These aspects need to be present in every classroom, regardless of whether it is a language classroom or a subject class. Further, consideration of students' cultures strengthens engagement and provides better learning outcomes (Moll et al., 1992; Wiltse, 2015).

A growing number of studies have indicated that linguistically and culturally responsive teaching leads to better academic results (Gay, 2002; Ladson-Billings, 1995a; Lucas & Villegas, 2010; Osborne, 1996; Sierens et al., 2018). In the last decades, the importance of including cultural and linguistic preparation in teacher training has been emphasized to give language learners the same possibilities for academic success as native speakers (De Jong & Harper, 2005; Lucas et al., 2018; Lucas & Villegas, 2010). Various frameworks and models have emerged that outline the knowledge and skills needed of teachers who work with language learners in mainstream classrooms (Commins & Miramontes, 2006; Hammond & Gibbons, 2005; De Jong & Harper, 2005; Lucas & Grinberg, 2008; Lucas & Villegas, 2013; Téllez & Waxman, 2006). In this study, the focus is on the framework of linguistically responsive teaching (LRT) and related practices (Lucas & Villegas, 2010). In addition, the scaffolding model by Hammond and Gibbons (2005) introduces a concrete perspective on how teachers can support students' learning, which complements and deepens the scaffolding of the LRT framework (Lucas & Villegas, 2011).

The aforementioned framework and model have been used as the theoretical basis of this study, as they were developed to promote teacher education and are well-established in the field of linguistically responsive teacher education. In addition, aspects of the Finnish Core Curriculum for Basic Education (National Agency of Education, 2014) are similar to ideas from these frameworks (see also Alisaari et al., 2019b), and thus provide a good basis for investigating teachers' practices. Other frameworks and models are available (see e.g., Aalto, 2019), but the frameworks presented here include students' backgrounds, teachers' advocacy for multilingual learners, aspects of social justice, and language and language learning related aspects, which support the holistic point-of-view of this study. In addition, these frameworks include a call to action, which will help prepare future teachers for the linguistically diverse reality.

Linguistically responsive teaching

Recent studies suggest that every teacher should also be a language teacher, which entails knowledge about language and language learning processes (Aalto, 2019; Schleppegrell, 2002). This is echoed in Finland's current core curriculum for basic education (National Agency of Education, 2014). To be specific, every teacher needs to understand the role language plays in learning and to recognize the specific language of their own subjects in order to plan and implement teaching that best supports all students (National Agency of Education, 2014). Additionally, it is important to distinguish between features that are related to language development and those related to learning difficulties (Wong Fillmore & Snow, 2018). It is knowledge of language learning that can provide the necessary foundation for understanding language learners (Villegas et al., 2016). It should further be noted that linguistically responsive teaching also supports students who are native speakers, especially those viewed as vulnerable learners (Beacco et al., 2015).

As most current teacher-training does not cover language-related aspects, particularly the processes involved in language learning, in their programs (Alisaari et al., 2019b; Commins & Miramontes, 2006; De Jong & Harper, 2005; De Jong et al., 2013), a framework of linguistically responsive teaching has been developed (Lucas & Villegas, 2010; Villegas & Lucas, 2007) that includes aspects of both culture and language. The aim of the framework is to outline the knowledge teachers need to support culturally and linguistically diverse students.

The two main components of the framework are teacher orientations and pedagogical knowledge and skills (Lucas & Villegas, 2011; Lucas & Villegas, 2013; see Table 1). The orientations, which create the foundation upon which pedagogical knowledge and skills are built, are then separated into *sociolinguistic consciousness*, *value for linguistic diversity*, and an *inclination to advocate for language learners*. Together, these mean that teachers should understand how language and identity are intertwined, that some languages have more power than others in particular contexts, that all languages should be affirmed, and that teachers should take public stands on behalf of their language learners. Finally, through advocacy, teachers can promote equity for all their students.

In order to teach content effectively, teachers need to plan lessons that optimize language and literacy learning and decrease language challenges (Wong Fillmore & Snow, 2018). Furthermore, the current core curriculum in Finland (National Agency of Education, 2014), which requires that teachers understand language learning, have a basic knowledge of the language of their disciplines, have skills for determining the language demands of classroom activities, and know how to apply linguistic scaffolding, are also included in the proposal for the framework for linguistically responsive teaching (Lucas & Villegas, 2011; Lucas et al., 2008). Even though these perspectives on learning are relatively new in mainstream classrooms (see also Alisaari et al., 2019b), they have a long tradition in language immersion classrooms (see also Cammarata & Tedick, 2012).

Knowing language learners

By understanding what students already know and are capable of, teachers can better support their success (Bunch, 2014). Furthermore, learning about individual students and their cultural, linguistic, and educational backgrounds is a major part of culturally and linguistically responsive teaching (Bunch, 2014; De Jong et al., 2013). This is supported by the framework, which states that teachers should be aware of their students' languages and language proficiencies (Lucas et al., 2008).

Table 1. Framework of linguistically responsive teaching by Lucas and Villegas (2010). (The pedagogical skills and knowledge investigated in the current study are marked in bold.)

ORIENTATIONS	PEDAGOGICAL KNOWLEDGE AND SKILLS
Sociolinguistic consciousness	Learning about language learners' language backgrounds, experiences, and proficiencies
Value for linguistic diversity	Identifying the language demands of classroom discourse and tasks
Inclination to advocate for language learners	Knowing and applying key principles of second language learning
	Scaffolding instruction to promote language learners' learning

Identifying language demands

Language affects all learning, therefore learning language cannot be separated from learning content (Fang et al., 2006; Schleppegrell, 2002; Schleppegrell et al., 2004). It follows that teachers must understand the language demands of their subjects (Lucas & Villegas, 2010), as each subject has its own ways of using language. For example, teachers need to identify subject-specific vocabulary and grammar, recognize what makes a text easy or difficult to understand, and be willing to discuss language in their classroom (Wong Fillmore & Snow, 2018).

Key principles of language learning

The most essential part of the framework for linguistically responsive teaching (Lucas & Villegas, 2010) addresses teachers' understanding of the language learning processes. First, teachers should be aware of the different dimensions of language: registers, dialects, and academic and subject-specific language (Cummins, 2008; Wong Fillmore & Snow, 2018). Next, the importance of social interaction with native speakers and the influence other languages have on learning a target language are highlighted (Lucas & Villegas, 2010). An awareness of languages is essential in understanding the impact students' languages have on their language learning and academic achievement. For example, if a teacher is aware that the Turkish language does not use copular verbs (e.g., the house *is* green), they will be prepared to help the student accordingly. Furthermore, teachers should be aware of techniques that increase language learning (Cummins, 2000; Faltis et al., 2010; Gibbons, 2002). The goal is not to make every teacher a language expert, rather to increase their understanding to support students' academic outcomes (Vigren et al., *in press*).

Importance of interaction. In his theory of learning, Vygotsky (1987) highlighted the importance of interaction; teachers must provide students with possibilities to interact with their native-speaking peers (Faltis et al., 2010; Miramontes et al., 2013). This creates affordances for students to learn language in meaningful contexts, through which students can negotiate meanings, thereby learning both language and content (Van Lier, 2000).

Importance of home language(s). Proficiency in a home language is directly connected to learning the language of schooling (Cummins, 2008). Not only does it support the development of vocabulary in the target language (August & Shanahan, 2006), there is substantial evidence (Cummins, 2008; García & Wei, 2014; Miramontes et al., 2013) that knowledge transfers between languages. In addition, literacy in the home language is a strong predictor of literacy in the target language (Cummins, 2000). Students benefit greatly when teachers allow and encourage them to use all of their linguistic resources (Kibler, 2010). While many teachers believe in language submersion and prohibit the use of home languages (Valdes, 2010), linguistically responsive teachers encourage students to use their home languages, especially when working with peers (Calderon et al., 2011; National Agency of Education, 2014).

Importance of language registers. An awareness of the ways that language is used differently in different settings helps teachers better support multilingual learners (Lucas et al., 2008); students who speak fluently in everyday conversations may struggle with academic contexts and subject-specific vocabulary (Cummins, 2000). In addition, teachers should adjust their own speech to be more understandable (De Jong & Harper, 2005). Because of this, the current core curricula in Finland (National Agency of Education, 2014, p. 21) requires that “multiliteracy is developed in all school subjects, progressing from everyday language to mastering the language and presentational modes of different ways of knowing.”

Scaffolding instruction to promote language learning. Scaffolding instruction is an important part of culturally responsive teaching (Ladson-Billings, 1995a; Teemant, 2018) and also a part of the framework for linguistically responsive teaching (Lucas & Villegas, 2010). The concept is based on socio-

constructivist ideology reflecting Vygotsky's (1987) zone of proximal development (ZPD), a developmental stage in which students are able to complete a task with the help of a teacher or a more advanced peer. Scaffolding strategies that support language learning include modifying language, using additional semiotic support techniques, and utilizing students' other language(s) (Lucas & Villegas, 2010).

While the main framework for this research project has been the LRT framework by Lucas and Villegas (2011), Hammond and Gibbons' (2005) scaffolding model has been included to deepen the investigation of teachers' practices. This model focuses on concrete methods and is divided into macro and micro levels. The macro level, called designed-in scaffolding, includes teachers' consideration of students' prior knowledge and experience, which is similar to LRT, but also underlines the importance of the selection and sequencing of specific, concrete tasks. Furthermore, while both the LRT framework and the scaffolding model stress the promotion of students' metalinguistic awareness, the scaffolding model also emphasizes the importance of metacognitive awareness. The micro level, on the other hand, is interactional. It also underlines consideration of students' prior experience, but, in addition, includes actions that spontaneously occur during teaching, such as pointing forward, recapping, recasting, and cued elicitation (Hammond & Gibbons, 2005).

Scaffolding enables teachers to "push" students to work at the "outer limits of their ZPD" (Hammond & Gibbons, 2005, p. 25). It must, however, be planned, because without planning, students are not encouraged to learn new things (Hammond & Gibbons, 2005). Furthermore, being actively present is necessary to optimize teacher support. Thus, scaffolding needs to happen on two levels: it has to be planned, and it has to occur in the moment of interaction with students.

Context of the study

In recent years, classrooms around the world have become notably more linguistically diverse. In Finland, the number of basic education students with home languages other than Finnish more than doubled from 2010 (3.2%) to 2018 (6.8%) (Vipunen, 2020a.) Finnish law requires teaching to be in either Finnish or Swedish, or in Sami in Northern Finland (Finlex, 1998), although language classes using content and language integrated learning (CLIL) or immersion can be partly in another language. However, the current Finnish core curriculum for basic education promotes using all of a student's linguistic resources.

It has been shown that despite the curriculum's requirement that all Finnish teachers should be linguistically responsive, monolingual ideologies are still prevalent in Finnish schools (Alisaari et al., 2019a), which may be due to the historic separation of Finnish and Swedish language schools. Furthermore, before 2016, Finnish teacher training did not systematically include linguistically responsive teaching (Aalto & Tarnanen, 2015), although some training was offered in some Finnish teacher education programs (Peltoniemi, 2015). Since 2016 and the implementation of the current curriculum, more linguistically and culturally responsive teaching methods have been offered, though not in all teacher education programs in Finland (Alisaari, 2020).

Research questions

Until recently, there has been no consensus on what teachers should know or how to ensure that language learners are given opportunities to learn both language and content and to thrive both socially and academically (Faltis et al., 2010). Researchers around the globe have been calling for this work (Aalto, 2019), and the European Council has supported multilingualism and the role of language in learning by providing guidelines and materials for teachers and teacher educators. The aim of this study was to investigate teachers' linguistically responsive practices and to examine associations between different practices through statistical analyses. In addition, the link between teachers' backgrounds and their linguistically responsive practices was examined. In this study, the following research questions were asked:

- (1) Which linguistically responsive practices do teachers report using in their linguistically diverse classrooms?
- (2) How are teachers' reported practices grouped together (in factor analysis)?
- (3) Which background factors are related to teachers' reported use of linguistically responsive practices?

Methodology

The present study arises from a larger research project investigating Finnish in-service teachers' linguistically and culturally responsive teaching beliefs and practices (Alisaari et al., 2019a; Alisaari & Heikkola, 2020a; 2020b; Vigren et al., in press).

Materials

The data were collected in an online survey in spring of 2016. The survey was created based on a preliminary version of a survey (Milbourn et al., 2017), which was informed by Lucas and Villegas' (2013) framework of linguistically responsive teaching, research on culturally responsive teaching (Gay & Kirkland, 2003; Ladson-Billings, 1995a, 1995b), and research on teaching for social justice (Cochran-Smith et al., 2012). This theoretical framework formed the basis for designing the statements that reflect teachers' beliefs and reported use of linguistically responsive practices. However, the survey also included statements that present beliefs and teacher practices that are not linguistically responsive (for both types of statements, see Table 2, Table 3). This was done in order to cross-check teachers' response validity. The aim of the survey was to gain knowledge regarding teachers' reported linguistically responsive beliefs and practices.

The survey was translated and adapted by one of the authors and one other researcher; some items from the original North American survey were left out of the final Finnish questionnaire, as they did not apply to Finnish educational practices. The survey was then reviewed by the National Agency of Education and researchers in both the Finnish Network for Language Education Policies and the Centre of Applied Language Studies in Finland. The final version of the survey was created based on comments by these experts and a statistician.

An open invitation to participate in the survey was advertised on email-lists, social media, and the websites of the Association of Finnish as a Second Language Teachers and the journal of the Finnish teachers' trade Union, *Opettaja*. In addition, the survey was advertised at a national educational fair, *EDUCA*, in January 2016. The link to the survey and a cover letter asking that it be forwarded to all teachers in the area were also sent to all local education departments in Finland. The cover letter included information about the intended participants, the purpose of the study, and data protection; the same information was given on the first page of the online survey. The questionnaire was directed to all teachers, including substitute teachers, principals, and counselors, within basic and upper secondary education in Finland. Answering the survey implied consent.

Table 2. The distribution of the respondents' different teaching areas (Finnish percentages based on Vipunen, 2020b)

Subject area	Percentage
Classroom teacher in primary school (CL)	23.1%
Subject teacher in secondary or upper-secondary school (SU)	44.3%
Classroom teacher with additional qualification of a subject teacher (CS)	4%
Special education teacher or a teacher of newly arrived immigrants (SE)	14.9%
Counselor (CO)	2.9%
Principal (P)	5.7%
Other (O)	3.6%

Table 3. The frequency of teachers' responses to the statements regarding linguistically responsive practices in linguistically diverse classrooms. (The statements are listed based on the frequency teachers report using them: the most often used are presented first, and the most seldom used are presented last).

Statement	Never (%)	Once (%)	Two or more times (%)	Four or more times (%)
1. In a typical week, I use visual cues and extra-linguistic support techniques. (M = 3.6)	2.7	5.9	20.2	71.1
19. In a typical week, I give both oral and written instructions. (M = 3.5)	5.2	8.3	16.9	69.6
17. In a typical week, I put directions on blackboard or on paper regarding how students can proceed with their assignments. (M = 3.1)	10.6	18.1	27.2	44.2
20. In a typical week, I use the interests of my students to make learning meaningful for them. (M = 2.9)	7.7	25.1	32.9	34.3
15. In a typical week, I create opportunities for my LCDSs to interact with native Finnish speakers. (M = 2.9)	21.7	12.3	16.4	49.6
18. In a typical week, I encourage my LCDSs to ask me questions about unclear issues during tests. (M = 2.9)	21.3	13.7	16.7	48.4
2. In a typical week, I use graphic organizers. (M = 2.9)	9.2	27.1	33.1	30.5
9. In a typical week, when I grade assessments, I think about ways that language may impact my understanding of my LCDSs' responses. (M = 2.8)	19.1	17	24.9	39
10. In a typical week, I allow students to use bilingual or online dictionaries or search the meanings of the words with picture search tools online. (M = 2.7)	25.7	19.3	16.8	38.2
11. In a typical week, I take my LCDSs' prior knowledge and experiences into account in my teaching. (M = 2.6)	23.1	24.5	26.4	26
8. In a typical week, when I speak, I pause for longer periods of time to give LCDSs time to form responses. (M = 2.6)	28.2	19.7	21.2	30.9
7. In a typical week, I take my LCDSs' Finnish proficiency levels into account when designing assignments. (M = 2.5)	25.4	24.4	22.2	28
3. In a typical week, I create opportunities for my students to experience hands-on activities. (M = 2.5)	16.9	36.8	26.4	19.9
12. In a typical week, I explicitly draw LCDSs' attention to Finnish grammatical structures while teaching. (M = 2.4)	29.1	25.2	22.1	23.7
14. In a typical week, I automatically correct my LCDSs' writing when they make Finnish language mistakes. O (M = 2.4)	28.3	27.7	24.7	19.2
13. In a typical week, I automatically correct my LCDSs' speech when they make Finnish language mistakes. O (M = 2.1)	37.7	30	17.4	14.9
16. In a typical week, I modify written texts to reduce readability demands. (M = 2.1)	39.3	27.2	19	14
21. In a typical week, I find topics that relate to my LCDSs' cultural backgrounds. (M = 2.0)	35	40.7	16.7	7.6
5. In a typical week, I give LCDSs' highlighted texts to signal important information. (M = 2.0)	44.2	27.6	15.5	12.7
4. In a typical week, I assess LCDSs' learning through hands-on activities. (M = 1.9)	42.8	31.7	17	8.5
6. In a typical week, I translate key concepts into the students' home language. (M = 1.7)	58.9	22.1	9.7	9.3

Note. LCDS = linguistically and culturally diverse student. O = Statement opposing the ideas of linguistically responsive teaching.

The survey included Likert scale statements and open-ended questions related to teachers' demographics and linguistically and culturally responsive teaching. Analyses were based on 21 statements regarding practices used in linguistically diverse classrooms. All the questions were formatted as: "How often do you use practice X during a typical week?" The scale ranged from 1–4 with 1 = never, 2 = once a week, 3 = two or more times a week, and 4 = four or more times a week (Table 3).

Participants

Approximately 4.5% (Kumpulainen, 2017) of all teachers in Finland responded to the survey (N = 820). The mean age of the participants was 41, and 78% of the participants were female, 21% male, and 1% other, which reflects the overall demographics of teachers in Finland (mean age 45; 77% female; Kumpulainen, 2017; Statistics Finland, 2019). The distribution of participants' teaching areas is presented in Table 2. Principals, counsellors, substitute teachers, and adult education teachers, were also included because, in Finnish basic education, these groups also have teaching responsibilities and

therefore have similar practices to the other teacher groups. Of all the teacher groups, subject teachers formed the largest group (44.3%) and included the following subjects: Finnish as a first language and literature, Finnish as a second language and literature, English, German, Swedish, French, Mathematics, Physics, Chemistry, Information and Communications Technology (ICT), and Health Care Sciences. These were further divided into four groups in order to examine possible differences between teacher groups teaching languages (Finnish language; Swedish language and foreign languages), other theory-based subjects (e.g., science and mathematics), and practice-based subjects (P.E. and arts).

All teachers in Finland are required to have a Master's Degree in their subjects. Additionally, in-service training for subject teachers includes a one-year program in pedagogy. Primary school teachers must complete a five-year program in pedagogy. Only 13% of the participants reported having had some training related to linguistically responsive teaching.

Data analysis

The quantitative data were analyzed with IBM SPSS version 26 by describing frequencies, doing a factor analysis on the 21 statements, and by doing regression analyses to look at possible links between teachers' reported practices and their background factors. The first research question was answered by investigating the frequencies of all the individual Likert scale statements. For question two, a factor analysis was done to determine whether some practices were frequently used together, forming groups of practices. Question three was answered by doing an ordered logistic regression analysis using the independent variables. The included background factors in the analyses were: (a) overall teaching experience (0–10, 11–20, over 21 years), (b) teaching experience with immigrant students (not at all, 1–2, 2–5, 5–10, 11 or more years), and (c) percentage of immigrant students at the teacher's school (less than 1, 1–5, 5–10, more than 10%). The independent factors used as the background variables were ordinal. In addition, a multinomial logistic regression analysis using three additional categorical variables (age, gender, and teacher group) was calculated. Only main effects were examined in the regression analyses.

Results

In this section, the analyses are discussed in the order of the research questions. First, the frequencies of practices are presented. Second, the factor analysis used to identify whether there were groups of practices are shown. Third, possible links between the reported practices and teachers' background factors are revealed.

Finnish teachers' practices in linguistically diverse classrooms

To answer the first research question, wherein teachers were asked how often they used particular practices in linguistically diverse classrooms during a normal week, the frequencies of teachers' responses to the 21 statements about linguistically responsive practices were examined (Table 3). Based on the group mean of the answers, the three practices most used were:

- (1) Using visual cues ($M = 3.6$)
- (2) Giving both oral and written instructions ($M = 3.5$)
- (3) Putting directions on the blackboard or on paper ($M = 3.1$)

Some other practices were used fairly frequently, but others were seldom or never employed. For example, 59% of the teachers never translated concepts into the students' home language, and 22% only did it once a week. Furthermore, 35% of the teachers never used topics related to their students' cultural backgrounds, and 41% did so only once a week.

Groups of reported practices: Linguistic scaffolding, additional semiotic systems, attention to language, and identifying language demands

For question two, a factor analysis of the 21 statements was done to see whether specific linguistically responsive practices were reported as being used together. The factorability of the statements was examined to see whether factor analysis could be performed on the data. It was found that all of the 21 statements correlated at least 0.3 with at least one other item, and thus, their factorability is reasonable (see [Appendix A](#)). Also, the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.92, well above the commonly recommended value of 0.6, and Bartlett's test of sphericity was significant ($\chi^2(210) = 6585, p < .001$). Finally, the communalities were above 0.3 (see [Appendix B](#)) for all items. Given the overall indicators, we proceeded to factor analysis with all 21 items.

The primary purpose of the factor analysis was to identify and compute sum variables to be used for analysis. Initial eigenvalues indicated that the first four factors explained 39%, 10%, 7%, and 5% of the variance, respectively. This four-factor solution, which explained 61% of the variance, was chosen as the base for forming sum variables.

Since all 21 items seemed to have reasonably high correlation, factor analysis of these items was conducted using varimax rotation (for rotated factor analysis, see [Appendix B](#)). Four factors emerged from the analysis:

- (1) Identifying language demands
- (2) Linguistic scaffolding
- (3) Additional semiotic systems
- (4) Explicit attention to language.

The four factors were named based on the content of the survey and the LRT framework (Lucas & Villegas, 2011). For example, the name of factor one is one of the pedagogical skills of a linguistically responsive teacher (Lucas & Villegas, 2011), and factor three was named after one of the items in the scaffolding model (Hammond & Gibbons, 2005).

Factor two included eight statements that were based on the factor analysis. However, only the four statements most closely related to linguistic scaffolding were included in the final factor.

Internal consistency for each of the four factors was investigated using Cronbach's alpha. The alphas were high for all four factors ([Table 4](#)): factor 1 = 0.89 (5 items), factor 2 = 0.70 (4 items), factor 3 = 0.75 (5 items), and factor 4 = 0.87 (3 items). No substantial increases were achieved by adding or eliminating items included in the four scales, hence the removal of the four items from *Linguistic scaffolding* did not affect the overall internal consistency of the analysis.

Finally, sum variables were calculated based on the four factors presented above. Higher scores indicated more frequent use of a practice. *Additional semiotic systems scaffolding* practices were reported as being used the most (factor 3, $M = 3.2$), on average two or more times a week. The second most used group of practices (factor 1, $M = 2.7$), also used on average close to two or more times a week, included practices focusing on *language demands* of linguistically diverse classrooms. Paying *explicit attention to language* (factor 4, $M = 2.3$) and using *linguistic scaffolding* (factor 2, $M = 2.1$) were used similarly, on average once a week. An approximately normal distribution was evident for the sum variables, and thus these were deemed well-suited for parametric statistical analysis.

Links between Finnish teachers' backgrounds and their reported use of linguistically responsive practices

Next, the possible links between teachers' background factors, including overall teaching experience (in years), experience with immigrant students (in years), and percentage of immigrant students at the teacher's school, and their reported practices were investigated. In the ordered logistic regression analyses examining main effects, none of the background factors statistically significantly predicted the

Table 4. The four final factors.

Factor 1 — Identifying linguistic demands	Factor 2 — Linguistic scaffolding
7. In a typical week, I take my LCDSs' Finnish proficiency levels into account when designing assignments.	5. In a typical week, I give LCDSs' highlighted texts to signal important information.
8. In a typical week, when I speak, I pause for longer periods of time to give LCDSs time to form responses.	6. In a typical week, I translate key concepts into the students' home language.
9. In a typical week, when I grade assessments, I think about ways that language may impact my understanding of my LCDSs' responses.	10. In a typical week, I allow students to use bilingual or online dictionaries or search the meanings of the words with picture search tools online.
15. In a typical week, I create opportunities for my LCDSs to interact with native Finnish speakers.	16. In a typical week, I modify written texts to reduce readability demands.
18. In a typical week, I encourage my LCDSs to ask me questions about unclear issues during tests.	
Factor 3 — Additional semiotic systems	Factor 4 — Explicit attention to language
1. In a typical week, I use visual cues as extra-linguistic support techniques.	12. In a typical week, I explicitly draw LCDSs' attention to Finnish grammatical structures while teaching.
2. In a typical week, I use graphic organizers.	13. In a typical week, I automatically correct my LCDSs' speech when they make Finnish language mistakes.
17. In a typical week, I put directions on blackboard or on paper regarding how students can proceed with their assignments.	14. In a typical week, I automatically correct my LCDSs' writing when they make Finnish language mistakes.
19. In a typical week, I give both oral and written instructions.	
20. In a typical week, I use the interests of my students to make learning meaningful for them.	

teachers' reported use of the four groups of practices. When calculating a multinomial logistic regression with three additional categorical variables (age, gender, and teacher group), no significant results were found.

Discussion

Of the 21 practices included in the survey, 17 were reported as being used at least once a week. However, only three practices were reported as being used an average of two or more times a week: using visual cues, giving both oral and written instructions, and putting directions on the blackboard or paper. These are all practices that the scaffolding model calls *additional semiotic systems*. Use of these methods has been shown to support students' understanding and independent construction of meaning (Hammond & Gibbons, 2005), then it is useful for students to have access to *message abundance* (Gibbons, 2002), meaning the same information via different sources. In sum, the majority of the teachers in this study were aware that oral input alone is not sufficient when scaffolding students' learning in a linguistically diverse classroom (Gibbons, 2002).

The examination of groups of practices supports the results from the analysis of the individual practices, revealing some awareness of linguistically responsive practices that promote learning in a linguistically diverse classroom. As the investigation of individual items and sum variables showed, the teachers were most comfortable with additional semiotic scaffolding, which is reflective of the socio-constructivist basis, including promoting the use of multimodal instructional methods, of teacher-training in Finland. Within the scaffolding model, the practices that teachers reported using the most were designed-in scaffolding (Hammond & Gibbons, 2005). These are quite easy to implement, for example, simply giving students more time to answer questions. The more demanding linguistically responsive practices, which were often reported to be used only once a week or never, fall into the category of interactional scaffolding (Hammond & Gibbons, 2005), which require teachers to make in-the-moment linguistic decisions in a complex linguistic environment.

The fact that most teachers reported frequent use of at least three linguistically responsive practices reflects an understanding of the demands faced by multilingual Finnish language learners and further suggests that Finnish teachers demonstrate a degree of linguistic responsiveness. However, to

accelerate the learning of second-language students, specific linguistically responsive practices should be implemented more often in the classroom. For example, *giving explicit attention to language* and *scaffolding learning linguistically and culturally* were reported as being used only once a week; however, these are the practices teachers should be using regularly. Moreover, creating opportunities to interact with native Finnish speakers was also reported to be used only once a week, but this is a vital practice, as social interaction supports language learning (Faltis et al., 2010; Miramontes et al., 2013). In addition, the teachers of this study reported under-utilizing their students' first languages as a resource for learning, even though this practice is encouraged by both the current core curricula (National Agency of Education, 2014) and previous research (Calderon et al., 2011).

Finally, the connection between teachers' backgrounds and their reported groups of practices were examined, and no link was found between overall teaching experience, experience teaching immigrant students and the reportedly used practices, nor between age, gender, or teacher group. This is of extreme interest, since the survey used is sufficiently powered and representative of the Finnish teacher population to draw conclusions. It is interesting here to note that previous analyses of other parts of the data collected by the same survey have shown that experience teaching immigrant students is linked to higher knowledge about the principles of language learning (Alisaari & Heikkola, 2020a, 2020b; Alisaari et al., 2019a). However, it takes more for this knowledge to be translated into actual practices; while teachers may have a good command of the theory of linguistically responsive teaching, their practices may not be in line with their knowledge (Basturkmen et al., 2004; Borg, 2006; Negueruela-Azarola, 2011). The results of this study also seem to indicate that teachers may not be able to learn and adapt while on the job. This maybe especially true for teachers who trained in general educational programs that have not included much information or practice in linguistically responsive teaching. Thus, although Finnish teachers are required to partake in yearly professional development days or afternoons, this does not seem to be enough to result in growth trajectories over time. The content of these vary widely, and the schools can independently decide which issues they cover in these professional development sessions. Further qualitative analyses are warranted to understand the meaning and to examine the possible reasons for the insignificant links between the teachers' backgrounds and their reported linguistically responsive practices.

However, the data for the study was gathered before the implementation of the current core curricula, so it may be that not all teachers felt supported in using linguistically responsive practices at that time. Our results seem to indicate that professional development has not yet sufficiently covered linguistically responsive teaching, and very few teacher training programs in Finland have included issues dealing with teaching linguistically and culturally diverse students before the current core curricula was implemented in 2016. It also seems plausible that contextual variables in some Finnish schools may be inhibiting linguistically responsive teaching. For example, change in teachers' knowledge and practices requires support and an encouraging atmosphere, often created by the school management (Postholm, 2012). Further enquiries are planned within the same research project into Finnish teachers' beliefs and practices relating to linguistically responsive teaching after the current core curricula in Finland has been in place several years.

The sample of the study is representative of the Finnish teacher population, and thus the results should reflect the practices of teachers in Finland. More research is needed to investigate teachers' reasons for using these practices. Moreover, the results of this study are based on a survey, and self-reported practices may not reflect reality. For example, a teacher may not remember how often specific practices are used, especially if they are routine, and socially accepted practices may be reported as being used more than they actually are. Still, as the groups of practices gave similar results as those of individual statements, it can be concluded that teachers' responses were reflected correctly and thus, the summed variables can be used in further analysis. Actual classroom observation of teachers' practices may be needed to gain further insight on how teachers support their multilingual learners.

Conclusions and implications

The current Finnish core curriculum's (National Agency of Education, 2014) requirements for language awareness places pressure on teachers. Thus, teacher-training programs should provide teachers with the necessary foundation to teach culturally and linguistically diverse students (Coady, et al. 2011; Commins & Miramontes, 2006; De Jong & Harper, 2005; Villegas, 2016). For example, teacher education should instruct on linguistics, language development, language registers, instructional emphasis, and multiple strategy use (Wong Fillmore & Snow, 2018). Furthermore, as teachers "may well be fluent in the language of their disciplines without realizing how distinct it is from the language their students use" (Wong Fillmore & Snow, 2018, p. 46), including linguistically responsive practices into teacher training would make teachers more effective within ever diversifying schools and help to ensure equity for all students, independent of their background and language proficiency (Commins & Miramontes, 2006; Hammond & Gibbons, 2005; Villegas, 2016).

Decreasing literacy skills and increasing inequalities within global education have led to a growing need for linguistically responsive teaching, the overall aim of which is to ensure educational equity for all students. We are energized by the current policy's promotion of linguistically responsive teaching, particularly as discussion about the learning outcomes of immigrant students in Finland and other OECD countries has led to recommendations from the European Commission and the European Center for Modern Languages (ECML) to implement linguistically responsive practices.

Acknowledgments

We would like to thank our participants, the National Agency of Education, scholars working at The Finnish Network for Language Education Policies and at the Centre for Applied Studies, and our statistician Eero Laakkonen. We give our gratitude also to Emanuel Opoku Acquah, who was involved in the adaptation of the survey into Finnish. In addition, we are very grateful to the anonymous reviewers for their helpful comments.

Disclosure statement

No potential conflict of interest was reported by the author(s).

About the Authors

Dr. Leena Maria Heikkola works as Senior Lecturer at the department of Speech and Language Pathology at the Faculty of Arts, Psychology and Theology, Åbo Akademi University. She is also affiliated with the Center of Excellence "Multilingualism in Society across the Lifespan" (MultiLing) at the University of Oslo. In addition, she holds a title of Associate Professor in Finnish language at Åbo Akademi University. Heikkola's research interests include neuro- and psycholinguistics, interfaces between music and language, second language acquisition, production and perception of spoken second language, linguistically responsive education, and ethically sustainable language teaching.

Dr. Jenni Alisaari works at the Faculty of Education and Welfare Studies at Åbo Akademi University, and as a senior researcher at the INVEST Flagship Research Center at the University of Turku. She also holds a title of Associate Professor in Finnish language at the University of Helsinki. Her research interests include immigrant background students' learning and wellbeing, linguistically responsive education, multilingualism, and language learning.

Heli Vigren is a postgraduate student at the University of Turku, Finland. She works in Basic Education, teaching immigrant background students. Before going back to primary school she worked as a university teacher at the Faculty of Education at the Department of Teacher Education, the University of Turku, teaching both pre-service and in-service teachers on linguistically and culturally diverse education. Her main areas of interest include linguistically and culturally responsive education, intercultural competence, and identity building of linguistically and culturally diverse students.

Dr. Nancy Commins is Clinical Professor Emeritus at the University of Colorado Denver in Culturally and Linguistically Diverse Education. Over the past four decades, she has worked with students from diverse linguistic and cultural backgrounds in the U.S., Mexico and Finland as a classroom teacher, university professor, program director, school district administrator and independent consultant assisting schools and districts in their efforts to improve instruction for multilingual students.

ORCID

Leena Maria Heikkola  <http://orcid.org/0000-0002-1795-7656>

References

- Aalto, E. (2019). *Pre-service subject teachers constructing pedagogical language knowledge in collaboration* [Doctoral dissertation, The University of Jyväskylä]. JYX Digital Repository. <http://urn.fi/URN:978-951-39-7950-8>
- Aalto, E., & Tarnanen, M. (2015). Kielitietoinen aineenopetus opettajankoulutuksessa [Linguistically responsive content teaching in teacher education]. *AFinLA-e: Soveltavan Kielitieteen Tutkimuksia*, 8, 72–90. <http://ojs.tsv.fi/index.php/afinla/article/view/53773>
- Alisaari, J. (2020, November 12). Suomalaisten opettajankoulutuslaitosten opetussuunnitelmat [The core curricula in Finnish teacher training] [Conference Session]. *Matkalla kielellisesti, kulttuurisesti ja katsomuksellisesti vastuulliseen pedagogiikkaan-konferenssi* [On the road to linguistically, culturally and world-view wise responsible pedagogy conference], Turku, Finland. <https://dived.fi/kielellisesti-kulttuurisesti-ja-katsomuksellisesti-vastuullinen-pedagogiikka/>
- Alisaari, J., & Heikkola, L. M. (2020a). How Finnish teachers understand multilingual learners' language learning. *Apples—Journal of Applied Language Studies*, 14(2), 129–143. <https://doi.org/10.47862/apples.99138>
- Alisaari, J., & Heikkola, L. M. (2020b). Kielellisesti vastuullista pedagogiikkaa ja oppilaan tukemista—Suomalaisten opettajien käsityksen kielen merkityksestä opetuksessa [Linguistically responsive pedagogy and supporting students—Finnish teachers' beliefs regarding the role of language in teaching]. *Kasvatus*, 51(4), 395–408.
- Alisaari, J., Heikkola, L. M., Commins, N., & Acquah, E. O. (2019a). Monolingual practices confronting multilingual realities: Finnish teachers' perceptions of linguistic diversity. *Teaching and Teacher Education*, 80, 48–58. <https://doi.org/10.1016/j.tate.2019.01.003>
- Alisaari, J., Vigren, H., & Mäkelä, M. L. (2019b). Multilingualism as a resource. Policy changes in Finnish education. In S. Hammer, K. M. Viesca, & N. L. Commins (Eds.), *International research on content teachers working with multilingual learners: Policy, perspectives, preparation, and practice* (pp. 29–49). Routledge.
- August, D., & Shanahan, T. (2006). *Developing literacy in second-language learners: Report of the National Literacy Panel on Language Minority Children and Youth*. Lawrence Erlbaum Associates.
- Basturkmen, H., Loewen, S., & Ellis, R. (2004). Teachers' stated beliefs about incidental focus on form and their classroom practices. *Applied Linguistics*, 25(2), 243–272. <https://doi.org/10.1093/applin/25.2.243>
- Beacco, J.-C., Fleming, M., Goullier, F., Thürmann, E., & Vollmer, H. (2015). *The language dimension in all subjects: A handbook for curriculum development and teacher training*. Council of Europe.
- Borg, S. (2006). *Teacher cognition and language education: Research and practice*. Continuum.
- Bunch, G. (2014). The language of ideas and the language of display: Reconceptualizing “academic language” in linguistically diverse classrooms. *International Multilingual Research Journal*, 8(1), 70–86. <https://doi.org/10.1080/19313152.2014.852431>
- Calderon, M., Slavin, R., & Sanchez, M. (2011). Effective instruction for English learners. *The Future of Children*, 21(1), 103–127. <https://doi.org/10.1353/foc.2011.0007>
- Cammarata, L., & Tedick, D. J. (2012). Balancing content and language in instruction: The experience of immersion teachers. *The Modern Language Journal*, 96(2), 251–269. <https://doi.org/10.1111/j.1540-4781.2012.01330.x>
- Coady, M., de Jong, E. J., & Harper, C. (2011). Preservice to practice: Mainstream teacher beliefs of preparation and efficacy with English language learners in the state of Florida. *Bilingual Research Journal*, 34, 223–239.
- Cochran-Smith, M., Ludlow, L., Ell, F., O'Leary, M., & Enterline, S. (2012). Learning to teach social justice as a cross cultural concept: Findings from three countries. *European Journal of Education Research*, 1(2), 171–198. <https://doi.org/10.12973/eu-jer.1.2.171>
- Commins, N. L., & Miramontes, O. B. (2006). Addressing linguistic diversity from the outset. *Journal of Teacher Education*, 57(3), 240–246. <https://doi.org/10.1177/0022487105285591>
- Cummins, J. (2000). *Language, power, and pedagogy: Bilingual children in the crossfire*. Multilingual Matters.
- Cummins, J. (2008). BICS and CALP: Empirical and theoretical status of the distinction. *Encyclopedia of Language and Education*, 2(2), 71–83. https://doi.org/10.1007/978-0-387-30424-3_36
- De Jong, E. J., & Harper, C. A. (2005). Preparing mainstream teachers for English language learners: Is being a good teacher good enough? *Teacher Education Quarterly*, 32(2), 101–124. <https://files.eric.ed.gov/fulltext/EJ795308.pdf>
- De Jong, E. J., Harper, C. A., & Coady, M. R. (2013). Enhanced knowledge and skills for elementary mainstream teachers of English language learners. *Theory into Practice*, 52(2), 89–97. <https://doi.org/10.1080/00405841.2013.770326>
- Faltis, C., Arias, M. B., & Ramírez-Marín, F. (2010). Identifying relevant competencies for secondary teachers of English learners. *Bilingual Research Journal*, 33(3), 307–328. <https://doi.org/10.1080/15235882.2010.529350>
- Fang, S. (1996). A review of research on teacher beliefs and practices. *Educational Researcher*, 38(1), 47–65. <https://doi.org/10.1080/0013188960380104>

- Fang, Z., Schleppegrell, M. J., & Cox, B. (2006). Understanding the language demands of schooling: Nouns in academic registers. *Journal of Literacy Research*, 38(3), 247–273. https://doi.org/10.1207/s15548430jlr3803_1
- Finlex. (1998). *Perusopetuslaki* [Basic education law]. Retrieved March 2020, from <https://www.finlex.fi/fi/laki/ajantasa/1998/19980628>
- García, O., & Wei, L. (2014). *Translanguaging: Language, bilingualism and education*. Palgrave Macmillan.
- Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education*, 53(2), 106–116. <https://doi.org/10.1177/0022487102053002003>
- Gay, G., & Kirkland, K. (2003). Developing cultural critical consciousness and self-reflection in preservice teacher education. *Theory into Practice*, 42(3), 181–187. https://doi.org/10.1207/s15430421tip4203_3
- Gibbons, P. (2002). *Scaffolding language, scaffolding learning: Teaching second language learners in the mainstream classroom*. Heinemann.
- Halliday, M. A. K. (1978). *Language as social semiotic: The social interpretation of language and meaning*. Edward Arnold.
- Hammond, J., & Gibbons, P. (2005). Putting scaffolding to work: The contribution of scaffolding in articulating ESL education. *Prospect*, 20(1), 6–30. http://www.ameprc.mq.edu.au/docs/prospect_journal/volume_20_no_1/20_1_1_Hammond.pdf
- Harju-Luukkainen, H., Nissinen, K., Sulkunen, S., Suni, M., & Vettenranta, J. (2014). *Avaimet osaamisen tulevaisuuteen. Selvitys maahanmuuttajataustaisten nuorten osaamisesta ja siihen liittyvistä taustatekijöistä PISA 2012 -Tutkimuksessa* [Keys to the future of knowledge. A report on the knowledge of young persons with immigrant background and other related factors in the PISA 2012 study]. University of Jyväskylä, Finnish Institute for Educational Research. Retrieved November 2019, from <https://jyx.jyu.fi/dspace/handle/123456789/44290>
- Hutchinson, M. (2013). Bridging the gap: Preservice teachers and their knowledge of working with English language learners. *TESOL Journal*, 4(1), 25–54. <https://doi.org/10.1002/tesj.51>
- Kibler, A. (2010). Writing through two languages: First language expertise in a language minority classroom. *Journal of Second Language Writing*, 19(3), 121–142. <https://doi.org/10.1016/j.jslw.2010.04.001>
- Kumpulainen, T. (2017). *Opettajat ja Rehtorit Suomessa 2016* [Teachers and principals in Finland 2016]. Opetushallitus.
- Kuukka, K., & Metsämuuronen, J. (2016). *Perusopetuksen päättövaiheen suomi toisena kielenä (S2)—oppimäärän oppimistulosten arviointi 2015, Kansallinen koulutuksen arviointikeskus* [The assessment of the basic education in Finnish as a second language 2015]. *Julkaisut*. Kansallinen koulutuksen arviointikeskus [National Assessment Center for Education]. <https://karvi.fi/publication/perusopetuksen-paattovaiheen-suomi-toisena-kielena-s2-oppimaaran-oppimistulosten-arviointi-2015/>
- Ladson-Billings, G. (1995a). But that’s just good teaching! The case for culturally relevant pedagogy. *Theory into Practice*, 34(3), 159–165. <https://doi.org/10.1080/00405849509543675>
- Ladson-Billings, G. (1995b). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal*, 32(3), 465–491. <https://doi.org/10.3102/00028312032003465>
- Lee, O., Luykx, A., Buxton, C., & Shaver, A. (2007). The challenge of altering elementary school teachers’ beliefs and practices regarding linguistic and cultural diversity in science instruction. *Journal of Research in Science Teaching*, 44(9), 1269–1291. <https://doi.org/10.1002/tea.20198>
- Leino, K., Ahonen, A. K., Hienonen, N., Hiltunen, J., Lintuvuori, M., Lähteinen, S., Lämsä, J., Nissinen, K., Nissinen, V., Puhakka, E., Pulkkinen, J., Rautopuro, J., Sirén, M., Vainikainen, M.-P., & Vettenranta, J. (2019). *PISA 18 ensituloksia* [First results of PISA 18]. Opetus- ja kulttuuriministeriön julkaisu. Retrieved November 2019, from <http://urn.fi/URN:978-952-263-678-2>
- Lucas, T., & Grinberg, J. (2008). Responding to the linguistic reality of mainstream classrooms: Preparing all teachers to teach English language learners. In M. Cochran-Smith, S. Feiman-Nemser, & H. McIntyre (Eds.), *Handbook of research on teacher education* (3rd ed., pp. 606–636). Erlbaum.
- Lucas, T., Strom, K., Bratkovich, M., & Wnuk, J. (2018). Inservice preparation for mainstream teachers of English language learners: A review of the empirical literature. *The Educational Forum*, 82(2), 156–173. <https://doi.org/10.1080/00131725.2018.1420852>
- Lucas, T., & Villegas, A. M. (2010). The missing piece in teacher education: The preparation of linguistically responsive teachers. *Yearbook of the National Society for the Study of Education (Teachers College, Columbia University)*, 109(2), 297–318.
- Lucas, T., & Villegas, A. M. (2011). A framework for preparing linguistically responsive teachers. In T. Lucas (Ed.), *Teacher preparation for linguistically diverse classrooms: A resource for teacher educators* (pp. 55–72). Routledge.
- Lucas, T., & Villegas, A. M. (2013). Preparing linguistically responsive teachers’ education: Laying the foundation in preservice teacher education. *Theory into Practice*, 52(2), 98–109. <https://doi.org/10.1080/00405841.2013.770327>
- Lucas, T., Villegas, A. M., & Freedson-Gonzalez, M. (2008). Linguistically responsive teacher education: Preparing classroom teachers to teach English language learners. *Journal of Teacher Education*, 59(4), 361–373. <https://doi.org/10.1177/0022487108322110>
- Madom, S., Jussim, L., & Eccles, J. (1997). In search of the powerful self-fulfilling prophecy. *Journal of Personality and Social Psychology*, 72(4), 791–809. <https://doi.org/10.1037/0022-3514.72.4.791>

- Milbourn, T., Viesca, K. M., and Leech, N. (2017). *Measuring linguistically responsive teaching: First results*. Presented at The American Educational Research Association annual meeting. San Antonio, TX, United States.
- Miramontes, O. B., Nadeau, A., & Commins, N. L. (2013). *Restructuring schools for linguistic diversity: Linking decision making to effective programs* (2nd ed.). Teachers College Press.
- Moll, L. C., Amanti, C., Neff, D., & Gonzalez, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory into Practice*, 31(2), 132–141. <https://doi.org/10.1080/00405849209543534>
- National Agency of Education. (2014). *Finnish Core Curriculum*. Retrieved November 2019, from http://www.oph.fi/saadokset_ja_ohjeet/opetusuunnitelmien_ja_tutkintojen_perusteet/perusopetus
- Negueruela-Azarola, E. (2011). Beliefs as conceptualizing activity: A dialectical approach for the second language classroom. *System*, 39(3), 359–369. <http://dx.doi.org/10.1016/j.system.2011.07.008>
- Nespor, J. (1987). The role of beliefs in the practice of teaching. *Journal of Curriculum Studies*, 19(4), 317–328. <https://doi.org/10.1080/0022027870190403>
- Nieto, S., & Bode, P. (2011). *Affirming diversity: The sociopolitical context of multicultural education* (6th ed.). Allyn & Bacon.
- OECD. (2015). *PISA in focus: Can the performance gap between immigrant and non immigrant students be closed?* Retrieved November 2019, from www.oecd-ilibrary.org/education/cantheperformance-gap-between-immigrant-and-nonimmigrant-students-be-closed_5jrxqs8mv327-en
- Osborne, A. B. (1996). Practice into theory into practice: Culturally relevant pedagogy for students we have marginalized and normalized. *Anthropology & Education Quarterly*, 27(3), 285–314. <https://doi.org/10.1525/aeq.1996.27.3.04x0351m>
- Peltoniemi, A. (2015). *Kansainvälinen näkökulma kielikylpyopetukseen: Seminaariraportti* [An international perspective on immersion education: A seminar report]. Publications, statements, and reports by the University of Vaasa. University of Vaasa. https://www.uvasa.fi/materiaali/pdf/isbn_978-952-476-601-2.pdf
- Postholm, M. B. (2012). Teachers' professional development: A theoretical review. *Educational Research*, 54(4), 405–429. <https://doi.org/10.1080/00131881.2012.734725>
- Rodriguez, D., Manner, J., & Darcy, S. (2010). Evolution of teacher perceptions regarding effective instruction for English language learners. *Journal of Hispanic Higher Education*, 9(2), 130–144. <https://doi.org/10.1177/1538192709359423>
- Schleppegrell, M. J. (2002). Linguistic features of the language of schooling. *Linguistics and Education*, 12(4), 431–459. [https://doi.org/10.1016/S0898-5898\(01\)00073-0](https://doi.org/10.1016/S0898-5898(01)00073-0)
- Schleppegrell, M. J., Achugar, M., & Oteiza, T. (2004). The grammar of history: Enhancing content-based instruction through a functional focus on language. *TESOL Quarterly: A Journal for Teachers of English to Speakers of Other Languages and of Standard English as a Second Dialect*, 38(1), 67–93. <https://doi.org/10.2307/3588259>
- Sierens, S., Frijns, C., Van Gorp, K., Seru, L., & Van Avermaet, P. (2018). The effects of raising language awareness in mainstream and language classrooms: A literature review (1995–2013). In C. Hélot, C. Frijns, S. Sierens, & K. Gorp (Eds.), *Language awareness in multilingual classrooms in Europe* (pp. 21–85). De Gruyter.
- Statistics Finland. (2019). *Opettajat* [Teachers]. Retrieved March 2019, from <https://stat.fi/>
- Teemant, A. (2018). Sociocultural theory as everyday practice: The challenge of PK-12 teacher preparation for multilingual and multicultural learners. In J. P. Lantolf, M. E. Poehner, & M. Swain (Eds.), *The Routledge handbook of sociocultural theory and second language development* (pp. 529–550). Routledge.
- Téllez, K., & Waxman, H. C. (2006). *Preparing quality educators for English language learners: Research, policies and practices*. Erlbaum Associates.
- Valdes, G. (2010). Between support and marginalization: The development of academic language in linguistic minority children. *International Journal of Bilingual Education and Bilingualism*, 7(2–3), 102–132. <https://doi.org/10.1080/13670050408667804>
- Van Lier, L. (2000). From input to affordance: Social-interactive learning from an ecological perspective. In J. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 245–260). Oxford University Press.
- Vigren, H., Alisaari, J., Heikkola, L. M., Acquah, E. O., & Commins, N. (in press). *Teaching migrant students: Attitudes and beliefs of Finnish school teachers* [Manuscript submitted for publication]. *Teacher and Teacher Education*.
- Villegas, A. M. (2016). Introduction to “Preparation and development of mainstream teachers for today’s linguistically diverse classrooms.” *The Educational Forum*, 82(2), 131–137. <https://doi.org/10.1080/00131725.2018.1420848>
- Villegas, A. M., & Lucas, T. (2007). The culturally responsive teacher. *Educational Leadership*, 64(6), 28–33. <http://rbteach.com/sites/default/files/villegas.pdf>
- Villegas, T., SaizDeLaMora, K., Martin, A. D., & Mills, T. (2016). Preparing future mainstream teachers to teach English language learners: A review of the empirical literature. *The Educational Forum*, 82(2), 138–155. <https://doi.org/10.1080/00131725.2018.1420850>
- Vipunen. (2020a). *Perusopetuksen 1–6 luokilla suomea tai ruotsia toisena kielenä opiskelleet* [Students studying Finnish or Swedish as a second language in basic education classes 1–6]. Education Statistics Finland. Retrieved March 17, 2020 from <https://vipunen.fi/en-gb/>

Vipunen. (2020b). *Henkilöstö* [Personnel]. Education Statistics Finland. Retrieved August 31, 2020 from <https://vipunen.fi/en-gb>

Vygotsky, L. (1978). Interaction between learning and development. *Readings on the Development of Children*, 23(3), 34–41. https://innovation.umn.edu/igdi/wp-content/uploads/sites/37/2018/08/Interaction_Between_Learning_and_Development.pdf

Vygotsky, L. S. (1987). Thinking and speech. In R. W. Rieber and A. S. Carton (Eds.), *The collected works of L. S. Vygotsky (Vol. 1), Problems of general psychology* (pp. 39–285). Plenum Press. (Original Work Published 1934).

Wiltse, L. (2015). Not just “sunny days”: Aboriginal students connect out-of-school literacy resources with school literacy practices. *Literacy*, 49(2), 60–68. <https://doi.org/10.1111/lit.12036>

Wong Fillmore, L., & Snow, C. E. (2018). What teachers need to know about language. In C. Temple Adger, C. E. Snow, & D. Christian (Eds.), *What teachers need to know about language* (2nd ed., pp. 8–51). Multilingual Matters.

Yoon, B. (2008). Uninvited guests: The influence of teachers’ roles and pedagogies on the positioning of English language learners in the regular classroom. *American Educational Research Journal*, 45(2), 495–522. <https://doi.org/10.3102/0002831208316200>

Youngs, C. S., & Youngs, G. A. (2001). Predictors of mainstream teachers’ attitudes toward ESL students. *TESOL Quarterly*, 35(1), 97–120. <https://doi.org/10.2307/3587861>

Appendix A. Correlation matrix of all 21 statements

Correlation Matrix																					
Correlatic	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	1	0.451	0.324	0.065	0.112	-0.052	0.222	0.214	0.245	0.157	0.234	0.195	0.088	0.131	0.239	0.139	0.307	0.26	0.444	0.324	0.146
2	0.451	1	0.214	0.16	0.24	0.075	0.181	0.161	0.176	0.247	0.202	0.153	0.097	0.079	0.173	0.186	0.323	0.206	0.329	0.316	0.175
3	0.324	0.214	1	0.531	0.367	0.183	0.301	0.318	0.314	0.2	0.359	0.325	0.3	0.297	0.292	0.276	0.238	0.291	0.219	0.36	0.281
4	0.065	0.16	0.531	1	0.575	0.397	0.455	0.419	0.446	0.289	0.521	0.456	0.397	0.389	0.409	0.423	0.187	0.357	0.107	0.265	0.394
5	0.112	0.24	0.367	0.575	1	0.478	0.526	0.513	0.46	0.363	0.519	0.491	0.428	0.449	0.371	0.534	0.228	0.435	0.164	0.194	0.38
6	-0.052	0.075	0.183	0.397	0.478	1	0.335	0.332	0.309	0.294	0.358	0.32	0.245	0.264	0.196	0.344	0.094	0.243	0.03	0.113	0.348
7	0.222	0.181	0.301	0.455	0.526	0.335	1	0.625	0.723	0.395	0.606	0.58	0.379	0.494	0.505	0.413	0.258	0.586	0.26	0.195	0.444
8	0.214	0.161	0.318	0.419	0.513	0.332	0.625	1	0.698	0.385	0.628	0.597	0.5	0.555	0.526	0.462	0.298	0.547	0.252	0.193	0.433
9	0.245	0.176	0.314	0.446	0.46	0.309	0.723	0.698	1	0.412	0.65	0.595	0.438	0.532	0.626	0.347	0.288	0.697	0.335	0.188	0.412
10	0.157	0.247	0.2	0.289	0.363	0.294	0.395	0.385	0.412	1	0.484	0.402	0.21	0.309	0.31	0.317	0.256	0.412	0.279	0.25	0.371
11	0.234	0.202	0.359	0.521	0.519	0.358	0.606	0.638	0.65	0.484	1	0.652	0.425	0.529	0.559	0.381	0.275	0.621	0.259	0.386	0.551
12	0.195	0.153	0.325	0.456	0.491	0.32	0.58	0.597	0.595	0.402	0.652	1	0.614	0.717	0.506	0.397	0.255	0.526	0.252	0.236	0.403
13	0.088	0.097	0.3	0.397	0.428	0.245	0.379	0.5	0.438	0.21	0.425	0.614	1	0.754	0.4	0.326	0.15	0.392	0.106	0.155	0.274
14	0.131	0.079	0.297	0.389	0.449	0.264	0.494	0.555	0.532	0.309	0.529	0.717	0.754	1	0.506	0.318	0.18	0.522	0.156	0.137	0.292
15	0.239	0.173	0.292	0.409	0.371	0.196	0.505	0.526	0.626	0.31	0.559	0.506	0.4	0.506	1	0.206	0.214	0.621	0.261	0.219	0.343
16	0.139	0.186	0.276	0.423	0.534	0.344	0.413	0.462	0.347	0.317	0.381	0.397	0.326	0.318	0.206	1	0.326	0.251	0.201	0.268	0.369
17	0.307	0.323	0.238	0.387	0.228	0.094	0.258	0.296	0.288	0.256	0.275	0.255	0.15	0.18	0.214	0.326	1	0.276	0.586	0.398	0.21
18	0.26	0.206	0.291	0.357	0.435	0.243	0.586	0.547	0.697	0.412	0.621	0.526	0.392	0.522	0.621	0.251	0.276	1	0.35	0.209	0.362
19	0.444	0.329	0.219	0.107	0.164	0.03	0.26	0.252	0.335	0.279	0.259	0.252	0.106	0.156	0.261	0.201	0.586	0.35	1	0.449	0.159
20	0.324	0.316	0.36	0.265	0.194	0.113	0.195	0.193	0.188	0.25	0.386	0.236	0.155	0.137	0.219	0.268	0.398	0.209	0.449	1	0.357
21	0.146	0.175	0.281	0.384	0.38	0.348	0.444	0.433	0.412	0.371	0.551	0.403	0.274	0.292	0.343	0.369	0.21	0.362	0.159	0.357	1

Appendix B. Rotated factor analysis

Statement	Factor 1 — Awareness of linguistic demands (5)	Factor 2 — Linguistic scaffolding (4)	Factor 3 — Extralinguistic & visual scaffolding (5)	Factor 4 - Explicit attention to language (3)
1. In a typical week, I use visual cues and extra-linguistic supports.			.562	
2. In a typical week, I use graphic organizers.			.486	
3. In a typical week, I create opportunities for my students to experience hands-on activities.		.409	.306	
4. In a typical week, I assess LCDSs' learning through hands-on activities.		.655		
5. In a typical week, I give LCDSs' highlighted texts to signal important information.		.659		
6. In a typical week, I translate key concepts into the students' home language.		.550		
7. I take my LCDSs' Finnish proficiency levels into account when designing assignments.	.659	.398		
8. In a typical week, when I speak, I pause for longer periods of time to give LCDSs time to form responses.	.597	.391		
9. In a typical week, when I grade assessments, I think about ways that language may impact my understanding of my LCDSs' responses.	.818			
10. In a typical week, I allow students to use bilingual or online dictionaries or search the meanings of the words with picture search tools online.	.342	.330		
11. In a typical week, I take my LCDSs' prior knowledge and experiences into account in my teaching.	.560	.477		
12. In a typical week, I explicitly draw LCDSs' attention to Finnish grammatical structures while teaching.	.460	.365		.543
13. In a typical week, I automatically correct my LCDSs' speech when they make Finnish language mistakes.				.720
14. In a typical week, I automatically correct my LCDSs' writing when they make Finnish language mistakes.	.389			.827
15. In a typical week, I create opportunities for my LCDSs to interact with native Finnish speakers.	.610			
16. In a typical week, I modify written texts to reduce readability demands.		.570		
17. In a typical week, I put directions on blackboard or on paper regarding how students can proceed with their assignments.			.645	
18. I encourage my LCDSs to ask me questions about unclear issues during tests.	.695			
19. In a typical week, I give both oral and written instructions.			.758	
20. In a typical week, I am able to use the interests of my students to make learning meaningful for them.			.594	
21. In a typical week, I find topics that relate to my LCDSs' cultural backgrounds.	.310	.492		