

# Exploring language skills and well-being in inclusive preschools

The impact of a dialogic reading intervention

Rasmus Riad





# Exploring language skills and well-being in inclusive preschools

## The impact of a dialogic reading intervention

Rasmus Riad

Academic dissertation for the Degree of Doctor of Philosophy in Special Education at Stockholm University to be publicly defended on Tuesday 7 May 2024 at 10.00 in Lärosal 7, hus 1, våning 2, Albano, Albanovägen 28.

### Abstract

Language skills during the preschool years are important for cognitive and social development, learning, and well-being, especially for children that are less proficient in the language that peers and teachers use for communication and teaching, known as the majority language. The overall aim of this thesis is to explore the effect of a practice-embedded introduction of dialogic reading in preschool, a method that engages children in conversation, using language-promoting strategies. Teachers performed dialogic reading for 85 five-year-old children in preschools. Children's linguistic progress was observed, while also recording their self-reported state of well-being. Based on the theme of language and well-being in early education, three studies were conducted.

In Study I, a British well-being measure for young students, "How I Feel About My School (HIFAMS)," was translated, validated, and assessed for psychometric properties. In total,  $N = 228$  children self-reported their well-being in early education. Study I included a combined sample of school-aged children ( $n = 143$ ) and a preschool sample ( $n = 85$ ), where the latter also participated in Study II and Study III. Study I confirmed a one-factor structure of HIFAMS in a confirmatory factor analysis with good model fit. The results showed that the HIFAMS can be used in Sweden to measure child well-being in preschool and early school years.

In Study II, structural equation modeling was used to examine the relationship between language skills and self-reported well-being among preschoolers ( $N = 85$ ). The assessment of language skills comprised both narrative and vocabulary abilities, while well-being was measured by HIFAMS. Language background (home language exposure) and gender were examined in relation to language abilities and well-being. Study II discovered no association between language skills and well-being. Children with a non-Swedish language use at home (additional language learners) displayed similar narrative skills but had less vocabulary. The results of Study II align with previous research, highlighting the significance of extensive language exposure for children whose home language differs from the language encountered in preschool.

In Study III, language development and child well-being were analyzed after a dialogic reading intervention. Ten preschool teachers delivered the intervention in small groups (four to eight children). The teachers performed the dialogic reading during two periods, and the children at each preschool were randomized to attend direct (group A) or delayed intervention (group B). The outcome measures were the same as in Study II and assessed pre-, mid-, and post-intervention. Study III showed that children improved their language skills after engaging in a dialogic reading intervention, with improvements regardless of language background. The well-being remained steady during the course of the trial.

Taken together, the results of these three studies indicate that language development in terms of vocabulary can be promoted by dialogic reading, and children that are additional language learners show a similar progression as their peers. Furthermore, these studies show that self-reported well-being can be measured in the early education context and that children's self-perceived well-being in preschool was not associated with early language skills. The implications of these studies and the significance of the results for educational practice are addressed.

**Keywords:** *dialogic reading, language development, early childhood education, child well-being, vocabulary, narrative skills, professional development, universal intervention.*

Stockholm 2024

<http://urn.kb.se/resolve?urn=urn:nbn:se:su:diva-227565>

ISBN 978-91-8014-725-5  
ISBN 978-91-8014-726-2



Stockholm  
University

Department of Special Education

Stockholm University, 106 91 Stockholm



EXPLORING LANGUAGE SKILLS AND WELL-BEING IN INCLUSIVE  
PRESCHOOLS

Rasmus Riad





Stockholm  
University

# Exploring language skills and well-being in inclusive preschools

The impact of a dialogic reading intervention

Rasmus Riad

©Rasmus Riad, Stockholm University 2024

ISBN print 978-91-8014-725-5

ISBN PDF 978-91-8014-726-2

Printed in Sweden by Universitetservice US-AB, Stockholm 2024

# Abstract

Language skills during the preschool years are important for cognitive and social development, learning, and well-being, especially for children that are less proficient in the language that peers and teachers use for communication and teaching, known as the majority language. The overall aim of this thesis is to explore the effect of a practice-embedded introduction of dialogic reading in preschool, a method that engages children in conversation, using language-promoting strategies. Teachers performed dialogic reading for 85 five-year-old children in preschools. Children's linguistic progress was observed, while also recording their self-reported state of well-being. Based on the theme of language and well-being in early education, three studies were conducted.

In Study I, a British well-being measure for young students, "How I Feel About My School (HIFAMS)," was translated, validated, and assessed for psychometric properties. In total,  $N = 228$  children self-reported their well-being in early education. Study I included a combined sample of school-aged children ( $n = 143$ ) and a preschool sample ( $n = 85$ ), where the latter also participated in Study II and Study III. Study I confirmed a one-factor structure of HIFMAS in a confirmatory factor analysis with good model fit. The results showed that the HIFAMS can be used in Sweden to measure child well-being in preschool and early school years.

In Study II, structural equation modeling was used to examine the relationship between language skills and self-reported well-being among preschoolers ( $N = 85$ ). The assessment of language skills comprised both narrative and vocabulary abilities, while well-being was measured by HIFAMS. Language background (home language exposure) and gender were examined in relation to language abilities and well-being. Study II discovered no association between language skills and well-being. Children with a non-Swedish language use at home (additional language learners) displayed similar narrative skills but had less vocabulary. The results of Study II align with previous research, highlighting the significance of extensive language exposure for children whose home language differs from the language encountered in preschool.

In Study III, language development and child well-being were analyzed after a dialogic reading intervention. Ten preschool teachers delivered the intervention in small groups (four to eight children). The teachers performed the dialogic reading during two periods, and the children at each preschool were randomized to attend direct (group A) or delayed intervention (group B). The outcome measures were the same as in Study II and assessed pre-, mid-, and post-intervention. Study III showed that children improved their language skills after engaging in a dialogic reading intervention, with improvements regardless of language background. The well-being remained steady during the course of the trial.

Taken together, the results of these three studies indicate that language development in terms of vocabulary can be promoted by dialogic reading, and children that are additional language learners show a similar progression as their peers. Furthermore, these studies show that self-reported well-being can be measured in the early education context and that children's self-perceived well-being in preschool was not associated with early language skills. The implications of these studies and the significance of the results for educational practice are addressed.

**Keywords: dialogic reading, language development, early childhood education, child well-being, vocabulary, narrative skills, professional development, universal intervention**

# Acknowledgments

As this thesis unfolds, it becomes evident that this work is the outcome of a collaborative effort that would not have been possible without the support of others. All the **teachers'** and **principals'** work, including believing in this project and their warmest welcome during my field visits, is noteworthy. Special thanks are also directed towards the **caregivers** and **children** who attended the project. I also want to express my gratitude to the special education teachers **Birgitta Leyman**, **Camilla Suarez**, and **Lisbet Bäck** for their significant contributions, which included coaching teachers and being part of the research team. Also, big credit to the **research assistants** that supported my data collection; simply put, without this data, it would not have been the same.

Additionally, I would like to express my gratitude to supervisor Professor **Mara Westling Allodi**, co-supervisor Associate Professor **Eva Siljehag**, and co-supervisor Professor **Sven Bölte**, all of whom have provided invaluable guidance throughout my doctoral journey. Eva and Mara have worked together for a long time to enable this project, which I was a part of. Your dedication and perseverance are truly inspiring. Mara, I have really enjoyed my time at the research school, and your creative ways of thinking have been a great source of inspiration for me. Kudos to Eva, for constantly remaining positive and supporting. Sven, you really opened my eyes to 'the name of the game'. All persons encountered and acquainted within the research school of early intervention, chapeau!

Professor **Henrik Danielsson** and Professor **Julie Dockrell**, as well as Docent **Iris-Corinna Schwarz** and Associate Professor **Olof Sandgren**, thank you for the feedback at my 50% and 90% seminars.

As a young scholar, I greatly appreciate the support and encouragement given by Professor Emeritus **Jan-Eric Gustafsson**. Also, I'd like to express my gratitude to Professor **Tatjana von Rosen**, whose contributions were significant to the third article. Thanks for all the advice, encouragement, and support from my fellow PhD students, both current and former, and especially the research school roster who has been on a similar journey but in a different direction.

I am also grateful for **Annika Leback-Butcher's** work and efforts, which helped me when I needed it most and offered me with support in private matters. Also, to my cousin, **Therese Lindeborg**, who created the wonderful cover picture, I am so happy with the result. In addition, I want to thank my loyal friends—**Emil, Filip, Philip, and Viktor**—for simply being there.

My extended family, thanks for guiding me thorough life and academia—**Tomas, Maria and Cilla**. To my sisters **Effie** and **Mimmi**, my **Mother**, and my **Father** (I am still Andersson by heart), thank you for your patience and support, in particular you mom! For my two most precious people in the world **Majken** and **Stella**, it is really beyond words, but I love you.

I dedicate this work to my **Mossi**, who took care of me as a child and actively supported my journey to become interested in books and literacy. I know you would have been proud.

# Context of the thesis

This thesis is a doctoral research project under the Research School in Special Education directed toward Early Interventions in Early Childhood Education (Swedish Research Council 2017-03683). The research school is a collaboration of four universities (Stockholm, Jönköping, Karolinska Institutet and Linköping). The data collection of the thesis is part of the research project: Social Interaction in play time and language activities: early interventions in inclusive Early Childhood Education for children with Special Educational Needs, funded by the Swedish Institute for Educational Research (SKOLFI) (2018-00018). This doctoral project focuses on language development in preschool through dialogic reading. Child well-being in early education is a complement to measuring other aspects of child development. The well-being data for children in school, presented in the first study, is also part of the project “Samspel i Samklang med Elevers Behov,” project number 2018-04012, funded by the Swedish Research Council. The work was also supported by the Filéenska and Lamberg Foundations Grant Su FV-0045-21.

# List of Publications

- I. Riad, R., Allodi, M. W., Siljehag, E., Wikman, C., Ford, T., & Bölte, S. (2021). How I Feel About My School—Adaptation and Validation of an Educational Well-Being Measure among Young Children in Sweden. *International Journal of Environmental Research and Public Health*, 18(10), Article 10. <https://doi.org/10.3390/ijerph18105075>
- II. Riad, R., Allodi, M. W., Siljehag, E., & Bölte, S. (2023). Language skills and well-being in early childhood education and care: A cross-sectional exploration in a Swedish context. *Frontiers in Education*, 8, 963180. <https://doi.org/10.3389/educ.2023.963180>
- III. Riad, R., Allodi, M. W., Siljehag, E., & Bölte, S. (Accepted manuscript). Dialogic Reading in Preschool: A Pragmatic Randomized Trial Enrolling Additional Language Learners.

# Contents

Abstract .....	1
Acknowledgments .....	3
Context of the thesis .....	5
List of Publications .....	6
Contents .....	1
Abbreviations .....	3
Chapter 1: Introduction and aims .....	4
Aims and objectives .....	5
Aims of each study .....	5
Rationale .....	7
Delimitations .....	8
Chapter 2: Background .....	9
Language development .....	9
Vocabulary .....	10
Narrative skills .....	12
Acquisition of more than one language .....	15
Well-being .....	19
Early childhood education .....	22
Professional development .....	25
Reading in preschool .....	27
Dialogic reading .....	29
Summary .....	34
Chapter 3: Theoretical foundation .....	35
Theories of Language development .....	35
Usage-based language development .....	36
Interactionist perspectives on language development .....	36
Cascading effects of development .....	37
Special education .....	38
Early intervention .....	40
Multi-tiered system of support .....	42

Chapter 4: Methodological overview .....	44
Instruments .....	46
Well-being.....	46
Narrative skills .....	46
Vocabulary depth.....	47
Standardized vocabulary .....	48
Pilot testing .....	49
The preschools .....	49
Participants .....	50
Teachers.....	50
Children .....	51
Data collection .....	52
Data analysis .....	52
Missing data and attrition.....	54
Fidelity, validity and reliability.....	54
Ethical considerations .....	55
Description of the work presented in Study III .....	56
Practice-embedded educational research.....	56
Professional development.....	59
The special education teachers .....	60
Switching replications design.....	61
The dialogic reading – the books, target words and local adaptations .....	62
Chapter 5: Results .....	65
Main results of Study I.....	65
Main results of Study II.....	66
Main results of Study III.....	69
Chapter 6: Discussion .....	73
Study I.....	73
Study II.....	74
Study III.....	74
Limitations.....	75
General discussion.....	76
The study design and the measures of change .....	78
Child well-being .....	80
Universal intervention of special education .....	81
Future directions.....	83
Conclusions .....	84
Swedish abstract.....	86
References .....	88

# Abbreviations

BPVS	British Picture Vocabulary Scale
CFA	Confirmatory Factor Analysis
CROWD	Completion, Completion, Recall, Open-ended, Wh-questions, Distancing
EBP	Evidence-based Practice
ECE	Early Childhood Education
HIFAMS	How I Feel About My School
MAIN	Multilingual Assessment Instrument of Narratives
OECD	Organization for Economic Co-operation and Development
PEER	Prompt, Evaluate, Expand, Repeat
SEM	Structural Equation Modeling
SIER	Swedish Institute for Educational Research
SNAE	Swedish National Agency for Education
SSI	Swedish School Inspectorate
SALAR	The Swedish Association of Local Authorities and Regions
UNCRC	United Nations Convention on the Rights of the Child
UNICEF	United Nations Children's Fund

# Chapter 1: Introduction and aims

During early childhood education and all subsequent stages of life, language drives socialization, learning, and thinking. In other words, language has a wide influence on several aspects of life that affect the ability to communicate with others. It is widely acknowledged that language proficiency plays a crucial role in the emotional and behavioral advancement of children (e.g., Girard et al., 2017; Hendry et al., 2016; Rose et al., 2018). Language has also been linked to well-being, especially for children with limited language skills (Law, Charlton, & Asmussen, 2017). In relation to the signs of declining quality in early childhood education, teachers need effective tools and methods to support and understand the development of child language and well-being. Early intervention actions have the potential to support teachers in their practice as well as children's developmental trajectory.

In the current thesis, I will, through practice-embedded research, explore and illuminate the relationship between language skills and the well-being of children aged five, based on a sample with a high proportion of additional language learners. I will explain this link through the three studies. Study I is a validation study in the Swedish context for a measure to assess children's self-reported well-being in a combined preschool and school sample of 228 participants. Study II explores the connection between language and well-being for the preschool sample of 85 children. Language skills are examined by vocabulary breadth and depth and the narrative of telling and comprehension. The relationship between language and well-being is further explored by assessing its relationship with gender and language background. In Study III, the 85 preschool children were cluster randomized to direct or delayed reading intervention, aiming to examine effects on language development with a concomitant assessment of well-being. The intervention conducted in Study III is part of a professional development program under the concept of early intervention within special education. Throughout the thesis and within each study, potential gender differences are examined. Exploring gender and potential differences is motivated by the gender equality goals as stated by the Organization for Economic Co-operation and Development (OECD, 2017b) and United Nations Children's Fund (UNICEF, 2021).

## Aims and objectives

The overall aim of the present thesis was to explore the effect of a language intervention in preschool for children aged five after their teachers had undergone professional development. This general aim stems from challenges in practice, where teachers request effective practices to support language development, particularly for children that learn Swedish as an additional language. Intensive book reading is used as a language intervention in an inclusive preschool setting, where all children attend and can potentially benefit from participation. Guided by principles of sustainability, this introduction to intensive book reading is supported by special education teachers while teachers perform the intervention. The overall aim was in line with an inclusive approach, targeting a universal level of special education support. The exploration of the intervention scope includes both general and targeted aspects of language skills that are part of the intervention and the self-perceived well-being in the preschool environment (See Figure 1 for an overview).

### Aims of each study

#### **Aim of Study I**

Study I, which examined self-reported well-being in the early educational context, aimed to explore how children perceive their preschool environment in terms of well-being from a subjective perspective.

#### **Aim of Study II**

In Study II, regarding the self-reported well-being and language skills in preschool, the purpose was to examine the relationship between language and well-being for a sample with a high concentration of additional language learners. The focus was to examine the influence of language background and gender on language skills and well-being.

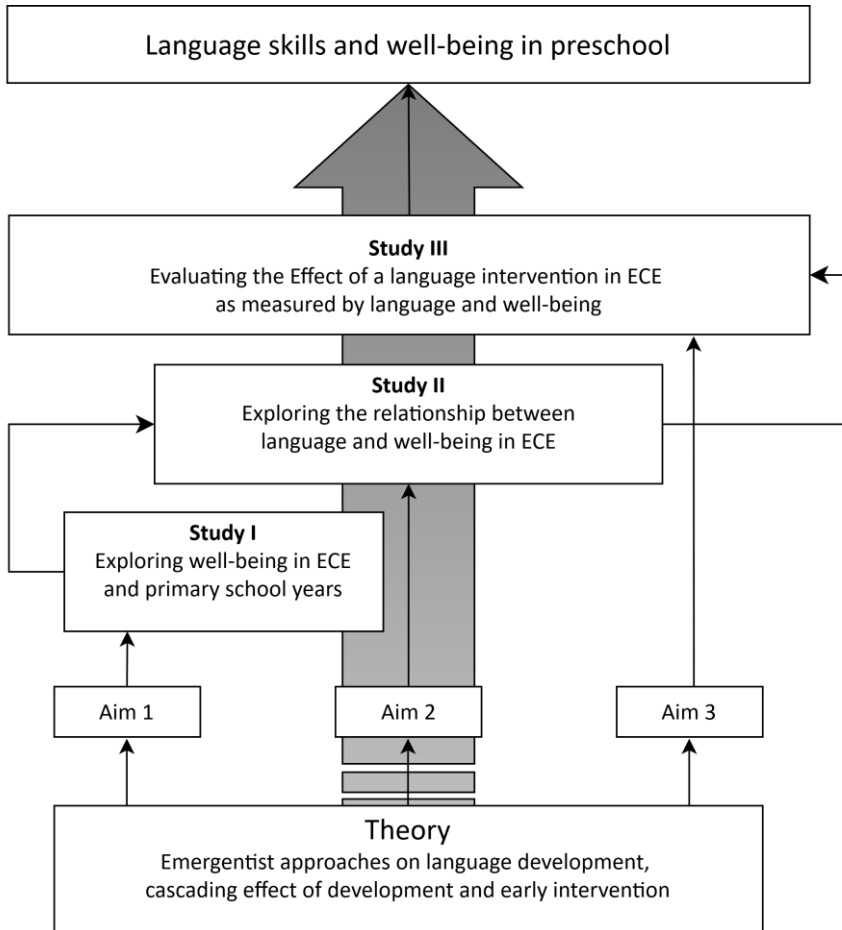
#### **Aim of Study III**

The aim of Study III, concerning early intervention in preschool, was to evaluate the effects of a short, intensive universal language dialogic reading intervention for five-year-old children involving daily picture book reading in small groups, implemented by regular preschool teachers who received professional development prior to the intervention and coaching during it. The effects of the intervention were tested on standardized vocabulary measures,

vocabulary depth, and narrative skills. Another aim was to explore the influence of gender and language background in relation to attending dialogic reading classes.

**Figure 1**

*An overview of the research included in this thesis*



Note. ECE = Early Childhood Education

## Rationale

Early childhood education of high quality has the potential to provide positive long-term outcomes for children, especially those from disadvantaged backgrounds (Heckman, 2006; Sylva et al., 2010; Taguma et al., 2013). And for a long period, Swedish early childhood education has been described as having the highest standards (OECD, 2001, 2015). However, over the last decade, there have been signs of declining preschool education quality and equity in Sweden (SOU, 2020; SSI, 2017, 2018). The identified issues include, but are not limited to: teaching, the absence of systematic evaluations of quality, a lack of everyday methods that are built on empirical and scientific knowledge, and a lack of professional development (SSI, 2018). This inequity is particularly concerning with regard to children that do not encounter the language of instruction at home (i.e. another language use in home than the one used for teaching in school) living in areas of social disadvantage, as they have been found to lag behind already in the second grade of primary school (Fälth et al., 2022). Data suggest that this gap persists during compulsory school, with approximately 40% of children with another first language than Swedish in grades 4 to 9 exhibiting weak reading comprehension compared to their majority speaking peers (Mullis et al., 2023; OECD, 2013, 2019a; Swedish National Agency for Education, 2017). To lessen the early signs of inequity, one possible solution is to improve the quality of early childhood education and equip children with the necessary skills for further academic learning and achievement.

During preschool age, the development of oral language skills is important as it lays the foundation for learning to learn (Eadie, 2022; McKean & Reilly, 2023). Prominent features of an oral language-promoting environment consist of sustained conversation where teachers initiate interaction and prompt more verbal responses from children (Hansen & Broekhuizen, 2021; Hindman et al., 2022; Justice et al., 2018). These practices may occur in shared reading, specifically in dialogic reading (Whitehurst et al., 1988). Dialogic reading is an evidence-based practice that is widely used internationally and to the greatest extent in the USA (Kennedy & McLoughlin, 2023; Pillinger & Vardy, 2022; Towson et al., 2017). Despite being considered an evidence-based practice (What Works Clearinghouse, 2007), there are still several questions that require further exploration and study. One concerns the lack of consistency in the reporting on teacher training and introduction. Regarding teacher training and introduction, few studies have combined all the recommended practices of dialogic reading (Towson et al., 2017). Furthermore, the level of fidelity is

not clearly reported, i.e., to what extent the practices have been carried out as intended. As a result, it is difficult to determine the methods' effectiveness. Another aspect of dialogic reading that requires further investigation is the inconsistent quality of previous studies, which encompass both the design (previous lack of randomized trials) and outcome measures (high concentration on only vocabulary).

Research suggests that intentional teaching targeting specific learning-oriented goals is most effective in developing child language and literacy (Sheridan & Gjems, 2017; Siraj et al., 2023). An engaged teacher creates a supportive learning environment by planning activities with educational intent while taking account of children's interests, experiences, and curiosity. To accomplish this, it is imperative that educators have a thorough understanding of developmentally appropriate teaching strategies that facilitate the achievement of language and learning objectives within the curriculum. (Nasiopoulou et al., 2023).

Promoting children's oral languages in preschool through dialogic reading is important from two perspectives. First, it has the potential to strengthen the oral language skills that will be necessary in the present for socializing and learning, but also from the longer perspective it is important for building a foundation for further development. Second, exploring the introduction of dialogic reading is also beneficial for teachers. Through their exposure to language-enhancing strategies, teachers become informed of the techniques and methodologies necessary for language development. This includes understanding the essence of these practices, how to plan their implementation, and how to execute them effectively. The introduction of dialogic reading in preschool also provides teachers with a tangible example of *teaching*, which is a recent concept in Swedish early childhood education.

## Delimitations

The current thesis has a collective focus on language development and well-being in preschool, meaning that other forms of support are not mutually exclusive in relation to dialogic reading. Thus, special education is presented from the perspective of proactive actions to minimize the need for future support provision. The dialogic reading in this thesis is considered a universal intervention that can be offered to all children, whereas other forms of support can and will be necessary on an individual level.

## Chapter 2: Background

In this chapter, I will define and contextualize key concepts of this thesis, pertinent to understanding its overall composition. The purpose of this section is to build a framework for how inclusive special education in early childhood can be understood. To begin with, language and well-being are described, along with some of their associated aspects in relation to early childhood. Then, I will introduce early childhood education, special education, and the current knowledge about reading in preschool. The final part of this chapter concerns the description of the intervention method that is central to this thesis, dialogic reading. I will also demonstrate how these concepts relate to prior research, and their relationship to the Swedish Education Act, curriculum for the preschool (Lpfö2018), and international assessment from the OECD.

### Language development

Language is a system of communication that is suggested to begin its development even before birth and affects several aspects of our everyday lives. Language permeates human life, from the social realm of establishing friendships to the intricate description of abstract constructs. In other words, language is a system that we use as a tool for communication. The language system can be subdivided into entities of phonology, morphology, semantics, syntax, and pragmatics. All of these components are used in an interplay with the receiver of a communicative intent.

Language development is thought to be the result of an interplay between contextual and genetic components (Bergelson et al., 2023; Dale et al., 2015; Levickis et al., 2023; Pinto et al., 2013; Weisleder & Fernald, 2013). Language development is furthermore linked to socioeconomic background, as measured by parental income and education (Hoff, 2003; Huttenlocher et al., 2010; Janus & Duku, 2007; Lervåg et al., 2019). During the preschool years, language ability seems to be represented by a unitary construct (Hjetland et al.,

2020) that, during school years, may become multidimensional (Foorman et al., 2015; Language and Reading Research Consortium, 2015). We will also, in a coming section, return to language development for children who learn several languages during their lives.

By following language development from an early age to later stages in life, longitudinal research has identified that language development is difficult to predict, at least from the first few years in life. This means that the so-called late talker at the age of two by default cannot be expected to have language difficulties two years later (Law, Charlton, Dockrell, et al., 2017; Rescorla, 2011). Furthermore, it is suggested that the language abilities of children under the age of four are largely influenced by factors that are not subject to modification through training or intervention. These factors include social disadvantage, cultural heritage, and gender (McKean et al., 2015). However, from the age of four, relative language ability, compared to peers, appears to be more stable and to better function as a predictor for the trajectory of language development (Bornstein et al., 2014; Snowling et al., 2016). In addition, it appears that language development can be improved by factors such as exposure to shared reading starting at the age of four (McKean et al., 2015).

As language develops in interaction with others, a language-rich environment at home and preschool has the potential to influence its development (e.g., Hansen & Broekhuizen, 2021; Schmerse et al., 2018). A rich language environment comprises both structural and behavioral components, such as more diverse and complex language output from adults and creating opportunities for children to participate in dialog (Cabell et al., 2015; Justice et al., 2018; Sylva et al., 2010).

Together, these findings concerning environmental impact suggest that language development is malleable during the preschool years and that children are able to benefit from environmental stimuli, such as book reading (Hulme et al., 2020). I will now review concepts that will be utilized in this thesis to monitor language development in early childhood.

## Vocabulary

By the age of five, a child's vocabulary can reach up to 10,000 words. This means that early childhood (i.e., from birth to age five, OECD, 2009) is a crucial period for vocabulary development. Vocabulary acquisition entails associating a label (the word) with a specific meaning, which typically requires multiple exposures. The amount of exposure needed for vocabulary development varies. The cumulative aspect is one factor that contributes to the rapid

development of vocabulary in early childhood. This means that the more words a child knows, the easier it is for them to learn unfamiliar words. However, some studies have shown that children as young as 24 months can learn words from a single exposure, although retention is limited if the word is not repeated (Horst & Samuelson, 2008; Munro et al., 2012). Children appear to implicitly utilize various strategies during vocabulary development, including detecting statistical patterns and making generalizations (Gertner et al., 2006; Srinivasan et al., 2017).

One can further divide the process of vocabulary development into the words that are explicitly learned and the words that one encounters and learns in passing, known as incidental learning (McLeod & McDade, 2011). Although incidental learning happens without specific instruction, it still demands attention, and merely overhearing words may not suffice (Shneidman et al., 2013). Longitudinal data further suggests that decontextualized talk, beyond the here and now, and parental use of sophisticated words are related to early vocabulary development (Anderson et al., 2021; Rowe, 2012).

One way to conceptualize vocabulary knowledge is through aspects of breadth and depth. Breadth corresponds to the number of words in the vocabulary, whereas depth represents the richness of these representations (Hadley & Dickinson, 2020). Vocabulary depth, therefore, adds a conceptual quality to the meaning of a word in the mental lexicon. The assessment of vocabulary skills follows the principles of breadth and depth, with adjustments depending on the child's age. During the early stages of language development, parental reports can be used to approximate the vocabulary breadth of a child (e.g., MacArthur-Bates Communicative Development Inventories, Fenson et al., 2012). This method has proven useful until the age of four in Sweden (Eriksson, 2017). Because of the increasing size of child vocabulary, parental reports have become less accurate, and other forms of formal vocabulary assessment exist. Standardized receptive measures such as the Peabody Picture Vocabulary Test or the British Picture Vocabulary Scale are commonly used to assess vocabulary breadth in children aged three and above, targeting a variety of words they may know at that age (Hoffman et al., 2014). One way to assess vocabulary depth is by having the child define words or respond to yes-or-no questions (Duff, 2019).

Well-developed vocabulary skills during early childhood have been linked to later outcomes, including reading comprehension (Perfetti, 2007) and academic achievement (Bleses et al., 2016). A recent meta-analysis suggests that vocabulary comprehension along with grammar skills comprise a linguistic comprehension construct that contributes to reading comprehension (Hjetland

et al., 2020). In relation to early vocabulary skills and reading development, Stanovich (1986) has popularized the concept of a Matthew-effect, i.e., children with relatively high vocabulary skills acquire the reading competence more quickly and further develop their vocabulary through print exposure. Stanovich (1986) suggests the opposite effect for children with limited vocabulary. Varying progressions of vocabulary development are suggested to be inflated during the school years as the learning progresses from learning to read to the reading to learn state (Buckingham et al., 2013; Dolean et al., 2019). Some studies have observed that girls demonstrate greater vocabulary skills at an early age (Huttenlocher et al., 1991; Rydland & Grøver, 2020), which may be due to greater variability among boys, and these gender differences typically diminish with age (Rinaldi et al., 2023).

One way to organize vocabulary is through a pyramid model within a tiered system (Beck et al., 2013). Tier 1, located at the base of the pyramid, contains basic words that occur in everyday life and rarely require explicit instruction (e.g., hot, cat, door, slow). Tier 2 is at the mid-section, represented by words that more commonly occur in text than in spoken language, e.g., repeat, treatment, exceptional, extend. As Tier 2 words occur less frequently in spoken language compared to Tier 1, they may require explicit instruction. Tier 2 words are domain-general, allowing them to be used in various contexts and demonstrating high usability. At the top of the pyramid is Tier 3, which corresponds to words with unique features, such as reverent, cascade, periscope, and surplus. These Tier 3 words have a specific meaning, often attached to a certain field, practice, or school subject. For the young learner with a need to develop their vocabulary, it is recommended to offer explicit instruction of words that correspond to the second and third tiers (Beck et al., 2013; Zucker, Cabell, & Pico, 2021).

Given its central role during early childhood, the current thesis's studies will cover both aspects of vocabulary breadth and depth.

## Narrative skills

Narrative ability concerns the skills to tell a story in a meaningful format for the listener. This format is achieved by expressing the events and characters in a story so that they make sense, i.e., a new event in the plot hinges on a previous event while also accounting for the listener's perspective. In addition, to be able to tell a story, the narrator must have a basic set of language skills, including vocabulary and syntax (Viberg, 2001). Given this complex nature,

narratives place a great load on cognitive skills, where both perspective-taking, language, and memory are simultaneously allocated (Berman & Slobin, 1994; Boudreau, 2008). A narrative can include the past, present, and future and can describe both fiction and reality. The earliest signs of a narrative are two clauses that are connected with a temporal marker (Labov & Waletzky, 1967) and can be contrasted with a description, where a narrative includes a protagonist, i.e., an agent (Stein & Policastro, 1984). From the age of three to four years, children can produce a narrative based on a pictorial aid, although narratives before age four are often fragmented, meaning that the characters, objects, and actions may be described but not in a stringent fashion. At four to five years, causality markers appear that are used to link different parts of a story and improve cohesion (Lindgren & Vogels, 2018). At ages eight to nine, a complete narrative sequence emerges, in which the telling is more like adult storytelling in terms of organization.

Several different approaches exist to elicit a narrative. As previously mentioned, storytelling can be based on pictures, but it can also be created from personal stories that relate to individual experiences and thus bear resemblance to spontaneous narrative discourse that occurs in everyday conversations (Bliss & McCabe, 2012). In a personal narrative, the narrator is relatively free and can use any type of word or way to present a story. On the other hand, in personal narratives, story generation is more reliant on memory and cognitive structures, i.e., the narrative schema. Another aspect of personal narratives is their limitations in terms of comparability and feasibility for children with language difficulties (Botting, 2002; Wellman et al., 2011). Eliciting narratives from pictures makes story generation more comparable across and between individuals.

Narratives can be viewed as an ecologically valid format for language assessment. Given that storytelling occurs in many cultures and can produce a rich representation of a child's current linguistic abilities. The analysis of narrative ability can concern the examination of tense and cohesive devices, known as microstructure (i.e., specific linguistic level features such as noun phrases, see Justice et al., 2006) and/or the overall organization of the story, known as macrostructure (Heilmann, Miller, & Nockerts, 2010). Typical targets in the analysis of microstructure concern the mean length of utterances, the number of words, the type of words, the number of different words, and syntactic complexity (Gillam et al., 2018; Justice et al., 2006). The macrostructure is possible to analyze through something called story grammar (Bohnacker, 2016). Story grammar serves as a framework for both narrative comprehension and narrative production. The macrostructure is assessed by

the presence of story grammar components that reflect the plot's organization and may include the goal, attempt, and outcome (Berman & Slobin, 1994; Bohnacker, 2016). The goal describes the problem that precedes the action; the attempt is the action taken to battle the problem; and the outcome is the resolution of the problem. This complete structure (goal-attempt-outcome) is an episode and matches the narrative sequence that is manifested for eight to nine-year-old children.

The advantage of studying the macrostructure is that it is thought to be language-independent (Boerma & Blom, 2017; Curen-ton & Justice, 2004); in other words, regardless of language background, the ability to structure the narrative is thought to be universal. Hence, using a narrative assessment of macrostructure instead of solely relying on vocabulary may decrease biases in samples from diverse cultural and linguistic backgrounds (Boerma et al., 2016; Boerma & Blom, 2017). Vocabulary development is dependent on language exposure in that particular language, leading to lower vocabulary skills for children with less language specific exposure. Several measures that target the macrostructure of narrative exist, where the Frog Story (Mayer, 1969) and Renfrew Bus Story (Renfrew, 1997) are most commonly used in research. However, the Frog Story only includes a few items, making it prone to ceiling effects (Fiestas & Peña, 2004; Klop, 2011), and the Bus Story tends to over-identify children with additional language backgrounds (Pankratz et al., 2007). Therefore, other measures may be necessary to capture the early story-telling capacities of the child. For instance, the Narrative Scoring Scheme (Heilmann, Miller, Nockerts, et al., 2010) was originally developed for the Frog story but can be used for any narrative. Another measure is the Multilingual Assessment Instrument for Narratives (MAIN), which originates from a collaboration aiming to improve language assessment for children with more than one language (Gagarina et al., 2012). MAIN aims to overcome some limitations with previous narrative tests by having a scoring structure less prone to ceiling effects and offering multiple episodes (goal-attempt-outcome sequence). MAIN consists of four six-picture stories with two comparable stories in scoring (cat/dog vs. bird/goat). No specific cut-off or criteria are available, but the instrument has been employed as an outcome measure to assess language development after a book-reading intervention in Norway (Grøver et al., 2020). Their results indicated a progression in narrative comprehension skills compared to the control group, whereas narrative telling scores increased in both the control and intervention groups.

No specific cut-off values exist for MAIN, although it has been used in Sweden on both monolingual (Lindgren, 2018, 2019) and bilingual

(Bohnacker, 2016; Lindgren, 2018; Öberg, 2020; Öztekin, 2019) five-year-old samples. Lower socioeconomic status (as measured by parental education) has been associated in one study with lower scores on MAIN (Öztekin, 2019), but most studies in Sweden have included children from relatively high socioeconomic backgrounds. Apart from socioeconomic status, there also seems to be an age effect of MAIN where older children present higher scores, even when only examining studies of five-year-olds. A summary of the previous studies of MAIN in Swedish for five-year-old children has been published in the appendix of Riad et al. (2023) and is presented below (Table 1).

**Table 1**

*Overview of the studies including study design, number of participants, design and data analysis*

Study	SES <sup>1</sup>	Language background	Mean age	N	Telling mean (SD)	Comprehension mean (SD)
Bohnacker, 2016	High	Bilingual (Swe-Eng)	5;4	19	5.7 (1.7)	7.1 (1.8)
Lindgren, 2018b	High	Bilingual (Swe-Ger)	5;5	16	6.20 (1.82)	6.27 (2.71)
Öztekin, 2019 <sup>2</sup>	2/3 Low 1/3 High	Bilingual (Swe-Tur)	5;5	23	4.3 (2.8)	5.3 (2.3)
Lindgren, 2018b	High	Monolingual (Swe)	5;6	24	6.33 (1.97)	6.73 (2.04)
Lindgren, 2019	Mid-high	Monolingual (Swe)	5;10	17	7.4 (2.0)	8.10 (1.6)

*Note.* <sup>1</sup>SES = Socioeconomic status based on United Nations ISCED 2011 classification; <sup>2</sup>This sample is partly reported in Lindgren, 2018b. Swe: Swedish; Eng.: English; Ger: German; Tur: Turkish.

### Acquisition of more than one language

In a global perspective, it is today common to be exposed to several languages during one's childhood, known as being bi- or multilingual (hereafter the term multilingual will be used to describe children with more than one language)(Cenoz & Gorter, 2023). The definition of a multilingual may vary, but

the bottom line is that the person is able to use or understand more than one language in either verbal or written form (Peña et al., 2022). Growing up with several languages means that the child may encounter one language in society or school that can be referred to as the majority language. The majority language is hence of great importance in terms of access and opportunities in life, for instance when the majority language is the language of instruction in education. In contrast to the majority language, the multilingual child also encounters another language in the home setting. A minority language that mostly occurs in the home may contribute to cultural, societal, and generational bonds (De Houwer, 2015). Multilingual children need to build up language systems for all their languages, including grammar, phonology, and vocabulary. In general, the same principle of language development concerning the importance of exposure, also applies to multilingual children (Huttenlocher et al., 1991). Despite the common belief, the early language development of multilingual children is not slower than for monolinguals. Multilingual children seem to produce their first words and combine these in short phrases around the same time as monolinguals, yet this may only occur in one of the languages (Hoff et al., 2012). According to a study by Thordardottir (2019), the amount of language input may be even more important than the timing of introducing the additional language. In practice, this means that the multilingual child benefits from meeting different speakers of the minority language to encounter a rich representation of sentence constructions and vocabulary (Gollan et al., 2015; Velázquez, 2018). Multilingual development seems to begin in the mother's womb, where language exposure may affect a child's predisposition for language development. Byers-Heinlein et al. (2010) showed for instance, that newborn children had equal preference when their mothers spoke two languages during pregnancy. Alternatively, when only exposed to one language during a multilingual mother's pregnancy, the children only preferred that particular language. Hence, early exposure affects the predisposition even before birth. Language development for multilinguals has also been associated with myths, such as the conception that learning an additional language will cause language delay or confusion for the child (Hakuta, 1986). During the last few decades, studies have also examined the potential benefits of developing several languages, such as increased cognitive abilities (Bialystok, 2017; Prior & MacWhinney, 2010). However, a recent large-scale study (Dick et al., 2019) and a meta-analysis (Gunnerud et al., 2020) could only find modest advantages in terms of overall executive functioning for multilinguals compared to monolinguals.

In Sweden, it is difficult to exactly determine the number of speakers of a specific language as this is not part of the official statistics. Yet there is readily available data concerning immigration background. About 38% of children aged 0 to 18 are reported as having an immigrant background, meaning that they either were born in a foreign country or both of the parents were born in another country than Sweden (Statistics Sweden, 2020). Therefore, preschool can be the first context where children with immigrant background encounter the majority language, Swedish. Children with an immigrant background present lower average language skills in the majority language at 15 years of age in the Program for International Student Assessment (PISA) (OECD, 2006; Schnepf, 2007). However, as presented by Agirdag and Vanlaar (2018), this suggested performance gap at 15 years of age is heavily influenced by socio-economic status (SES). When controlled for SES, the gap diminishes or is reduced by half. The study included results from 17 countries in the OECD, including Denmark, Finland, and Germany. For younger students at 10 years of age, the international assessment Progress in International Reading Literacy Study (PIRLS) addresses attitudes toward literacy and reading comprehension. Since the first PIRLS in 2001, both higher and lower performance have decreased in Sweden and in the most recent study in 2021, there were differences related to language background (IEA, 2023). Children coming from homes that always speak the test-language in PIRLS (Swedish) have significantly higher performance compared to students that do not always speak Swedish in the home. Moreover, this significant difference is the second highest among all 24 countries attending PIRLS 2021 (the Swedish National Agency for Education [SNAE], 2023). Although these results are not fine-grained concerning language background, they highlight that we need to investigate the opportunities and conditions for language development within the education system in Sweden.

The language development of multilinguals during early childhood has been studied to some extent in Sweden. For instance, Salameh et al. (2004) followed the grammatical development of 22 Arabic-Swedish-speaking children with and without developmental language disorder over 10 months. They concluded that language development was similar for both groups, yet the development in both languages was slower for children with developmental language disorders. Some studies have also explored the parallel development of two languages (e.g., Bernardini & Schlyter, 2004; Granfeldt, 2000). More recently, Holmström (2015) presented data on vocabulary development for 88 children, aged five to nine year, including monolingual and multilingual (Ar-

abic-Swedish) children with both developmental language disorder and typical language development. The results acknowledged the importance of assessing vocabulary competency in both languages for bilinguals when only vocabulary is used as an outcome measure. In general, previous studies of language development for children with minority language backgrounds in Sweden have been rather small in terms of sample sizes, but as mentioned in the previous section, narrative ability has been examined more closely during the last few years.

However, a recent cohort study in Sweden indicated that students with foreign background (corresponding to that one or two caregivers being born in another country) performed on a par with children from a monolingual background in long-term outcomes, such as university degree or employment (Mood & Jonsson, 2023). Their study further suggested that the lower performance for children with multilingual background in PISA and other international comparisons, can be attributed to immigrant children arriving after the age of 12. Research on immigrant language development suggests that obtaining proficiency to complete lower secondary or secondary levels (ISCED 2 to ICSED 3) takes five to ten years (Hakuta et al., 2000; Thomas & Collier, 2002). In practice, this means that some immigrants will struggle to complete secondary levels of education and will be reliant on adult education to be able to apply to university. Nevertheless, from 2011 onwards Sweden has received an increased amount immigrants, partly due to the civil war in Syria, and by the year 2022, about 20% of the population had immigrated to Sweden during their lifetime (Statistics Sweden, 2022b). We will return to theories of language development in the theory section (Chapter 3), but some important things are necessary to mention at this point. Language development is suggested to be dependent on both linguistic input and opportunities to exercise language skills with a more competent speaker (Hoff, 2006). Having none or few peers that have acquired sufficient language skills may hence affect language development (Oller & Eilers, 2002).

Recent studies of preschool environments also suggest different interaction patterns occur between children than perhaps expected. One recent example is that in some preschools, children have been observed to adopt English as a *lingua franca*, which means they are using a language that none of the children have as their first or native language (Larsson et al., 2022). Although this phenomenon was also present in monolingual environments, the dominance of English was stronger in areas of linguistic diversity. Another language aspect that affects the language environment in preschool concerns what languages should be used and when. As several languages are represented and used

within the preschool group, teachers may be faced with difficulties concerning how to both support the majority language of Swedish, while still supporting the use of the home languages (Puskás & Björk-Willén, 2017a).

With the aforementioned importance of vocabulary skills, having lower language skills from the beginning of education can be considered a risk factor for a range of outcomes, including lower reading comprehension (Lee, 2011; Lervåg & Aukrust, 2010; Quinn et al., 2015) and academic achievement (Bleses et al., 2016). According to the threshold hypothesis put forth by Cummins (1979, 2000), children exposed to two languages will perform on par with their majority-speaking peers once they have mastered the language of instruction. This hypothesis has also been confirmed in a large-scale study of 17,000 English speakers (Ardasheva et al., 2012). In sum, early language skills seem to be crucial at the beginning of education for all children and in particular for multilinguals.

### **Additional language learner**

In the current thesis, the term ‘additional language learner’ will be used, which is comparable to the term ‘English as an additional language’ (Strand & Hessel, 2018; UK, Department of Education, 2020). ‘Additional language learner’ refers to children coming from a home where none of the caregivers have Swedish as their native language, and hence the children encounter Swedish as an additional language in preschool. In the current thesis, the additional language learners will be contrasted against their peers at preschool that have at least one caregiver who speaks Swedish as a native language. Children with one caregiver having Swedish as a native language therefore include children that are monolingual but also multilingual. The term ‘additional language learner’ in this thesis is used to distinguish them from children with at least one caregiver who is a native speaker of Swedish.

## **Well-being**

In a historical context, the United Nations Convention on the Rights of the Child ([UNCRC], United Nations, 1989) can be viewed as the impetus for an increased focus on child well-being during the last three decades (Ben-Arieh, 2008). Several countries, including Sweden, have both ratified the UNCRC and adopted its statutes in national legislation (Lundy et al., 2012; Swedish Parliament, 2018). The UNCRC positions children as citizens with their own

rights. For instance, they have a right to be involved in decisions that concern them. The UNCRC states that governments must provide children with education (article 28) and teach children about health and well-being (article 24) (United Nations, 1989). Thus, well-being and its importance for children are underscored by policy and legislation. But apart from national interest, the primary wish of caregivers is typically their child's well-being (Seligman et al., 2009). Given its prominent position as caregivers' main priority and its status in policy, one would expect a consensus on what this well-being refers to.

The concept of well-being is multi-faceted, and one definition is the following: the presence of positive affect and a lack of negative emotions coupled with a perceived satisfaction with one's life (Diener, 1984). In addition, well-being is also related to health, quality of life, and happiness (Ben-Arieh et al., 2014). The World Health Organization further broadens the concept by describing health from a holistic perspective that is shaped by physical, mental and social well-being and not only the absence of sickness (WHO, 2018). This holistic view does not limit well-being to a certain time or place and underscores that multiple experiences shape health and well-being. At the same time, well-being may be affected by context. For instance, well-being can be seen as a balanced state where personal resources match the challenges and demands of life (Dodge et al., 2012).

Well-being is furthermore defined by two distinct perspectives, as happiness and pleasure (hedonic well-being) or as the realization of one's potential (eudaimonic well-being). In the hedonic tradition the state of feeling well and being happy is the goal in itself, while in the eudaimonic perspective on happiness, well-being is rather a consequence of living in line with one's values (Ryan & Deci, 2001; Waterman et al., 2010). Returning to the measurement of well-being, one can either focus on external (objective) indicators or rely on internal indicators (subjective measures). Objective measures may include maltreatment, environment, and safety, whereas subjective measures focus on how the individual perceives their situation (Voukelatou et al., 2021). A common ground for both the hedonic and eudaimonic perspectives of well-being resides in the primary-perspective, i.e., it can only be based upon personal experiences.

However, subjective measures, where the child rates their own well-being are scarce (Cho & Yu, 2020; Fane et al., 2020; Pollard & Lee, 2003). The lack of self-report measures of child well-being has been attributed to perceptions that children have too limited language or cognitive abilities to evaluate their well-being themselves (Ben-Arieh et al., 2014; Fane et al., 2020). In addition,

some studies have indicated that children may apply response strategies in well-being assessment, for instance by providing the answer they think is desired by the adult (Borgers et al., 2004; Krosnick, 1991). This has led to reliance on proxy measures, where an adult evaluates the child's well-being (Mashford-Scott et al., 2012). Two difficulties are attached to the proxy measure of child well-being. First, they tend to over-identify boys, with lower well-being and particularly children with externalizing behaviors (Loades & Mastroyannopoulou, 2010; Stensen et al., 2022). This means that the lower well-being of children with internalizing behaviors and girls is at risk of being undiscovered. The second complication with proxy measures concerns the validity problem, i.e., how should one interpret child well-being when the child and adult accounts of child well-being diverge (Axford et al., 2014; Collishaw et al., 2009; Mashford-Scott et al., 2012).

In the emerging field of positive psychology, there is a greater focus on child happiness (Cooke et al., 2016) compared to the previous focus, which was on objective measures such as mere survival (Ben-Arieh, 2008). Positive psychology has a strength-based approach and focuses on factors that contribute to “the good life” in terms of thriving, subjective well-being and happiness (Keyes, 2003). This represents a movement toward positive aspects of life and away from the previous focus on negative features of mental health and infirmity. Through the influence of positive psychology, happiness has been a way to measure and operationalize well-being for young children (Cho & Yu, 2020; Pollard & Lee, 2003). Happiness is an emotion that children usually recognize at age five (Lewis & Michalson, 1983), and has been found to have correlations with various life skills such as prosocial behavior, creativity, problem-solving, and coping (Lewis et al., 2009; Lyubomirsky et al., 2005).

Given that a majority of children within OECD countries attend preschool (OECD, 2022) and spend significant time in this institution, the interest in well-being in an early childhood education context has increased. Some measures have been developed during the last decade that target children's own account of their well-being, particularly in an early childhood education context (Allen et al., 2018; Sandseter & Seland, 2016). To overcome the reliance on proxy measures and potential response strategies, certain adaptations of self-reported well-being for young children are possible. These adaptations include response scales with fewer options and visual aids to improve the accuracy of child questionnaire assessment (de Leeuw et al., 2004; Fane et al., 2020; Montserrat et al., 2021).

### **Competing interests of learning and well-being?**

Along with increased interest in child health and well-being, the relationship between well-being in school contexts has gained attention. Although well-being may not foster learning by itself, it has been described as acting as a positive influence on learning (Hascher, 2008; Shoshani & Slone, 2017). In a meta-analysis of the relationship between well-being and academic performance, a positive association was found (Kaya & Erdem, 2021). In addition, the association between well-being and academic performance seems to decrease with age (Amholt et al., 2020; Kaya & Erdem, 2021). In other words, well-being during the early years of education may be of greater importance for learning and performance. Swedish data indicate that girls tend to report lower well-being in school contexts compared to boys, with a general decreasing trend of well-being over time for all children, based on two cohorts (Klapp et al., 2023). Still, the knowledge about gender differences in well-being in school is inconclusive. Knowledge about child well-being for younger children in Sweden is scarce and not systematically monitored. For instance, the Ombudsman for Children in Sweden conducted a cross-sectional survey of child well-being for 219 five-year-olds (Barnombudsmannen, 2019), and a majority (92%) reported positive feelings in relation to preschool. However, about 25% reported negative feelings upon arrival at preschool. A key foundation for further understanding and supporting child health and well-being in preschool is finding effective measures. A validated measure within the educational setting is advantageous for assessing policy, provisions, and specialized educational interventions. Furthermore, assessing and understanding well-being from a child's point of view is not only part of future well-becoming (Ben-Arieh, 2008) but meaningful in the present to fulfill the standards of the Education Act and legislation. The current thesis aims to further contribute to knowledge about well-being by further exploring how children self-report their well-being in the early stages of education.

### **Early childhood education**

Swedish early childhood education is governed by the Swedish Education Act (2010), with the Curriculum for the Preschool (SNAE, 2019a) providing further guidance on the content. The Swedish preschool is organized by municipalities and available for all children from 12 months, meaning that children with and without special educational needs attend the same groups. The overall aim of preschool is to enable two caregivers to work while being parents

and offer children a universal early intervention (Broman et al., 2015). A typical preschool in Sweden is subdivided into units such as for younger children (one to three years old) or older children (three to five years old) (Williams et al., 2019). Each unit consists of about 15 children, and the staffing ratio is approximately 1:5 (SNAE, 2023a). The physical space of both indoors and outdoors is arranged to foster curiosity and support interaction with peers (Westberg, 2021). The indoor environment does not have any dedicated classrooms but rather smaller rooms for activities, which enable the adults to split the unit into even smaller groups of children, when for instance, having structured activities, such as reading. A fundamental part of Swedish early childhood education is the elevated status of play as a means for development, learning, and well-being (SNAE, 2019a). Yet the word *teaching* [undervisning, in Swedish] emerged in the curriculum in 2011 and several initiatives have been raised to support and strengthen teachers in early childhood education to teach (e.g., Swedish Institute for Educational Research, [SIER] 2019).

Still, the current curriculum describes the child as an agent, and their learning and development should be encouraged by interest and willingness to explore (SNAE, 2019a). This is also reflected in practice, where free play is the most common activity (Coelho et al., 2021). The focus on free play as a means for learning and development is also reported from preschools in Norway, indicating a common ground of values and priorities (Einarsdottir et al., 2015; Storli & Hansen Sandseter, 2019).

Since 2009 it has been possible to establish preschool services that are independent (private), partly commercially driven, and partly subsidized by municipalities, and about 20% of all children attend these preschools (Korpi, 2015). According to the National Agency of Education, there are some structural differences between independent and municipal preschools. For instance, the proportion of qualified teachers is higher in municipal preschools (42%) compared to private preschools (29%) (SNAE, 2020). Early childhood education is a part of the Swedish welfare system, where the fee is subsidized. For instance, when children turn three years old, they are entitled to 15 hours of free early childhood education per week. Comparing Sweden to other OECD countries, the country is in the top five, with the highest expenditure per child on early childhood education (OECD, 2022). The attendance rate for children aged four to five is high, with 95% attending, compared to the OECD average of 87% (OECD, 2022).

In broad terms, Swedish early childhood education is considered of high quality (OECD, 2017a). Yet evaluations show that there is local inconsistency

in terms of preschool quality (Garvis & Lunneblad, 2018; Nasiopoulou et al., 2023; Persson, 2015; Sheridan, 2009; SSI, 2018). Basic concepts to define preschool quality can be derived from structural features and process quality (Slot, 2018). The Structural features refers to current conditions within preschool such as teacher-child ratio or teacher's education. These structural features may have a knock-on effect on the process quality, which include what teachers or children actually do on a daily basis in preschool. The process quality may include interaction patterns between peers and adults and learning opportunities. On a structural level, 25% of the children in preschool are estimated to have a foreign background (SOU, 2020), yet the regional distribution of language background varies, even in each preschool. Due to segregation, some preschools have a high concentration of children with a minority language background whereas others only have Swedish-speaking children. Statistics Sweden also shows that children with a foreign background, have lower attendance rates at preschool (Statistics Sweden, 2022a). Moreover, preschools in segregated areas are reported to have a lower proportion of qualified preschool teachers (Garvis & Lunneblad, 2018), and the teachers in these preschools in general have lower language skills in Swedish (SOU, 2020). As a result, some children may seldom encounter Swedish spoken by a native speaker in an early childhood education context.

On process level of quality, children in Swedish preschool are also reported to mostly talk to a single peer but seldom to a teacher (Åström et al., 2020; Coelho et al., 2021). This indicates that children may encounter a limited amount of linguistic input during a day in preschool, mostly from peers. In these senses, language development is to some extent dependent on the language abilities of that peer. Focusing on opportunities for interaction seem important in preschool environment. According to recent reviews, features of the process quality, such as teacher practices during the preschool day may be more relevant than structural aspects in relation to child outcomes in early childhood education (Hadley et al., 2023; Walker et al., 2020). For instance, Hadley et al. (2022) identified two discrete set of teacher behaviors, that promote child language skills. The first was the use of an Emergent Academic Language register that included a more diverse use of words and talk beyond here and now. The second set of behaviors, Bridge Language, can be summarized as different forms of scaffolding, where the teacher uses different forms of questions and prompts to elicit more verbal interaction from the child. The adult is thereby a communicative bridge between the child's current language competencies and the language practices that will be relevant and used in an

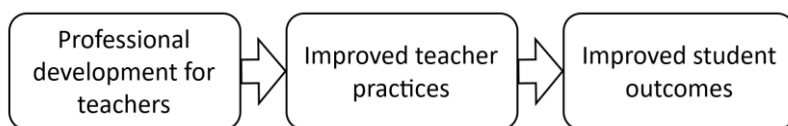
academic context. Suggested approaches of translating these registers in practice, is to offer teachers professional development with a holistic focus, rather than concentration on a discrete set of behaviors (Hadley et al., 2022).

## Professional development

In-service training, or professional development, has the overall aim of improving teacher practice and child outcomes (Dunst, 2015; Snyder et al., 2011). Professional development means that further training is undertaken as part of an additional education that adds to a previous degree to improve professional competency (Bruder, 2016). The rights to professional development in Sweden for preschool teachers are not regulated in any jurisdiction *per se*, but collective bargain deals underscore the importance of quality and development at work (The Swedish Association of Local Authorities and Regions [SALAR], 2022) and the curriculum states that early childhood education should be based on scientific grounds (Skolverket, 2018). In 2011, a specific license for teachers was introduced, but the standards do not mention any obligations or rights to professional development (Swedish Parliament, 2011). Therefore, a great responsibility for professional development is assigned to the principal, who according to the Education Act is responsible for providing teachers with the right preconditions for teaching and education (Swedish Education Act (2010:800), 2010). According to international comparison, the amount of professional development in Sweden is comparatively low, as measured by the Teaching and Learning International Survey (TALIS) (OECD, 2019b).

### Figure 2

*Theory of change for professional development, inspired by Bruder, 2016*



To achieve a high quality of early childhood education, particular efforts have been made to improve teacher practices in Sweden. This can be interpreted as a response to the aforementioned inconsistencies in terms of preschool quality (Garvis & Lunneblad, 2018; SNAE, 2012, 2017; SSI, 2018). Several state-

governed initiatives have been launched, such as Collaboration for School Improvement (Swedish Department of Education, 2015), and professional development programs (SNAE, 2021) and courses (SNAE, n.d.) arranged and funded by the Swedish National Agency for Education. However, recent evaluations have shown modest to negative outcomes for children when primary school teachers were involved in professional development (e.g., Lindvall et al., 2023). This problem can also be described as the research-to-practice gap and the known difficulties of implementing new practices (Cook & Odom, 2013; Odom, 2009).

Effective and sustainable professional development may be composed of several features, i.e., structures to transfer the theory into practice. In turn, children and students benefit from the new teacher practices (see Figure 2), and continue to do so after the researchers leave the site (Størksen et al., 2021). The work of improving knowledge to gain improved practice is thus a process rather than something obtained at a specific time-point or by a single action (Durlak & DuPre, 2008; Ogden & Fixsen, 2014). During this process, a comprehensive effort is needed where the whole organization is involved, from principals and potential stakeholders, to practitioners (Bleses et al., 2023; Metz & Bartley, 2012).

A suggested structure for high-quality implementation has been offered in terms of professional development programs (e.g., Dunst, 2015). To accomplish a sustainable change of practice, Dunst (2015) suggests a model of facilitators including, improved knowledge base, opportunities to practice knowledge in an ecologically valid context, discussing experiences with others, receiving feedback from a mentor or coach, receiving continuous feedback from the coach, and distributing the practice of the newly acquired skills. In preschool, professional development focused on language and literacy was, according to meta-analysis, more effective with a longer duration of up to one year (Brunsek et al., 2020). Moreover, the same study indicated that closely aligned measures that mirrored the professional development content, and included coaching, provided higher effect sizes for language and literacy. The importance of coaching has also been corroborated by a meta-analysis, where the coach observes the professional and provides feedback to improve professional practice (Kraft et al., 2018). The coaching should preferably include a repeated cycle of observation, feedback and practice (Kraft et al., 2018; Sims & Fletcher-Wood, 2021; Størksen et al., 2021).

## Reading in preschool

The motive for reading to children and its connection to language development is widely researched, with known links to expressive and receptive language (Dowdall et al., 2020; Fitton et al., 2018) and cognitive development such as theory of mind (Grøver et al., 2020; Martucci, 2016; Smadja et al., 2021). Furthermore, reading aloud is part of the Swedish national curriculum (SNAE, 2019a) and specifically endorsed as a language developing practice for children with minority language backgrounds (Puskás & Björk-Willén, 2017b). The quality of reading aloud can be interpreted by both studying teacher and child interaction as well as monitoring language and literacy outcomes (Pentimonti et al., 2021; Weadman et al., 2023).

Over the past decade, there has been an increased focus on preschool reading behavior and its quality in Sweden. In general terms, preschool teachers acknowledge the importance of reading both as a measure for language development as well as for world learning, i.e., concept development (Alatalo et al., 2023). Reading activities also seem to occur in preschool on a regular basis.

Yet the purpose and quality of shared reading in early childhood education may vary. For instance, book reading may not be part of a language-promoting strategy but rather a part of children's daily rest (reading rest) or to solve organizational strain, i.e., that reading occurs so staff can have their breaks or prepare other activities (Damber, 2015). Furthermore, teachers report that they do not have sufficient time for planning shared reading as part of a systematic strategy to promote language development (Norling, 2014). Another suggested barrier to the limited quality of reading in preschool is related to knowledge and competency (Alatalo & Westlund, 2021). A general shortcoming concerning literacy practices in Swedish early childhood education has also been reflected in a recent observational study, where accessibility to books as well as reading practices varied (Dahlström et al., 2023). To summarize, book reading in Swedish preschool occurs frequently, but it seems unstructured and not planned in a way to optimize language development. The identified barriers concern both a lack of practical knowledge of how to best stimulate language, and organizational matters that hinder planning and performing reading in small groups. The state-governed initiative to improve literacy (SNAE, 2021) included reading in preschool with professional development. However, the impact of the initiative has not been evaluated yet.

Some advantages of structured and *repeated* reading concern cognitive processing. Horst (2015) exemplifies this by describing the total novelty for children during the first reading of a book. Vocabulary, story plot, characters,

rhyme, and perspective (first or third person) are all content information that children need to comprehend and familiarize themselves with. As these aspects become known, cognitive capacity can be freed and devoted to more complex details in the story, allowing them to relate the content to their own experiences (Horst, 2015). When children are familiar with the story, this may also be associated with a sense of competency, where the child can respond, provide feedback, and predict what is coming next. Story competency may foster engagement in story reading (Rodriguez Leon & Payler, 2021) that leads to extended conversation, which is known to foster language development (Cohrssen et al., 2016; Walsh & Hodge, 2018). In particular, the extra-textual talk, i.e., when teachers and children engage in dialog beyond the text, seems beneficial (Blewitt & Langan, 2016; Dickinson et al., 2014). The extra-textual talk involves asking children questions that elicit more responses as well as scaffolding the understanding of the story by discussing the story plot, story events, and specific vocabulary (Pentimonti et al., 2021). More specifically, Grøver et al. (2022) found that teachers more often provided word explanations, used more complex language i.e., increased the number of multi-clause utterances, and increased the number of different words they used after attending professional development with a focus on extra-textual strategies during shared reading.

The reading in preschool can either be conducted in a whole group or with a smaller group of three to six children. The advantages of reading in small groups are related to both the engagement in the book reading as well as social aspects related to attending a social context with fewer participants. Attending small group literacy activities has also been suggested to influence other aspects. For instance, West et al. (2022) reported improved attention and behavior regulation, such as waiting patiently for one's turn, after four to five-year-old children attended a small group literacy intervention. Particularly interesting was that they could not observe a mediating effect of language, where the increased language skills could not explain the behavioral or cognitive improvement. Small group activities seem, in other words, to be beneficial in terms of linguistic exposure but consequently also yield positive outcomes for children. Recent meta-analysis additionally supports the small group format for language intervention, as studies organized with small groups (fewer than 10 children) reported higher effect sizes (Rogde et al., 2019). Due to limitations in the reported data, the meta-analysis could not present any sub-analysis concerning children with second language backgrounds. However, language activities in small groups can be favorable for children with a second language

background, as the teacher can potentially assist their participation in conversation with peers (Åström & Almqvist, 2022; Lepola et al., 2022). Moreover, small group readings can make second language learners more inclined to talk (Neu, 2013), as small group activities such as reading nurture trustful relationships between peers and adults (Clasen & Jensen de López, 2017; Gillanders, 2007; Houen et al., 2022; Puskás, 2017).

The particular importance of reading in preschool can also be viewed through a lens of equity, where not all caregivers may have the skills or confidence to perform reading (Mol et al., 2008; Reese, 2012). A Norwegian study reported that 33% of caregivers never read to their children during the past week (Stangeland et al., 2023). In Sweden, according to a study by Legilexi (2019), 57% of caregivers reported reading to their children aged 0 to four on a daily basis. This percentage is lower compared to similar public polls conducted in 2003 and 2014, where 74% of caregivers reported daily reading to their children aged 0 to 9. Some studies have examined potential barriers and facilitators of parental shared reading, specifically in socioeconomically disadvantaged neighborhoods (Celik et al., 2023; Hume et al., 2015; Preece & Levy, 2018). As described in Celik et al. (2023), parents and caregivers are aware of the importance of reading, but other factors affect the frequency. On one hand, lack of time and perceived child disinterest in reading are described as obstacles. On the other hand, perceived child enjoyment in reading was described as a facilitator for performing shared reading (Preece & Levy, 2018). It is also suggested that caregivers who do not enjoy book reading themselves are less likely to read (Grolig, 2020; Neuman et al., 2018). However, Hume et al. (2015) showed that literacy exposure improved child reading interest, despite low initial curiosity. This indicates that enjoyment and interest can be the result of repeated exposure to books and reading. Given the high attendance rates in Swedish early childhood education, offering reading in preschool can not only boost the child's language but foster an interest in reading, thereby removing one potential obstacle for parental reading, and increasing the total literacy exposure.

## Dialogic reading

Dialogic reading is a specific form of shared reading that aims to develop the child's language by eliciting conversation between the child and adult (Whitehurst et al., 1988). It differs from other forms of shared reading, as it is more scripted and includes the systematic framework of PEER and CROWD (Towson et al., 2017). The PEER and CROWD mnemonics represent the desired

verbal prompts that the adult uses to create engagement and dialog (Whitehurst et al., 1994). The PEER mnemonic outlines the adult actions of Prompting, Evaluating, Expanding, and Repeating and mirrors the interaction with children. Prompting is represented by the second acronym CROWD and underscores that the adult is the communicative bridge that may (if needed) ignite discussion. Evaluating can be described as an action where the adult affirms that he or she has heard what the child says and rephrases the information. Evaluation goes together with the Expansion, where the adults add information to the response that the child has provided. So if the child's response is two words, then the adults mirror that with a three- or four-word sentence (Whitehurst et al., 1994). Repeating refers to the adult asking the child to repeat a word or piece of information from the book with their own words.

The CROWD acronym represents different types of questions. Completion queries aim to close a sentence, while Recall prompts recollection of details. Open-ended questions encourage discussion about the story or the central vocabulary. Meanwhile, “Wh-questions” concern topics such as what, when, where, who, and why. Distancing questions aid in contextualizing the content or topics of the book, prompting reflection on personal experiences (Whitehurst et al., 1994). One distinctive feature of dialogic reading, apart from the framework of PEER and CROWD, is the practice of repeated readings of the same book. The repeated reading is further subdivided into three stages. During the first few readings of the book, the children will establish a general understanding of the story (Flynn, 2011). Then, in the second and third stages, more advanced prompts (Open-ended, Wh-questions, and Distancing) are gradually included. These prompts not only reflect the content of the book but also encourage personal reflection from children. Hence, the dialogic reading is built upon progression, where the acquired story knowledge and vocabulary will be used to elaborate and extend the conversation.

An appropriate book for dialogic reading should contain a moderate amount of textual content and have rich, vivid images that inspire discussion (Flynn, 2011). If there is too much text, the reading may take too long and strain the child's attention span and thus limit the possibilities for interaction. Recent study that focused on verbal interaction during reading, suggested that books at medium difficulty resulted in more advanced questions from teachers and elicited most child participation (Nicolopoulou et al., 2023). When selecting books for dialogic reading, they should be determined in relation to the targeted sample and could include analysis of syntactic complexity (Zhao et al., 2022) or instances of perspective shifts (Nicolopoulou et al., 2023).

The procedure of dialogic reading may also involve target words that the adult explicitly explains to children. These targeted words should be central to the story and match a tier-2 or tier-3 level, i.e., words that can be used in several contexts and that more commonly occur in written than spoken language (Beck et al., 2013; Zucker, Cabell, & Pico, 2021).

The studied outcomes of dialogic reading concern oral language skills in general and vocabulary in particular (Flack et al., 2018; Pillinger & Vardy, 2022; Wasik et al., 2016). The vocabulary measures have included both standardized tests of breadth as well as study-specific measures of depth. The tests of depth have in several cases been taught in the intervention and thereby offer a near measure, offering a more sensitive way to capture vocabulary development (Hadley & Dickinson, 2020). The reported effect size from studies performed in small groups with the teacher as the implementer of reading, ranges from 0.21 to 0.41 (Cohen's *d*) concerning standardized vocabulary, and 0.3 for standardized measures (Wasik et al., 2016). But important aspects to consider in terms of study-specific or near measures are the composition of words, for instance, nouns are thought to be easier to learn (Byrnes & Wasik, 2019; Fenson et al., 1994). In addition, only examining the effect size may mask the practical utility of the result (Wasik et al., 2016). For instance, an effect size of 0.66 (Cohen's *d*) corresponds to learning one out of 10 words, and this outcome needs to be compared to time invested and alternative activities.

Apart from vocabulary, dialogic reading may have a positive impact on other language skills such as narrative ability (Grolig et al., 2020; Lever & Sénéchal, 2011; Reese et al., 2010) and grammar or phonological skills (Mol et al., 2009; Swanson et al., 2011; Trivette & Dunst, 2007). Recent studies of dialogic reading have also included non-linguistic measures and have suggested a positive influence on cognitive measures such as attention (Vally et al., 2015) and cognitive control (Twait et al., 2019). These cognitive outcomes measures are in line with a recent neuroscience study indicating increased activity in cortical areas associated with executive functioning, complex language, and socioemotional processing, for children attending high-quality shared reading classes (Hutton et al., 2017). In the social domain, dialogic reading has also been reported to increase socioemotional skills of engagement and enjoyment for the child (Fleury et al., 2014; Pillinger & Wood, 2014), reduce stress for parents, and can create stronger bonds between children and adults (Canfield et al., 2020; Ganotice et al., 2017; Jimenez et al., 2019).

The pre-intervention training for teachers engaged in dialogic reading has historically varied, ranging from 0 to 15 sessions, with each session lasting 15

to 90 minutes (Towson et al., 2017). The number of reading sessions performed during intervention and their respective lengths have also differed, ranging from two weeks up to one year, with each reading session lasting between five and 20 minutes (Pillinger & Vardy, 2022). Given this variability, it is not possible to conclude on an optimal dosage or training related to dialogic reading. However, for children with developmental language disorder, six readings of the same book, with six receptions of a target word at each reading have been suggested as the optimal dosage (Storkel et al., 2017, 2019). The modal dosage reported is nevertheless five to 15 minutes of reading, delivered daily over six weeks (Pillinger & Vardy, 2022).

A recent review has highlighted four areas that have received limited attention in relation to shared reading. These include child outcomes in grammar, narrative, socioemotional or socio-cognitive skills, and world knowledge (Grøver et al., 2023). Although both narrative abilities and socioemotional skills were studied, the respective studies used different outcomes, making comparisons inconclusive. Both grammar and narrative abilities can be described as more complex language measures compared to vocabulary, that may have better predictive value, such as for future reading performance (National Early Literacy Panel [NELP], 2008). World knowledge is closely tied to language experiences, where book reading offers a medium to interpret and gain knowledge about the world and develop vocabulary. In other words, the books in shared reading are relevant to consider in light of what they offer in terms of world knowledge (Snow, 2017).

Dialogic reading is an evidenced-based practice (What Works Clearinghouse, 2007) that corresponds to both Tier-1 and Tier-2 in the Multi-Tiered Systems of Support prevention model, meaning that it is suitable as a universal and extended activity (Wackerle-Hollman et al., 2021). In some studies, dialogic reading has been implemented as tier-1 instruction (for all children) complemented by extended individual, or small group activity (e.g., Rogde et al., 2016; Zucker, Cabell, Petscher, et al., 2021).

During the last decade, dialogic reading or similar semi-structured shared reading have been researched in the Nordic countries. A central theme for all these studies is a general focus on a) introducing the practice of dialogic reading in early childhood education, and b) doing so with particular attention to implementation aspects. For instance, coaches have been engaged to support the introduction of dialogic reading practices to maintain a high degree of fidelity. These coaches have been part of the research team with on-site visits, and offered four to eight coaching sessions (Grøver et al., 2020; Lepola et al., 2022). Another approach has been to follow-up on the implementation by

phone (Rogde et al., 2016). The pre-intervention training for teachers has not been clearly reported but ranges from a single-day workshop to two days (Grøver et al., 2020).

Previous Nordic studies have, to a large extent used structural equation modeling (SEM) to examine the language development of children after shared reading. In SEM, a theoretical model is suggested and is subsequently analyzed against the data-set based on variance and covariance matrices. The outcome provides an estimate of how well the suggested model is represented in the data-set, through fit indices. Using SEM, Grøver et al. (2020), found a treatment effect of shared reading in taught/targeted vocabulary ( $d = 0.66, p < .001$ ), perspective-taking skills ( $d = 0.41, p < .001$ ) and grammar ( $d = 0.31, p < .007$ ). Moreover, Rogde et al. (2016) reported in their SEM study a significant effect on taught/targeted vocabulary ( $d = 0.55, p = .001$ ) and the standardized expressive measure ( $d = 0.55, p = .000$ ). None of these studies reported a significant effect on standardized expressive vocabulary (such as BPVS). However, Hagen et al., (2017), (which was a scale-up study from Rogde et al., 2016) found significant effects on language measures after dialogic reading ( $d = 0.56^{***}$ ), including standardized vocabulary, and for outcomes targeted within the intervention ( $d = 0.66$ ). It should be noted that all of these studies involved an intensity of book reading of three times a week, while the Rogde and Grøver studies were comparable in length (16 vs. 18 weeks respectively), and the intervention in Hagen progressed over 30 weeks. A sustained shared reading intervention appears to impact both targeted language measures and distal language outcomes that are not specifically targeted. Stretching over a longer intervention period of 7 months, Grøver et al. (2022) showed that teachers that were subject to professional development improved their communicative pattern during shared reading. Teacher talk improved their diversity of word types, use of word explanations, and ratio of multi-clause utterances, where the latter was associated with increased child vocabulary skills. This can also be considered in light of the results from Lepola et al. (2022), where they describe that it took almost two years of teacher training and coaching to achieve a general high quality in teachers' readings. Based on the Nordic studies, how a more intensive delivery format can affect child outcomes is still unknown. Further examination of the aspects of introducing the dialogic reading practice should also consider more extensive coaching and whether this coaching is organized in-house by the respective early childhood education entities themselves.

## Summary

Language skills are crucial during early childhood for effective communication with peers and adults. In other words, language skills can impact social aspects of life, such as friendships and well-being. During preschool age, children establish fundamental language skills that contribute to their learning and development. Well-being from a child's perspective is scarcely researched, but the topic has received increased attention during the last three decades through the Convention on the Rights of the Child. Positive feelings in school may act as a bias for learning, and some studies indicate that children with lower language skills have a lower degree of well-being. Early language development depends on both language use and interaction with more proficient speakers. Rich language encounters during preschool are crucial for children who have limited exposure to the majority language used in preschool. One way to support language development is through book reading, particularly when adults interact with children through questions and encouragement. Planned reading, including deliberate book selection and questioning, can be even more effective for stimulating language development. However, book reading in Swedish preschools is infrequent and lacks a structured approach. Preschool teachers report that the quality of reading sessions with children could be improved by focusing on language development and allowing sufficient time for planning and organization. One effective method to promote oral language skills is dialogic reading, which involves engaging children in conversation during the reading process. Due to its focus on language development, dialogic reading can be viewed as part of a universal intervention that benefits all children and ensures high quality in preschool. Introducing new practices in preschool requires a scaffolding structure so that professional development can lead to sustainable change of practice. To evaluate language development effectively, the assessment must include several measures of different language domains. Including multiple language measures is particularly important when assessing a sample of children with diverse language backgrounds, when it is only possible to assess one language.

# Chapter 3: Theoretical foundation

This chapter will cover the theoretical underpinnings that together shape the body of research that is the foundation that this thesis depends on. First, I will introduce language development and how social contexts are intertwined. This will be achieved by describing the usage-based and interactionist perspectives on language development. Then I will address the common ground between language skills and well-being by describing the cascading effects of development. Finally, I will connect the language development theories with dialogic reading, which is the pinnacle of this thesis.

## Theories of Language development

A typically developing child acquires language seemingly without any effort during childhood. However, no unifying theory has been put forward that fully explains the process of language development. A helpful way to conceptualize language is through a view of a system with a particular set of rules that one has to acquire. In broad terms, language development can be understood as part of an innate ability that is independent from exposure. Another contrasting view claims that language development is related to aspects of use and exposure (emergentist approaches) described in interactionist or usage-based perspectives. Together, the emergentist approaches adhere to the idea that language development is the result of generalizations from language exposure rather than emerging from an independent predisposition. Central to the emergentist theories of language development is the combination of input and interaction that together shape and contribute to language development (Lieven, 2019). I will now describe the usage-based and interactionist perspectives on language development. These are chosen due to their connection to the framework of dialogic reading and the social aspects that connect language and well-being.

## Usage-based language development

According to the usage-based theory of language development, two particular sets of skills shape early language development: intention-reading and pattern-finding (Tomasello, 2003). Intention-reading concerns the ability to understand how language is used (pragmatics) and, more specifically, to share attention with others and comprehend their actions of communication. Intention-reading skills emerge at the age of nine to 12 months. The second set of skills, pattern-finding, concern the ability to conceptualize categories of objects and events into meaningful sequences (Tomasello, 2003). A limited ability to implicitly learn these patterns has been suggested as an explanation for developmental language disorder (Plante & Gómez, 2018; Ullman & Pierpont, 2005), although this is still debated (Conway et al., 2019; West et al., 2018). Based on pattern-finding, the child extracts linguistic patterns from language output, and this happens implicitly, i.e., without any specific explanation. The typical language development, (regardless of the underlying acquisition mechanism) is dependent on input. This is seen in several aspects of language (e.g., grammar and semantics) and is claimed to be important for both first language learners (Ambridge et al., 2015) and second language learners (Ellis et al., 2016).

## Interactionist perspectives on language development

Rooted in the sociocultural perspectives of human development, the interactionist perspective on language development has similarities with the aforementioned usage-based theory. From an interactionist point of view, language development is dependent on interaction, particularly with more competent others (Vygotsky, 1978). This interaction comprises dialogs, conversations, and interactions with more language-competent peers or adults. This interaction in language learning is conceptualized in the proximal zone of development. Within this proximal zone, a more language-competent person can offer the language learner a challenge that is just beyond their current competence (Siraj-Blatchford, 2009). Theoretically, this challenge contributes to the development of language skills beyond their current level. A central aspect is for the competent person to offer enough support and scaffold the language learner to an extent where the challenge is optimal. Too much challenge or lack of scaffolding, and the learner cannot benefit from teaching, it is too difficult. When there is a lack of challenge, the language learner will only be faced with content already mastered, and no progression will occur. This also means that cognitive and linguistic development alter the proximal zone, as

competence increases. The interactionist perspective also positions language development within a cultural context, meaning that how language is used and by whom shape its growth.

### Cascading effects of development

The concept of cascading effects of development refers to the relationships between different developmental domains such as language development and social capabilities. By influencing and producing changes in a domain with an early intervention in one domain, changes within the same or another domain can emerge (Masten & Cicchetti, 2010). This ripple effect can be applied to the concepts of language and well-being. Advances in language skills may affect well-being. A cascading effect within the language domain has been described in relation to language-promoting practices. Through programs such as Hanen (Manolson, 1992) caregivers are instructed to change their communicative interaction with their child to boost language development. Such programs target caregivers for children who are identified as late-talkers. These supporting language practices are based on following child interest to promote sustained back-and-forth dialog, deliberately increasing the response to child communication, and limiting adult talk and directive questions (Suttora et al., 2021). These language-promoting strategies can be seen as a conceptualization of the interactionist perspective on language development that leads to improved language skills for the child.

### **The connection between well-being and language**

In the context of early childhood, language has been described as an indicator of well-being (Law, Charlton, & Asmussen, 2017). Limited language skills may, in other words, influence life, to an extent that they affect children's happiness. One example is the known connection between language skills and externalizing behavior (hyperactivity or aggression) (Bornstein et al., 2013). When language skills increase, externalizing behaviors decrease (Brownlie et al., 2004; Van Daal et al., 2007). Children with developmental language disorder experience challenges in socializing with their peers due to their limited communication skills (Brinton et al., 2004; Conti-Ramsden et al., 2013; Lloyd-Esenkaya et al., 2020). In addition to impacting child well-being during early life stages, children diagnosed with developmental language disorder have an increased risk of reduced well-being as adolescents and adults (Law et al., 2009; Schoon et al., 2010).

Apart from language disabilities, children with restricted language skills in terms of second language learners may also be at risk for lower well-being.

This conclusion comes from mainly two lines of research; one that can focus on child well-being and social competencies in relation to language skills (Collins et al., 2011; Jurkic et al., 2023; Pistella et al., 2020; von Grünigen et al., 2012), and another focusing on how multilinguals use their language in relation to family and society (De Houwer, 2015, 2017). For instance, children with an immigrant background may have a higher risk of being bullied by peers (Pistella et al., 2020; von Grünigen et al., 2012). In relation to language usage, De Houwer underscores the importance of providing young multilinguals with a harmonious language development for their well-being. This harmony is offered when children and their families can use their minority language without meeting obstacles in contact with the surrounding society that uses the majority language. This view is also supported by research pointing to higher well-being for children that are exposed to their minority language in different settings (Sun, 2019). Moreover, it seems that multilinguals with proficiency in both of their languages display signs of higher well-being (Müller et al., 2020). Through the OECD (2020), early childhood education has been suggested as an important arena for promoting both language and well-being. The link between well-being and learning behaviors has been suggested by exploratory studies (e.g., Shoshani & Slone, 2017b), yet how language skills may vary in relation to well-being is an area that requires further research.

## Special education

Special education is a multi-professional field of practice and research and can occur at several stages of life, from birth to adulthood. A central theme in special education concerns the conditions for learning, participation, and development. As this theme exists in several contexts, the field is not limited to the education setting. For instance, special education is used in early interventions for children born pre-term in the form of guided practices for caregivers (Baraldi et al., 2020) or may concern the conditions for participation in society for persons with intellectual disability (Huus et al., 2021). In addition, special education is more than just focusing on the individual and includes group, environmental, and organizational aspects such as the social climate in the classroom (Allodi, 2010) or environmental adaptations necessary to meet the needs of persons with autism (Bejnö et al., 2019). Given these various contexts, special education is dependent on a multitude of perspectives to under-

stand human conditions for learning and development. The multiple perspectives derive from learning theories (e.g., sociocultural), neuroscience, sociology etc. (Odom, 2016). For all these different contexts and theories to unite, Skrtic, (1995) stated that special education needs a critical pragmatism i.e., that different perspectives and professions are needed to reach the ultimate goal of supporting the person in need. In practice, this means that disability can be simultaneously understood in a medical model as well as from contextual factors i.e., a social construction.

In a historical view, education and special education have faced criticism for not providing the answers needed for either policy-makers or practitioners (see Pring, 2000). However, during the last 25 years, significant changes have occurred in the field of special education. These changes concern new perspectives such as inclusive education, advancements in education technology, and a greater focus on evidence-based practices. A starting point of a new era can be traced to both the introduction of the United Nation's standard for persons with disabilities (UN, 1993) and The Individuals with Disabilities Education Act (Individuals with Disabilities Act, 2004) in the U.S. Jointly they have contributed to moving special education from a model that endorsed segregated provision for students with disabilities, to one that encourages inclusive practices within the general education setting (Florian, 2014).

The new era of special education that has a focus on all students, not only those with disability, poses new questions from the practitioners' point of view (Florian, 2014). In an inclusive agenda, where all students are to be offered high-quality education within the regular classroom, teachers need to be equipped with adequate competency and skills (Haug, 2017; Shepherd et al., 2016). To meet this demand for increased competency, the field of educational research also needs to adjust its methods. Snow (2015), outlines the new movement of educational research, and the way forward to meet the demands from teachers. One of the key principles in the new movement is the shift from theoretically motivated lines of research to instead direct research by the "problems of practice". This is a fundamental game-changer given that research has previously been to some extent guided by its own questions. In the USA, Snow (2015) identified the instigation of the Strategic Education Research Partnership by the National Research Council as the starting point in 2003. Thereafter, several projects followed, based on practice-embedded research questions and resulting in more ecologically valid results for teachers. Through a partnership between research and practice, the practice defines the most urgent problems, whereas academia contributes with the most scientifically sound ways to examine or solve the problems (Donovan et al., 2013).

Apart from defining the questions of urgency, teachers should also be the agents, i.e., implementers of the new practices (Snow, 2015).

In Sweden, a similar trend can be observed from governmental initiative of ULF (Government Office, 2017), endorsing collaboration between schools and academia, leading to the establishment of the Swedish Institute for Educational Research in 2015 (SIER, 2020). It is essential to understand the definition and purpose of this new direction. An explanation of the term ‘practice-embedded research’ in Sweden is offered in the report “Joint research” (SOU 2018:19), stating that research should aim to develop educational practice, that in turn will lead to higher standards, in line with evidence-based practices. Therefore, there is a drive to enhance practice, preferably through rigorous scientific validation.

Until this point, special education has not been explicitly defined but in the coming subsection I will use two concepts to explain special education within the current thesis. From the aforementioned new era of special education, the Multi-Tiered Systems of Support has contributed to the development of special education (e.g., Hemmeter et al., 2016; Pentimonti et al., 2017; Sandall, 2019). The Multi-Tiered Systems of Support is a framework that outlines how to address children with special educational needs and can be seen as an understanding of inclusive practices and early intervention. I will first describe early intervention and then return to the Multi-Tiered Systems of Support.

## Early intervention

The concept of early intervention originated from an American context (Pool et al., 2008) and may refer to either preventative or compensatory measures (Vik & Hausstätter, 2014). The preventative intervention targets a broad population, known as universal programs, for children with known at-risk status for developmental difficulties or disadvantaged backgrounds (e.g., socioeconomically). The compensatory intervention is reactive, meaning that it is initiated as soon as any difficulties are discovered. Hence, early intervention includes a broad population, with or without specific diagnoses, and children coming from a disadvantaged background.

Both preventative and compensatory interventions are typically delivered before formal school begins i.e., from birth until the age of five (Shonkoff & Meisels, 2000). In economic models by Heckman (2006) it is argued that the cost-benefit justifies early societal investments: By early intervention, the trajectory of development can be improved. The most radical opposite could be described as a “wait and see” approach, leading to late intervention, with less

return of interest and at a higher cost (Heckman, 2006). From a child's point of view, late intervention also means that the children must fail substantially, which may affect their attitude toward school and learning (Gersten & Keating, 1987; Reschly, 2010; UK Department for Education, 2021)

The importance of early intervention is also established within the Nordic countries (Broman et al., 2015; Vik & Hausstätter, 2014) and although these nations have more comprehensive societal investments during early childhood compared to the USA, the Heckman effect of early intervention is still observable (see Rosholm et al., 2021). In policy, early intervention has gained increased attention during the last decade and has broad support in both the Nordic Welfare Center (Marklund et al., 2012; Nordic Welfare Center, 2020), Nordic Council of Ministers (Dánielsdóttir & Ingudóttir, 2022) as well as from Swedish national agencies (e.g., Swedish Agency for Health Technology Assessment and Assessment of Social Services, 2022; The National Agency for Special Needs Education and Schools, 2023; The Public Health Agency of Sweden, 2020).

Concerning the research field, Educational science and Pedagogy in several universities have had a tradition of qualitative methods (Broman et al., 2015), and compared to other Scandinavian countries, Sweden has conducted a limited number of Randomized Controlled Trials (Pontoppidan et al., 2018). Hence international methods and intervention programs that are established as evidence-based practices have rarely been conducted in a Swedish education setting with a high degree of control (Frankenberg et al., 2019). Pontoppidan et al., (2018) suggests that Sweden has historically been lacking in governmental initiatives that support both early intervention and randomized trials, compared to other Scandinavian countries. Nevertheless, an increasing number of randomized controlled trials of early intervention have been conducted in the Swedish education setting (e.g., Eninger et al., 2021; Fridell et al., 2023; Lindström-Sandahl et al., 2023; Nordström et al., 2019; Wolff & Gustafsson, 2022).

Although part of structured programs, early interventions that target literacy and language are designed to reflect everyday interaction between child and adult. A systematic review (Greenwood et al., 2020), summarized as follows:

For example, most interventions aimed at improving child communication and language learning outcomes are based on naturalistic conversation models that emphasize using the child's interest and initiations as opportunities to model and prompt language use during and across daily contexts. (p.231)

Thus, early language interventions support the intentions outlined in the national curriculum, i.e., that adults should encourage child curiosity and interest. Broström (2017) actually suggests that this is the way forward, namely to embed learning (teaching) in play or playful activities. Core values to guide this embedded learning are to create activities of *interaction*, *communication* and that children perceive these as *meaningful* (Broström, 2017).

When introducing new practices through early intervention, these methods need to align with teacher perspectives and offer a sound balance between flexibility and fit (Blases et al., 2018; Harn et al., 2013), i.e., flexibility as in opportunities for teachers to adapt the intervention to meet local conditions, and fit as in providing enough fidelity to actually offer the essence of the intervention. One way to improve the fidelity is to introduce self-monitoring components as part of the intervention (Scheibel et al., 2023). By targeting specific goals or actions, the receiver of a professional development is hence required to reflect upon their practice and levels of achievement. Pairing early intervention with sufficient implementation is more likely to lead to child improvement (Størksen et al., 2021). Moreover, well-implemented studies have also been associated with higher gains for children (Hulme et al., 2020). We will now turn to a model of support that can organize how early intervention is delivered.

## Multi-tiered system of support

The Multi-Tiered Systems of Support framework provides a service delivery structure for providing support with special education needs. It offers a comprehensive perspective on the child and learning environment, including not only the socioemotional aspects of the child but also teachers' professional development. The main goal of the Multi-Tiered Systems of Support is to provide all children with high-quality education, thereby reducing the need for special education (Wackerle-Hollman et al., 2021). As a visual representation of the Multi-Tiered Systems of Support framework, four pillars can represent its foundational structure (Schaffer, 2023). These four include, screening, data-based decision-making, progress monitoring and a multilevel prevention system.

The multilevel prevention system comprises evidence-based interventions that in turn can be delivered at multiple levels. This part of the Multi-Tiered Systems of Support aligns with the response-to-intervention framework, where support is organized by distinctive levels such as building blocks (Sandall, 2019) or by a three-level pyramid (Fox et al., 2010). According to the

pyramid structure, the foundation is the Tier-1 that corresponds to a universal level of support for all students (Schaffer, 2023). The Tier-1 in the Multi-Tiered Systems of Support presumes a high quality of instruction and teaching provided by skilled staff. When children do not meet the expected development after attending Tier-1 instruction, the Tier-2 follows. At this second level, some children (approximately 15%) receive additional support that serves as a complement to the Tier-1 instruction. The Tier-2 support is often delivered in a small group, offering extended instructions that enable more tailored support. The top level of this prevention system is the Tier-3, comprising individualized and intensive support for a relatively small proportion of children (approximately 5%). Tier-1 typically involves a contact with a specialist such as a Speech-language Pathologist (see, Lindsay et al., 2012).

However, there are some considerations attached to implementing the Multi-Tiered Systems of Support. For instance, there is a scarcity of measures that preschool professionals can use for screening and progress monitoring (Wackerle-Hollman et al., 2021). One reason for this lack of screening materials is the relative recency of the Multi-tiered system of support in early education, where this model has been more used and researched at the school-age level (Odom & Fetting, 2013).

According to recent review, the tier-1 level of language intervention in preschool setting may need further examination with particular focus on teacher training and addressing more culturally and linguistically diverse samples (Walker et al., 2020). Yet some interventions with tiered instruction are advocated by the U.S. department of education (What Works Clearinghouse) such as dialogic reading for language development (Whitehurst et al., 1988) and Building Blocks for math (Clements & Sarama, 2011).

## Chapter 4: Methodological overview

The current chapter will provide a description of the employed methods to fulfill the aims that were presented at the end of the background section.

The research included in this study all involved empirical data. Study I comprised a combined sample of preschool children and children attending the first years of primary education. The participants in Study II comprised only the preschool sample and Study III also included their preschool staff. In Table 1, an overview of all studies is presented, along with their respective sample, study design, and data analysis. The research process included the following stages: (a) identifying the problem(s) of practice and designing a practice-embedded study design (b) obtaining ethical approval and piloting the instruments; (b) recruiting preschools with teachers to attend professional development (c) informing about the research and retrieving consent from participants (d) executing a professional development program (e) conducting the data collection and supporting teachers in executing the intervention. All these stages will be described into more detail during this chapter.

**Table 2**

*Overview of the studies including study design, number of participants, design and data analysis*

Study	Title	Participants	Instrument(s)	Design	Data analysis
I	How I Feel About My School—Adaptation and Validation of an Educational Well-Being Measure among Young Children in Sweden	Children in pre-school and primary years ( $N = 228$ )	HI-FAMS	Cross-sectional evaluation of validity and reliability assessment	Confirmatory factor analysis, Kendall's tau b correlation, internal consistency
II	Language skills and well-being in early childhood education and care: a cross-sectional exploration in a Swedish context	Children ( $N = 85$ )	HI-FAMS, MAIN, Vocabulary Depth, BPVS-II	Cross-sectional analysis of relationship between language skills and well-being, with sub-group analyses for gender and language background	Structural equation modeling, Person correlation, independent samples t-test, invariance test, Monte Carlo simulation of power
III	Dialogic Reading in Preschool: A Pragmatic Randomized Trial Enrolling Additional Language Learners	Children ( $n = 85$ ) teachers ( $n = 10$ )	HI-FAMS, MAIN, Vocabulary Depth, BPVS-II	Randomized experimental study with switching replications	MANOVA, Repeated measures MANOVA, Effect size d Repeated Measures, pooled

*Note.* HIFAMS = How I Feel About My School; MAIN = Multilingual Assessment Instrument for Narratives; BPVS-II = British Picture Vocabulary Scale, second version; MANOVA = Multivariate analysis of variance.

## Instruments

### Well-being

To assess child well-being, we employed a self-report measure. How I Feel About My School (HIFAMS) is a seven-item questionnaire that targets the child's subjective well-being in the school context. The questions concern the well-being related to teacher, peers, classroom, playground, the transition to school, during work, and overall school satisfaction. The responses are provided on a three-level scale of Sad, OK and Happy, coded respectively as 0, 1, and 2 points. The total score ranges from 0 to 14. HIFAMS was originally developed in the UK for children aged four to 12 (Ford, 2013). The validation study of HIFAMS reports modest test-retest reliability over two weeks [Spearman's correlation ( $r_s$ ) = .62; 95% CI: 0.54 - 0.69], and modest internal consistency (Cronbach's alpha  $\alpha$  = .62) (Allen et al., 2018). Furthermore, the study has revealed that girls scored on average 0.37 points higher than boys in the HIFAMS assessment, which was conducted on a sample of 2345 children between the ages of four and eight. A total of 4.9% of the variance was attributed to differences between schools, while the remaining 95.1% was attributed to differences among students within schools. Concerning face validity, children with suspected lower well-being have reported themselves as less happy (Allen et al., 2018; May et al., 2020). These children were at risk of exclusion from school or exhibited signs of difficulties with attention and increased activity levels. HIFAMS including its Swedish version is further described in article 1 (Riad et al., 2021). Research assistants, described under the section data collection, scored the child responses.

### Narrative skills

To measure the narrative ability the Multilingual Assessment Instrument for Narratives (MAIN) was used (Gagarina et al., 2012). MAIN originates from a European Collaboration in Science and Technology Action IS0804 and assesses aspects of macrostructure, which corresponds to the overall organization of the narrative and how the different parts are linked. MAIN aims to overcome some limitations with previous narrative tests. MAIN has a scoring structure without ceiling effects and offers multiple episodes with the same

structure: goal-attempt-outcome sequence. MAIN consists of four six-picture stories with two comparable stories in scoring (cat/dog vs. bird/goat). The advantage of MAIN is that bilingual children can be assessed in both their languages without a training effect, due to the comparable stories. In the current project, the bird and goat story were used. During the first part of assessment with MAIN, the child is encouraged to tell a story guided by the pictures. Then the telling is followed by comprehension questions where the child is asked questions about the story such as the characters' intentions or feelings. Scoring ranges from 0 to 17 for telling and 0 to 10 for comprehension. Only certain prompts are allowed by the test leader to minimize their influence on the child's narrative. To ensure correct scoring of MAIN, all sessions were audio-recorded and subsequently transcribed verbatim. All scoring was performed by the author and was assessed for interrater reliability, by an external rater (Riad et al., 2023). The external rater was a speech-language pathologist with seven years of clinical experience. This rater scored a randomized sample of about 20% of the data. The respective scoring was analyzed using Cohen's kappa (K) with a mean of .72 for telling, and .92 for the comprehension scale. Internal consistency was assessed with Cronbach's alpha, resulting in values of .59 and .67 for telling and comprehension, respectively.

## Vocabulary depth

To assess word learning from the taught words in the books, a custom measure was developed, measuring vocabulary depth. All taught words were written on small cards and collected in a jar that children were instructed to choose from. One at a time, the test leader recited what the card said and asked the child to tell something about it, and to explain the meaning of the word. The child randomly picked up 18 small cards from the jar out of the total 36 taught words. The child response was coded according to the scale of 0 to 3. Using the targeted word "starving", one point was given for showcasing the word or giving a simple example (e.g., pointing to the stomach), two points were awarded from a good example or explanation (e.g. "One is hungry"), and three points for a synonymous description or definition of the word (e.g., "Starving means that you have not eaten in several weeks"). No points were assigned for an incorrect or unrelated response. This test was also audio-recorded in order to ensure correct scoring and also interrater reliability (Riad et al., 2023). The possible total score ranged from 0 to 54. All scoring was performed by the author and was assessed for interrater reliability by an external rater (Riad

et al., 2023). The external rater was a speech-language pathologist with eight years of clinical experience. This rater scored a randomized sample of about 20% of the data. The respective scoring was analyzed using Cohen's kappa (K) with a mean value of .71. Internal consistency was assessed with Cronbach's alpha and yielded .73.

## Standardized vocabulary

The British Picture Vocabulary Scale second version (BPVS-II) is a standardized receptive vocabulary measure (Dunn et al., 1997). Due to its well-established use in Norway (e.g., Grøver et al., 2020; Karlsen et al., 2017; Klem et al., 2016; Rogde et al., 2016) and the lack of an equivalent norm-referenced test in Swedish, the BPVS-II was translated in order to be adopted in this study and is successively reported in article 2 and article 3. Based on the Norwegian standardization (Lyster et al., 2010), the BPVS-II was translated to Swedish from Norwegian by a native speaker of Norwegian with high proficiency in Swedish. The test was subsequently retranslated into Norwegian, and the results were discussed by the research group to check for similarities and potential language inconsistencies between the English, Norwegian, and Swedish versions. Scores ranged from 0 to 144. During the assessment reported in article 2 and article 3, the standard procedure described in the BPVS-II manual was applied (Dunn et al., 1997). Cronbach's alpha reliability for the Swedish version was 0.94. The translation and use for this study were approved by The Licensor GL-assessment. All instruments, including BPVS-II, are presented in Table 3, with a brief description of the targeted ability and their use in the study.

**Table 3***Measures of language and well-being*

Test/material	Targeted ability	Study
How I Feel About My School (Allen et al., 2018)	Subjective child well-being in the school context	I-III
Multilingual Assessment Instrument for Narratives (Gagarina et al., 2012)	Narrative telling and narrative comprehension on macrostructure	II-III
Vocabulary Depth (Study-specific)	Taught vocabulary	II-III
British Picture Vocabulary Scale (Dunn et al., 1997)	Receptive vocabulary	II-III

### Pilot testing

All the included instruments were piloted prior to the data collection. The piloting ensured that all the instruments were feasible in terms of child attention span and that the instructions were sufficient to perform testing, particularly for the study-specific measure of vocabulary depth. The piloting was performed on children of the same age (five years old) that were not taking part in the studies. After piloting all assessments, a standardized manual was created to ensure that the same procedure was adopted on all assessment occasions. Other measures were considered and piloted but excluded, for instance due to feasibility issues as they included too many loose objects such as small toys or cards. In sum, the pilot testing confirmed that the included measures were appropriate for the targeted sample in term of feasibility.

### The preschools

The nine preschools included in Studies I, II and III were located in large cities ( $n = 2$ ), medium-sized cities ( $n = 3$ ), and commuting municipalities ( $n = 4$ ), as per the official classification of municipalities (Swedish Association of Local

Authorities and Regions, 2016). The number of children in each class [avdelning, in Swedish] varied between four and 13 children. None of the preschools were enrolled in the national initiative for improved reading in preschool [Läslyftet, in Swedish] (SNAE, 2021). The SES-level at the respective preschool was retrieved from the Swedish National Agency of Education, based on the most proximal compulsory school in relation to each preschool (SNAE, 2019b). The SES index is a composite measure of caregiver income, education, social security compensation, and eligibility for secondary education. The index ranges from 20 to 596, with a mean of 106.

## Participants

### Teachers

Nine preschool teachers plus one childcare worker (hereafter described as teachers) were recruited for the study. The majority of teachers had over a decade of experience ( $n = 9$ ), with one teacher reporting two to five years of working experience. Three of the teachers indicated fluency in an additional language other than Swedish (bi/multilingual)

**Table 4***Descriptive data of participants at each preschool*

	Preschool class	SES index	n-participants	n-additional language learners	Group allocation	
					A	B
	1	91	7	5	4	3
	2	209	9	7	5	4
	3	209	14	10	8	6
	4	209	7	4	4	3
	5	104	6	4	3	3
	6	98	8	3	4	4
	7	154	7	7	3	4
	8	152	12	3	6	6
	9	259	11	11	5	6
	10	259	4	4	4	-
Total	10	$\bar{x}$ 174	85	58	46	39

*Note.* A higher SES index indicates an increased level of disadvantage within the school district, min-max = 20- 596; n-ALL = Total number of Additional Language Learners, children with no caregiver being a native speaker of Swedish.

## Children

Study I included a combined sample of preschool children ( $n = 85$ ) and children in primary school ( $n = 143$ ). The primary school children were recruited from four schools located in districts with different socioeconomic characteristics; large cities and commuting municipalities (SALAR, 2016). The primary school sample was enrolled in a socioemotional climate intervention and its recruitment and data collection are described in detail elsewhere (Wikman, 2023).

The preschool children ( $n = 85$ ) in Studies I, II and III attended their final year at nine preschools. All five-year-old children in these settings were offered participation and no exclusion criteria were applied. Caregivers provided

written consent; information about the study was available in Swedish, English and Arabic (Swedish version available in the appendix). In total, 85 children provided written consent. They had a mean age of 5.29 ( $SD = 0.25$ ) at the first assessment. Forty-nine (58%) were female, and 58 (68%) had no caregiver with Swedish as their native language. The children with at least one caregiver with Swedish as a native language were in the minority ( $n = 27$ , 32%). The data concerning language background was provided by the respective preschool. The need for additional information concerning language background and socioeconomic status derived from a low response rate on the caregiver questionnaire. The randomization is further described in the next section but was made based on blocks of gender and equal group size at each preschool. Additional information concerning the participants is presented in Table 4.

## Data collection

The data in Studies I, II and III was collected by the author and research assistants. The primary school data in Study I was collected by Wikman (see Wikman, 2023). The research assistants were recruited via advertisements aimed at graduate students of psychology and speech-language pathology. These students were deliberately selected based on their experience of child assessment during their studies. The research assistants received a two-hour instruction session on the assessment, guided by an assessment manual. The two-hour instruction included a description of the allowed strategies for prompts when eliciting child responses and the rights of the children. Prior to meeting any child, all research assistants provided external assurance of having no previous conviction. Part of the data collection was also done by the teachers as they reported their reading practices, in terms of applied techniques of PEER and CROWD, and which children had attended the reading sessions.

## Data analysis

Studies I, II and III included descriptive statistics, correlations, assessment of reliability and inspection of normality, through SPSS (version 28-29). Studies I and II applied structural equation modeling (SEM) and were conducted in Mplus version 8.4 (Muthén & Muthén, 1998-2017).

Latent modeling of variables allows comparison between different scales and has the advantage of error-free measurement of these relationships (Little, 2013). The SEM studies and model tested in the respective studies followed recommended practices and were guided by existing theory and modification indices (Brown, 2015). As we were agnostic towards the nature of the relationship between language and well-being, SEM for Study II was appropriate (Little, 2013). This agnostic assumption was guided by the theories of developmental cascades where change in one domain can alter the other (Masten & Cicchetti, 2010). Model fit was determined based on conventional fit indices: the comparative fit index (CFI), root mean square error of approximation (RMSEA), standardized root mean square residual (SRMR). Cut-off values were  $CFI > 0.95$ ,  $RMSEA \leq 0.08$ ,  $SRMR \leq 0.08$  (Hu & Bentler, 1999; Kline, 2016). Exact fit was determined based on nonsignificant Chi-square ( $p > .05$ ). In addition, residuals and potential model weaknesses were inspected.

In Study I, the weighted least square mean and variance adjusted (WLSMV) estimator was used. This was decided as appropriate as the data for Study I was not normally distributed and WLSMV is recommended for categorical data (Brown, 2015). Since a previous study by Allen et al. (2018) reported a single factor structure and this solution is the most parsimonious, this model was tested. The one-factor structure was estimated with exact fit Chi-square ( $p > .05$ ). Other models were also tested but showed a poor model fit.

For Study II the maximum likelihood estimator (ML) was used for the full model whereas the models containing categorical data used WLSMV. To maintain sufficient power, the parceling technique was applied, meaning that items were averaged into bundles rather than using all individual items (Little et al., 2002). The parcels were then used in the structural model to increase power, as the participants per item increased. In addition, fewer items in the model also enabled a more parsimonious model, meaning that there were fewer free parameters to estimate. Parceling was applied for MAIN where items from the telling scale (A2-A16) comprised one parcel, and the comprehension scale was divided into two parcels of IST (items D2, D5, and D8) and GOAL (D1, D4, and D7). Items A0, A1 and D10 were excluded as they were not part of a similar macrostructure and D3, D6, and D9 were excluded as they were not independent observations.

BPVS-II (in total 120 items) and Vocabulary depth (in total 36 items) were parceled into three equal bundles by randomization (40 and 12 items in each parcel respectively).

Study III concerned a multivariate analysis of variance (MANOVA) and had a repeated measures MANOVA design, using SPSS (version 29). As the initial baseline equivalence was established by MANOVA, the data analysis progressed with a repeated measures MANOVA (Barkaoui, 2014). In the repeated measures MANOVA, time was set as a within-subject factor, whereas the language background, gender and intervention group were between-subjects factors. The measure of vocabulary depth was transformed by square root and then met criteria of normality. Standardized residuals were used to inspect normality in each variable. When other criteria of ANOVA were not met, such as sphericity, the data was analyzed by adjusted values (Greenhouse & Geisser, 1959; Huynh & Feldt, 1976; Mauchly, 1940).

### Missing data and attrition

Study I had 14% of missing data, mainly due to sampling errors. Study III had 16% of missing data mainly due to absence during the testing period. Before imputation, missing data was analyzed and inspected and deemed to be at least Missing at Random (MAR). In Study I and Study III the missing data was remediated with multiple imputation in SPSS using the Monte Carlo Markov Chain.

For Study II, missing data was imputed by Mplus through Full Information Maximum Likelihood (FIML). FIML is considered to be appropriate for both data that is Missing Completely at Random (MCAR) and Missing at Random (MAR) (Enders & Bandalos, 2001).

### Fidelity, validity and reliability

A central aspect of determining the effectiveness of an intervention study concerns the fidelity, i.e., whether the intervention has been delivered in line with the study protocol (Gearing et al., 2011). Fidelity may furthermore concern several parts of the study including study design, training prior to intervention, intervention delivery and intervention receipt. Concerning the design, the teachers included in Study III, received a manual with the targeted goals of the intervention (PEER and CROWD) and additional material was available through the project website. For the training prior to the intervention, the teachers attended a professional development program that will be described in the coming section. The intervention delivery was examined by teachers' self-reported checklists and through observation by special education teachers. Through the teacher checklists the intervention receipt was monitored and the individual dosage of dialogic reading was measured.

Turning to the language assessment, there is a shortage of language tests in Swedish that have been thoroughly examined concerning both reliability and validity. Even tests that have been norm-referenced, may not sufficiently represent cultural and linguistic variability among children (e.g., Andersson et al., 2019). Therefore, the included language tests in the current thesis have been analyzed in terms of reliability through both internal consistency and interrater scores. Furthermore, the language tests have presented significant correlations (Study II) that accord with the unitary construct of language during preschool age (Hjetland et al., 2020).

For the language testing, it is also likely that children improved their scoring to some extent as a result of multiple testing (Scharfen et al., 2018). At the same time, the randomization compensates for the regression to the mean (Barnett et al., 2005), and the multiple testing allows monitoring the development in both groups when not attending dialogic reading.

The assessment of well-being could have benefited from a concurrent measure, for instance provided by the preschool teachers. However, no other similar tool that measures subjective well-being in preschool was readily available. One option would have been an objective measure such as a strength and difficulties questionnaire that had been examined in a preschool context by teachers (e.g., Dahlberg et al., 2020). However, it was deemed not feasible to add further instructions to the teachers.

## Ethical considerations

The study was approved by the Swedish Ethical Review Authority, concerning the preschool sample (#2019-02977). The school sample in Study I was reviewed by the Swedish Ethical Review Authority (#2019-03058).

Prior to all preschool assessments the children were presented with a picture of the person that would conduct the assessment. In addition, all the children were explicitly informed, in child-friendly language that they could withdraw at any time they wished. A few children also acted on this and actually left the assessment. During the assessment, children were placed with easy access to a means to leave the room. When audio was recorded during the assessment (MAIN and vocabulary depth) children were explicitly informed about this. If any research assistant encountered anything unusual, for instance in relation to asking about child well-being, they were instructed to report this to the project owner coordinator Eva Siljehag. Introducing new practices in preschool

meant an increased workload for the teachers. To ensure a good working environment, the agreement with the principals meant that teachers received time for planning. In addition, the principals underscored the importance of a joint effort by the whole staff. As the teachers were filmed by the special education teachers, they also provided consent.

The data collected was coded to maintain teacher and student confidentiality. All audio-recorded data was stored in a secure location.

## Description of the work presented in Study III

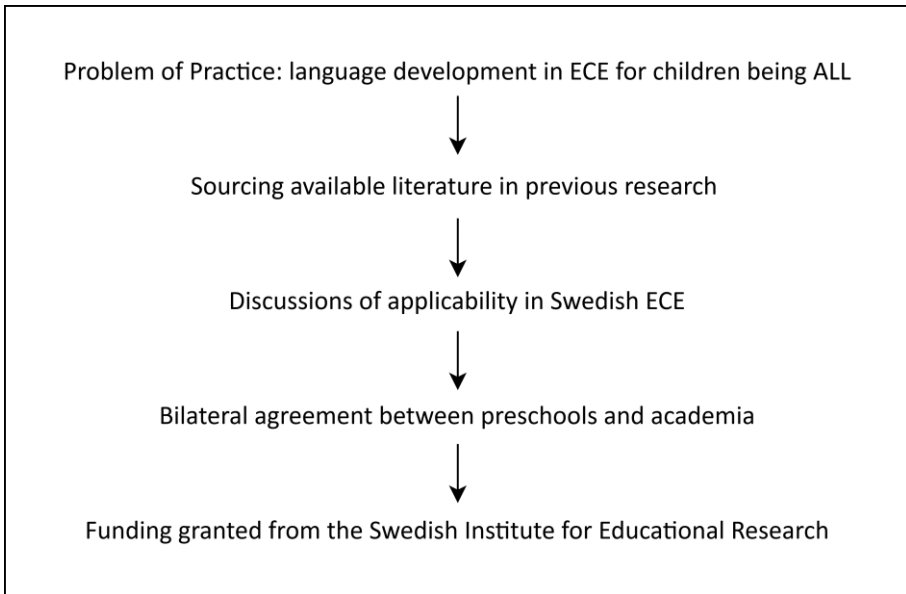
With respect to Study III, I will now present its underlying work. This is done to provide an understanding of the process and one of the important foundations of this thesis. This presentation will include how the practice-embedded research was conducted, along with the professional development program.

### Practice-embedded educational research

This thesis and its research originates from a research-to-practice network organized by Stockholm University, Department of Special Education (Siljehag & Allodi Westling, 2019). The network is focused on inclusive education and early intervention in preschool and the network was attended by practitioners from early childhood education and researchers. Responding to practitioners' requests for methods of early intervention and particularly about procedures to develop language and social skills in early childhood education, a project was started. Guided by implementation science frameworks (Dunst, 2015; Metz & Bartley, 2012) the project of Social Interaction in play time and language activities: Early interventions in inclusive Early Childhood Education for children with Special Educational Needs (Siljehag, 2023) was organized through a structure that both ensured high-quality research while also enabling the teachers to contribute as active participants. In addition, the term 'practice-embedded' in this project meant that the teachers were involved in several decisions concerning the research, including books to read, target words in the book and study design, which I will return to. The initial steps of the problems of practice framing this research are described in Figure 3.

### Figure 3

*Vital steps in the practice-embedded research of the current thesis*



*Note.* ECE = Early Childhood Education; ALL = Additional language learners.

As reading aligns with reported teacher practice in early childhood education (Alatalo & Westlund, 2021) and shared reading is supported by international literature as effective for stimulating language, and particularly for additional language learners, the dialogic reading approach was suggested, tested in practice and deemed feasible. Within the research-to-practice network the method of dialogic reading was discussed concerning its applicability in the Swedish context.

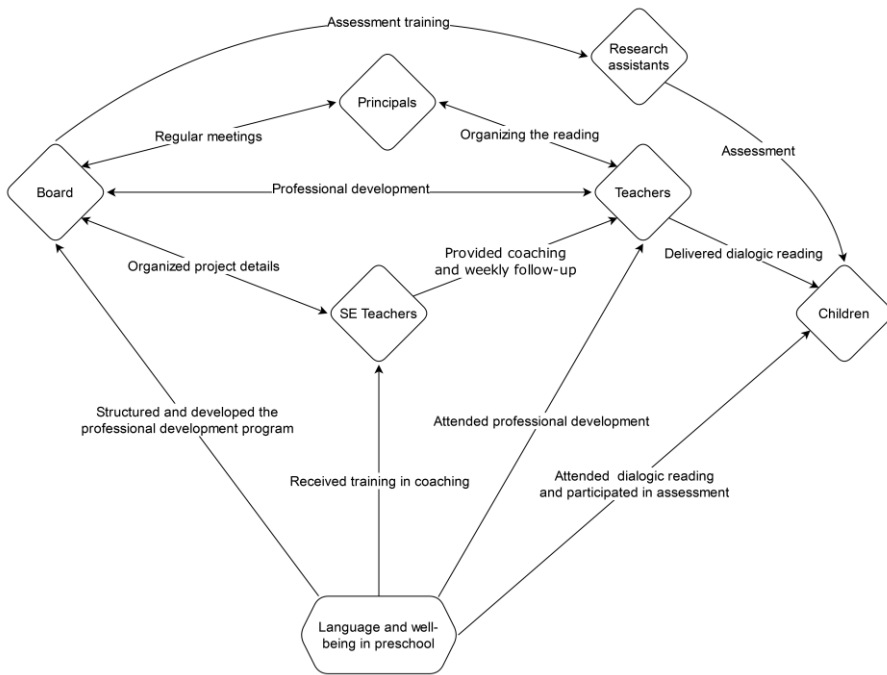
A rich amount of material was available on the internet to learn more about the method, for instance the CONNECT module at the Frank Porter Graham Institute (Buysse et al., 2011) and other resources. The employers of the practitioners in the research-to-practice network were then contacted by the researchers, ending in a bilateral agreement of interest and an application for funding that after some attempts was received from the Swedish Institute for Educational Research.

The collaboration between research and practice consisted of one municipal school district and an independent school service provider, established in

several municipalities. From these preschools the teachers were offered participation, while three special education teachers were also recruited to work part-time on the project. The special education teachers were knowledgeable in their respective organizational structures and familiar with the preschools, teachers and principals. The research project involved several actors, starting with a board of research, comprising researchers and the special education teachers. The special education teachers also performed the teacher coaching and had direct communication with principals and the teachers through the coaching. The next layer concerned the principals from the respective preschool, that organized the reading on a local level, and ensured the dialogic reading was prioritized at instances of sick-leave and staff being absent. The principals had, as well as direct contact with teachers and special education teachers, also contact with the board of research. The teachers that were to perform the reading, had contact with all layers. The intervention, with arrows of communication is illustrated in Figure 4.

**Figure 4**

*The organization of the research project by a concept map*



Note. Board = Board of research including researchers and special education teachers; SE teachers = Special education teachers.

## Professional development

The professional development consisted of three different parts. First, the teachers received training in a workshop format of three sessions and two additional meetings over the course of eight months. The workshops are described in more detail in the Appendix of Riad et al. (Submitted manuscript).

During the workshops the teachers were offered a mix of theoretical and practical encounters with dialogic reading. The theoretical part included examining the CONNECT modules (Buysse et al., 2011) and reading a translated version of the practice-oriented journal article of Flynn (2011).

The teachers also attended a video-meeting with a Norwegian researcher that previously performed randomized trial of dialogic reading, with the possibility to ask questions. The practical part included homework in between the workshop where teachers were asked to perform dialogic reading on other

children than were later included in the study. During workshops the dialogic reading was performed as embedded practice as role-play with specific target areas of dialogic reading techniques (PEER and CROWD). Prior to the intervention start, the teachers also performed a pilot week of dialogic reading, with other children but with the same books and content as intended for the study. During this period the teachers were introduced to various support material including checklists, manual and examples of child-friendly definitions of target words. Additional information about the project was offered on the project blog where all material was available.

The second part of the professional development activities was the coaching. The coaching occurred as the intervention was initiated and was offered in person three times for all teachers and as weekly follow-up by phone. During the coaching the teachers could watch and discuss with the coach video-recordings of their own dialogic reading session. The video-recordings were made by the project coaches (who were special education teachers participating in the project). The teachers were also encouraged to describe with the coaches the potential issues of concern they had experienced during the dialogic reading, for instance how to increase child engagement. The aim of the coaching was to give constructive feedback that would contribute to improving the quality and fidelity of the application.

The third part concerns the personal reflection that the teachers were to conduct after each session. After each dialogic reading, the teachers reported on the techniques of PEER and CROWD, the children attending, as well as potential incidents that could affect the outcome, such as disruptions from other children. Moreover, the teachers kept a personal log of reflections where they were encouraged to reflect upon their dialogic reading practices.

### The special education teachers

The three special education teachers were employed by the preschools and received financial compensation from the project for their part-time work on the project. This included, apart from the coaching, being members of the research team, in which they participated in decision-making, planning, and assisted with communication among all stakeholders involved in the study. The special education teachers varied in their level of experience in special education, ranging from three to 20 years (3, 20 and 20 respectively). To enhance their coaching abilities, the teachers participated in three training sessions and attended an additional coaching session with an international partner, an experienced researcher with expertise in the coaching and implementation field.

## Switching replications design

As a result of the practice-embedded research, we discussed the research design with the teachers. Although we could not guarantee any benefits of dialogic reading, the teachers believed that it could be beneficial and expressed concern at the thought that some children would be allocated to the control group and would miss the chance to improve their language skills. As the children were five years old, they could not receive the intervention later as a wait-list control group, since they would move to another educational setting soon. From this ethical point of view the teachers advocated another research design, without a control group, so all children could receive the dialogic reading. As a result, the Switching replications design (Edmonds & Kennedy, 2017) was suggested. Depending on structure the switching replications design is an experimental design, where all participants receive the intervention, while having one of the group in turn act as a control group (Shadish et al., 2002). In Table 5, a schema for the switching replications design is presented.

**Table 5**

*Study design, switching replication with random group assignment*

Group	Pretest	DR	Mid-test	DR	Post-test
A	O <sub>1</sub>	X	O <sub>2</sub>	-	O <sub>3</sub>
B	O <sub>1</sub>	-	O <sub>2</sub>	X	O <sub>3</sub>

*Note.* DR = Dialogic Reading of 25 sessions; A and B = group allocation; O<sub>1</sub>-O<sub>3</sub> = assessment over the course of three time points.

## Randomization

The children were randomized into A and B groups with blocks on gender and equivalent group sizes, i.e., in a preschool with eight children, four were randomized to group A, and four to group B, with as equal gender distribution as possible in respective group. It was not possible to randomize the allocation with a block on language background as some preschools were only attended by additional language learners. During the dialogic reading periods the teachers delivered reading every day for five consecutive weeks. Each test period

was set to two weeks, however two additional weeks were necessary after the mid-test due to the Christmas holidays.

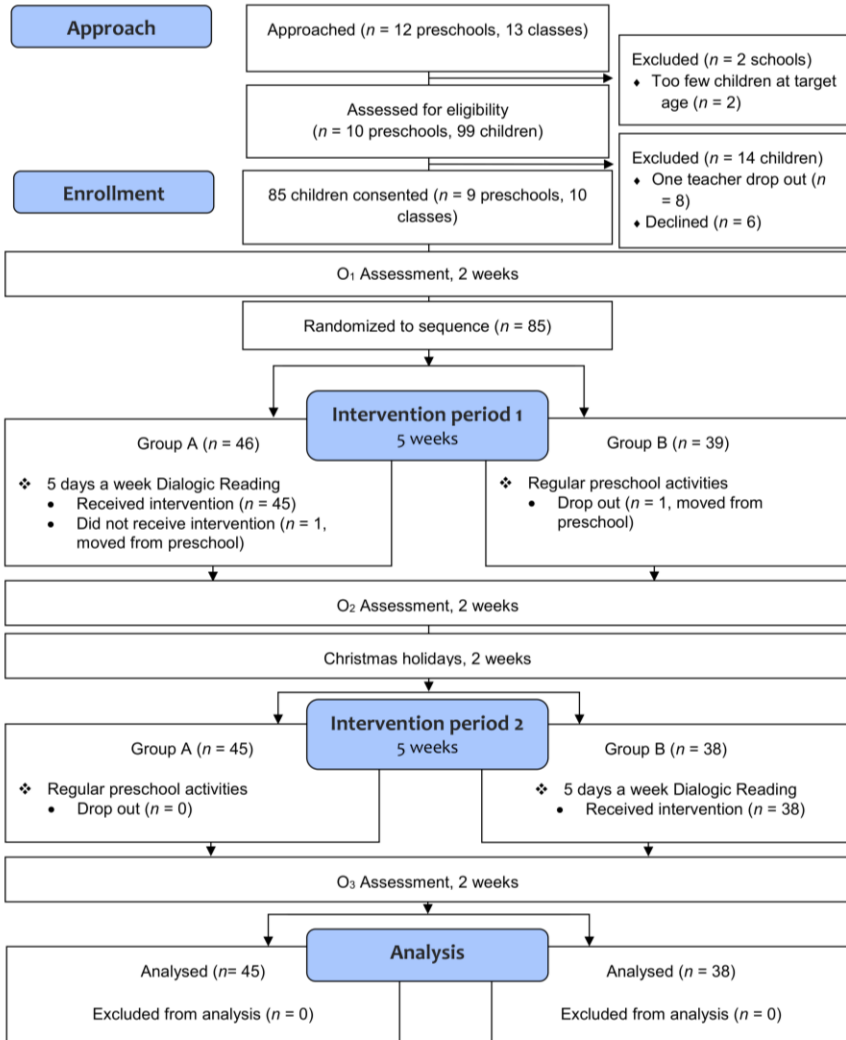
### The dialogic reading – the books, target words and local adaptations

The teachers were instructed to use the techniques of PEER and CROWD and to read the six chosen picture books, five days a week for five consecutive weeks. The books were jointly chosen based on criteria of having rich pictures and being of appropriate length for the children (Wasik et al., 2016; Zucker, Cabell, & Pico, 2021). Too much text in the book would reduce the talking time for the children, while too long stories would challenge the attention span of the children. Furthermore, the books should include an engaging story, rather than just contain semantic content (pointing and naming). The story is important as it is used as a pivot for discussions in the Open-ended, Wh- and Distancing questions. The books were chosen together with the teachers as they could judge the type of books that would be suitable for the targeted sample. We also specifically aimed to offer children new experiences by using books that it would be unlikely they had encountered previously.

After selecting the included books for the dialogic reading, we identified words that would be suitable for the targeted population, following the principles of tier 2 and tier 3 words (Beck et al., 2013; Zucker, Cabell, & Pico, 2021). The target words comprised a mix of nouns, verbs and adjectives, offering a variety of words that would be useful in several contexts. All included books and examples of target words are presented in Table 6. Teachers had different local circumstances in terms of physical space, group sizes and local organization. Therefore, when the reading was executed during the day, the placement of children and other local adaptations were decided by the teachers. Each reading session were expected to last 20-25 minutes. All the included books are available in the appendix of Study III (Riad et al., accepted manuscript). The target words were also decided in tandem with the teachers. Before the intervention the teachers were provided with the target words and potential child-friendly descriptions of them. The teachers were not informed about the testing and hence were not explicitly informed that the target words were part of the assessment. The same teacher delivered the intervention for both intervention group A and group B (see Figure 5).

**Figure 5**

*CONSORT Flowchart of participants in preschool sample*



**Table 6***Included books and examples of target words*

Book	Plot	Tags	Example of target word, with English translation in brackets
Arnes stora, läskiga tänder, Jarvis, 1985	The crocodile scares the other animals with his teeth, yet one day the teeth are lost.	Friendship, emotions	Rutin [Routine]
Alla tre på utflykt med förskolan ärtan, Nillson Thore, 2019	The story describes the routines at preschool when going on a small outing.	Discovery, routines	Varsin [One for each]
Allt det här kan jag, Rottböll & Johansson, 2014	Written with rhyme-based descriptions of capabilities of a child through an animate context.	Animals, self-efficacy	Obehagligt [Unpleasant]
Knuttes hus, Lindgren & Adbåge, 2017	The child Knutte cannot stand the situation at home, so he moves to a new house where animals come to visit and move in.	Self-efficacy, emotions	Repetera [Repeat]
Nisse på stranden, Landström, 1992	Nisse visits the beach, but it does not turn out as intended.	Unexpected, emotions	Överge [Abandon]
Varför gråter pappan, Murray Brodin & Johansson, 2019	Two children observe a crying man and hypothesize why he is upset.	Fantasy, emotions	Föredrar [Prefer]

# Chapter 5: Results

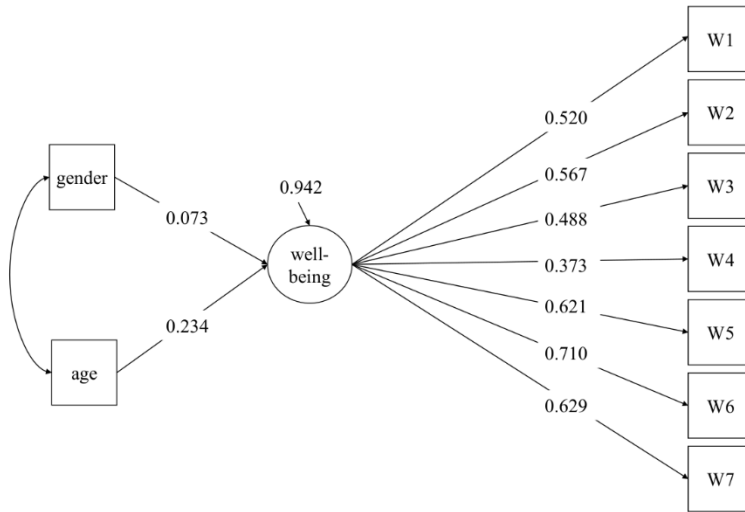
## Main results of Study I

This cross-sectional study aimed to validate the HIFAMS in a Swedish early education context. Two-hundred-twenty-eight children completed HIFAMS during November-December 2019. Inter-item correlation ranged between .39 and .53 ( $p < .001$ ). One exception was however item 4, concerning the well-being at the playground. This item has shown some divergent tendencies in a previous study in the UK (Allen et al., 2018). The mean reported well-being score was 10.82 of the maximum 14. A one-factor structure was assessed through confirmatory factor analysis and endorsed by exact fit ( $\chi^2 > .05$ ) and good model fit ( $\chi^2 = 16.572$ ;  $df = 14$ ;  $p = .280$ ; RMSEA = 0.029; CI = 0.000–0.074; CFI = 0.99; SRMR = 0.049). Standardized factor loadings were all significant ( $p < .001$ ) and ranged from .39 to .70.

Subsequently dummy variables of gender and age were added to the model to assess their respective influence on HIFAMS. In contrast to a previous UK study, no significant gender differences were observed, although girls had a higher mean score. Concerning the dummy variable of age, significant differences were observed. Children in school reported a significantly higher mean score on HIFAMS compared to preschool children, indicating that older children had a higher well-being. The final model with both dummy variables included yielded an excellent model fit ( $\chi^2 = 29.701$ ;  $df = 26$ ;  $p = .280$ ; RMSEA = 0.025; CI = 0.000–0.074; CFI = 0.99; SRMR = 0.049). Internal consistency as per Cronbach's alpha was 0.63.

**Figure 6**

*Path-model of HIFAMS, Swedish version, with standardized estimates*



## Main results of Study II

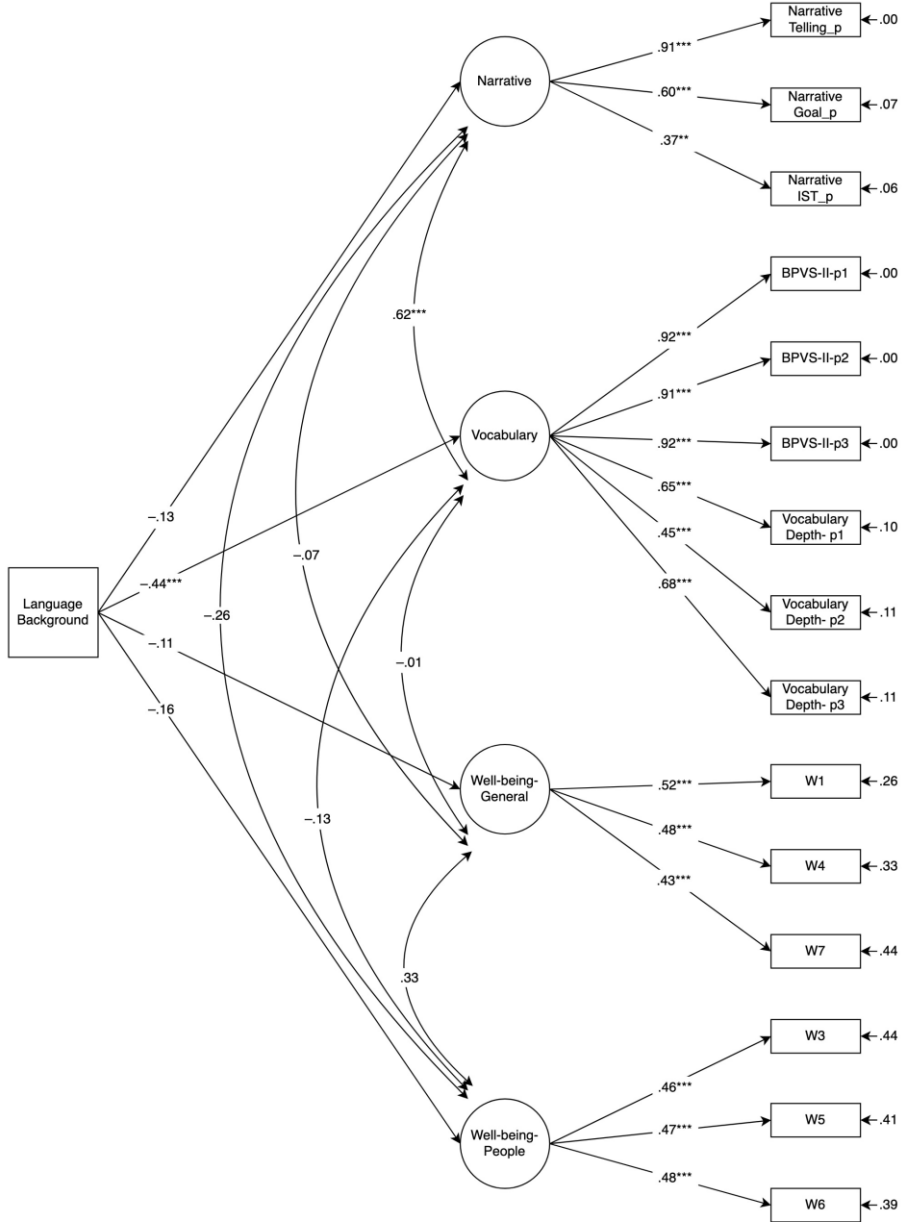
The purpose of this cross-sectional study was to explore the relationship between language skills and well-being in the 85 preschool children, i.e., prior to the intervention. The relationship between language and well-being was analyzed through structural equation modeling, conducted in a step-by-step fashion. First language and well-being were examined in separated CFAs before being examined jointly in a full model. A two-factor model for well-being was best represented by the data, offering good fit ( $\chi^2 = 9.802$ ,  $df = 8$ ,  $p = .280$ ,  $RMSEA = 0.054$ ,  $CI90 = 0.000 - 0.151$ ,  $CFI = 0.95$ , and  $SRMR = 0.079$ ), with significant factor loadings ( $p < .05$ ) ranging from  $r = .39$  to  $.77$ . The two-factor model was divided by two constructs named WBG (well-being general) and WBP (Well-being related to people), based on their respective item information. The only language model was employed with parcels of BPVS, vocabulary depth and MAIN to create stable measures and increase power. A two-factor model of narrative and vocabulary as latent constructs showed a good fit to the data ( $\chi^2 = 32.515$ ,  $df = 26$ ,  $p = .177$ ,  $RMSEA = 0.057$ ,  $CI = 0.000 - 0.112$ ,  $CFI = 0.982$ ,  $SRMR = 0.059$ ). The two models of well-being and language were subsequently combined in a joint model, obtaining a good fit

in relation to the data ( $\chi^2 = 105.103$ ,  $df = 88$ ,  $p = .102$ , RMSEA = 0.050, CI = 0.000 – 0.083, CFI = 0.955, SRMR = 0.077). Yet none of the well-being measures indicated a significant correlation with any of the language constructs ( $p > .05$ ). The well-being constructs did indicate a relationship ( $r = .33$ ); however, this was not significant ( $p = .17$ ).

We also wanted to explore the influence of gender and language background, and these were added as covariates (coded boys = 0, girls = 1 and at least one caregiver native speaker = 0, additional language learner = 1, respectively). Adding the dummy variable of language background indicated a significant negative score on vocabulary for additional language learners (Vocabulary on Language Background:  $d = -0.932$ ,  $p < 0.001$ ). Gender did not indicate any significant regressions on the constructs but was closest in relation to narrative abilities (Narrative on gender:  $d = 0.43$ ,  $p = .07$ ). This meant that language background did not affect narrative ability as measured per macrostructure (MAIN) but influenced vocabulary scores (BPVS-II and vocabulary depth). Due to the sample size, it was not possible to perform multi-group analysis for the full model, but the results were corroborated through invariance testing (supporting metric, configural and scalar invariance) and Monte Carlo simulation to assess power, and multi-group analysis construct-by-construct. The additional information received showed a negative correlation between child well-being related to people and narrative ability for children, with at least one caregiver being a native speaker ( $r = -.74$ ,  $p < 0.001$ ). Figure 5 represents the path-model published in (Riad et al., 2023). One final important note about Study II is that we could not establish any association in the SEM between language and well-being, nor in the complete correlation matrix. Yet one significant correlation between well-being and language was discovered for the children, with at least one caregiver being a native speaker. Their telling scores in MAIN showed a significant negative correlation concerning well-being related to people (WBP).

**Figure 7**

*Path-model with standardized estimates of language skills and well-being, with language background added as a dummy variable*



## Main results of Study III

This study aimed to evaluate the effects of dialogic reading by measuring language skills in tandem with well-being. The average dosage was 18.57 reading sessions and teachers reported their fidelity to range between 60.9 and 85.5% (see Table 7).

**Table 7**

*Teacher-reported practices in percent of respective occurrence*

	P	E	E	R	C	R	O	W	D
Period									
A+B (%)	85.8	81.4	68	76.35	75.9	66.7	60.9	83.45	74.2

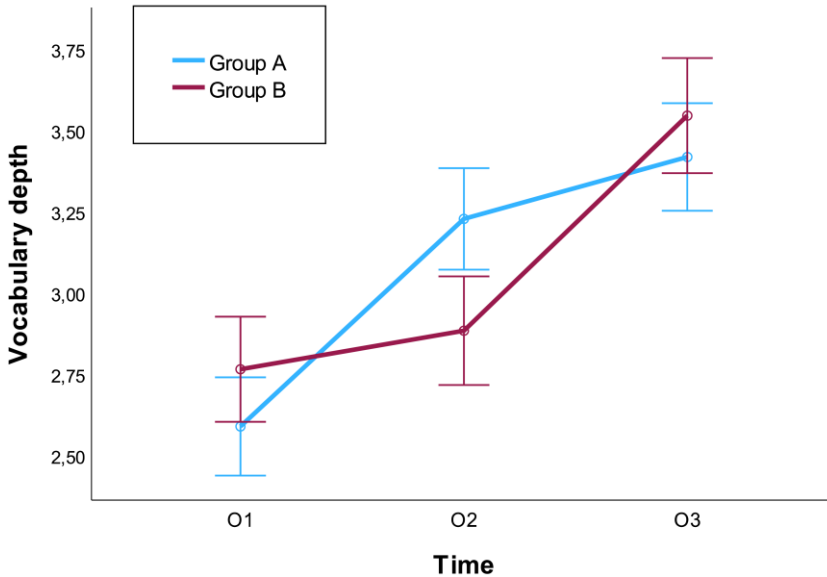
*Note.* PEER = Prompt, Evaluate, Expand, Repeat; CROWD = Complete, Recall, Open-ended, Wh-question, Distancing.

Baseline equivalence between intervention groups (A and B) was first assessed in two MANOVAs, one for language measures (MAIN, BPVS and vocabulary depth) and one for well-being (HIFAMS; WBG and WBP). The fixed factors of gender and group did not show any significant baseline differences, indicating successful randomization. However, language background showed significant group differences related to vocabulary. This difference was discovered in Study II and expected and not possible to adjust for, as some preschools were only attended by additional language learners. The well-being MANOVA indicated nonsignificant ( $p > .05$ ) group differences related to intervention group, gender, or language background.

Then a repeated measures MANOVA was conducted with language background, group assignment, and gender as between-subjects factors. The results showed significant, large improvements in the custom measure vocabulary depth (partial eta squared = .299,  $p = < .001$ ), see Figure 8.

**Figure 8**

Vocabulary depth with mean scores of Group A (n= 44) vs. Group B (n= 37) on three occasions



Note. Error bars represent standard errors; the mean scores of Vocabulary depth are square root adjusted to meet criteria of normality.

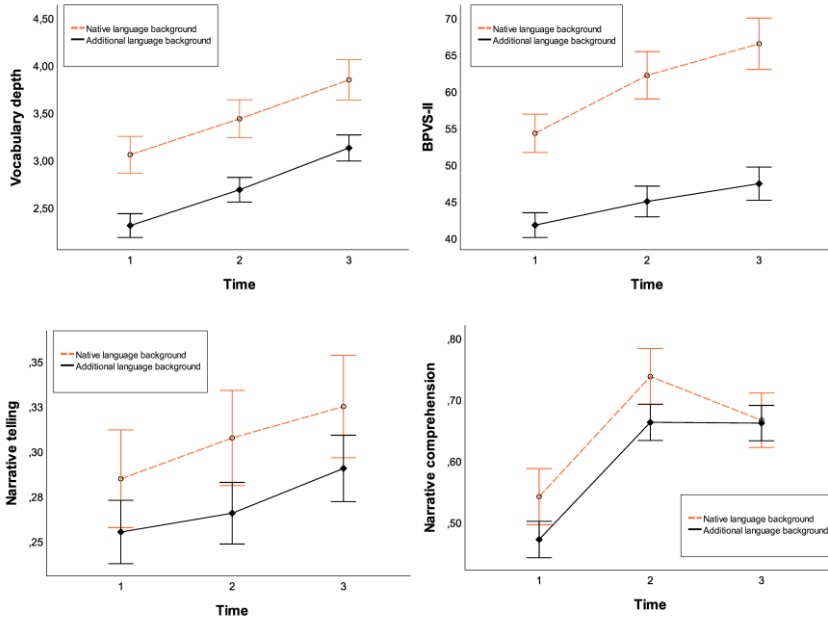
Examining the graphs (Figure 9) with the trend line for the respective group, an increased mean score adjacent to engaging in dialogic reading is observable. For the telling mean score, the development was more complex, but with a significant intervention effect for group B. Narrative comprehension increased in the same fashion as O<sub>1</sub> and O<sub>2</sub>, indicating a test effect.

The standardized vocabulary remained under constant development for both groups during the observed time points, and its progression could not be associated with engaging in dialogic reading.

Well-being remained, in general terms, constant during the observed time points (O<sub>1</sub>-O<sub>3</sub>). Initial differences between intervention groups (A vs. B) in general well-being (WBG) were observed at O<sub>1</sub> but converged to O<sub>3</sub>. For gender (girls vs. boys), a diverging trend was observed between O<sub>2</sub> and O<sub>3</sub> where girls tended to report higher and boys lower mean scores of well-being related to people (WBP). An ad hoc analysis also indicated a positive association between well-being reported at O<sub>2</sub> and O<sub>3</sub>, and engaging in dialogic reading sessions.

**Figure 9**

*Mean score development for children with a native language background (n = 27) and additional language learners (n = 58) in vocabulary and narrative skills*



Additional language learners showed similar progress in all language measures compared to their peers that had at least one caregiver with Swedish as their native language. Each measure was also estimated for effect size, using a repeated measures corrected estimate (see Table 8).

**Table 8**

*Inferential statistics for pretest (O<sub>1</sub>) and post-tests for additional language learners*

		Pre (O <sub>1</sub> )	Post (O <sub>2</sub> /O <sub>3</sub> )	Effect size
Scale	<i>n</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>ES (CI-95%)</i>
Vocabulary depth	56	2.29 (.91)	2.99 (1.07)	1.19 (0.795 - 1.581)
BPVS-II	56	41.89 (12.32)	46.42 (15.59)	0.59 (0.219 - 0.972)
MAIN Telling	56	0.26 (.13)	0.30 (.13)	0.33 (-0.043 - 0.702)
MAIN Compr.	56	0.47 (.21)	0.68 (.23)	1.01 (0.616 - 1.404)

*Note.* BPVS-II = British Picture Vocabulary Scale; MAIN Telling = The Multilingual Assessment Instrument for Narratives, narrative production; MAIN Compr. = The Multilingual Assessment Instrument for Narratives, narrative comprehension; ES = Effect size *d* Repeated Measures, pooled.

# Chapter 6: Discussion

This dissertation presents research on the concurrent relations between language skills and subjective well-being in Swedish preschool for children aged five. The language data was collected through several tests that provide both proximal data that is sensitive to change as well as rich linguistic data from narrative telling and comprehension paired with child self-reported well-being in preschool.

## Study I

Sweden has recently adopted the statutes of the United Nations Convention on the Rights of the Child as part of the national legislation (Swedish Parliament, 2018). The convention stresses that the opinions of children need to be considered and valued. Yet there is a lack of measures that target how children feel from a subjective perspective (Cho & Yu, 2020; Pollard & Lee, 2003). To fulfill the agenda of adhering to the voice of children, a validated measure in the educational context is useful for evaluating policies and regulations, as well as for mediating special educational interventions. In this cross-sectional exploration we aimed to explore how children perceive their preschool environment in terms of well-being from a subjective perspective. The short answer is that HIFAMS is a potential option for assessing self-reported child well-being, although additional studies are needed to confirm its usefulness in Swedish early education. The further exploration of HIFAMS could include testing both its reliability in terms of test-retest as well as using it with a concurrent measure. Similar measures of child well-being are being developed, such as Sandseter and Seland (2016). The virtues of HIFAMS lie in its straightforward construction and adapted response scale that compensate for some concerns when assessing child subjective well-being (Fane, 2017; Fane et al., 2020). The volatile state of well-being for young children and the somewhat lower factor loading on item 4 may indicate that the scale should preferably be used as a unit rather than for a close analysis of specific items. The HIFAMS measure taps into a relatively recent field of research on subjective

well-being for young children, with few similar measures and a limited knowledge base. The use of HIFAMS in early childhood education can be seen as a screening tool, where additional interviews with the child are necessary to discover more details of their feelings and well-being.

## Study II

Language skills during early childhood are central for communication and for establishing relationships with peers. Given that language has a central position in terms of social encounters, it may also influence aspects of well-being. Previous studies of children with limited language skills such as immigrants, indicate that they have a risk for lower well-being compared to peers. For Study II, the aims were: to examine the relationship between language and well-being for a sample with a high concentration of additional language learners, and to examine the influence of language background and gender concerning language skills and well-being. We found that the concepts were not related in this study, but discovered that narrative language abilities among additional language learners and children with majority language were comparable in their macrostructure. Yet additional language learners showed significantly lower vocabulary skills compared to peers. This study provided a solid basis for the assumption of the usefulness of a macrostructure to compare language abilities when only the majority language is possible to measure. Another topic of importance is the lower scores in standardized vocabulary compared to Norwegian studies of BPVS-II and Swedish studies of MAIN. Collectively, this indicates that the sample may benefit from a universal language intervention and not only additional language learners.

## Study III

Shared reading in preschool may offer an opportunity for language development where adults model and engage children in conversation. Yet current reports show that reading in Swedish preschool does not occur as part of a language developing strategy nor is pre-planned, leading to potentially less effective reading sessions. For the final Study III the aims were to: Evaluate the effects of a short, intensive universal language dialogic reading intervention for five-year-old children involving daily picture book reading in small groups, implemented by regular preschool teachers who received professional development prior and coaching during the intervention. The effects of the

intervention were tested on standardized vocabulary measure, vocabulary depth and narrative skills. The purpose was also to explore the influence of gender and language background in relation to engaging in dialogic reading. The study revealed improved language performances in the proximal measure that was relatively sensitive to change. Also, narrative telling skills were improved for intervention group B, whose progression can be attributed to engaging in dialogic reading. The narrative comprehension as well as the receptive language measures indicated improvement, but their progress could not be directly attributed to engaging in dialogic reading. Furthermore, the study revealed that additional language learners showed similar progression when engaging in dialogic reading as their peers, indicating the universal usefulness of dialogic reading.

## Limitations

To begin with, Study I only comprised a single measure of well-being and the validity of the findings would have improved by an additional concurrent measure. Due to the scarcity of readily available measures, the additional measure would have been an objective assessment, i.e., rated by an adult such as caregiver, teacher or research assistant. However, this would also deviate from the target of getting a first-person perspective of well-being.

Concerning the language measures, there is in general a shortage of validated, norm-referenced measures that are suitable for the targeted population. However as pointed out in recent review, the aspects of socio-cognitive skills, grammar and world knowledge, warrant further investigation in relation to shared reading (Grøver et al., 2023).

Study II and Study III had the common limitation of the low response rate to the caregiver questionnaire. Consequently, there was a limited coverage of socioeconomic background and language behaviors performed at home. Although the coarser measure of socioeconomic-index was used, based on the nearest compulsory school, a more fine-grained measure had strengthened the results. In the current thesis, the experiences and views of the teachers taking part in the professional development are not reported. This information is collected but not yet completely analyzed.

Although this thesis is focusing on the development of the majority language, it does not consider this focus as mutually exclusive for the existence of a parallel track of language-promoting strategies where the additional languages are used and applied in early childhood education. In fact, as several sources

in this thesis claim, development and maintenance of additional languages, apart from the majority language, contribute to well-being (De Houwer, 2015; Müller et al., 2020; Sun, 2019). Language means culture, heritage and social access. Yet the current thesis only scopes the challenges of offering language development in the majority language as used in education and society. Additional measures of language development could have contributed to the results. Suggestions for such measures will be brought up during the next section. Furthermore, the dialogic reading is evaluated through the child outcome measures and although some additional data concerning the teacher's perspective has been collected, they are not reported here due to the limited timeframe of the PhD program.

## General discussion

The overall aim of this thesis was to explore the effects of a teacher-mediated activity that stimulates language, conducted in Swedish early childhood education. Given the brief history and scarcity of intervention studies in Swedish early childhood education and, in particular, universal studies that target all children, the current thesis breaks new ground in the Swedish preschool context. The thesis included a controlled study of dialogic reading in a preschool setting, performed by teachers. It also included a cross-sectional exploration of the relationship between children's language skills and their self-reported well-being. The well-being measure, in turn, was novel and investigated in a cross-sectional study after translation.

The findings of this thesis demonstrate that dialogic reading is a useful method in Swedish early childhood education that can support language development. In addition, the findings showed that the children improved their language skills after a comparatively intensive and short intervention period. The findings have also demonstrated that the subjective well-being measure of HIFAMS can capture previously less studied aspects of the Swedish educational environment. Furthermore, the results show that for younger children (of preschool age), the HIFAMS may be best represented by two constructs related to general features of well-being and related to people. Additionally, according to HIFAMS, well-being was constant in relation to engaging in the dialogic reading.

According to emergentist perspectives, two components are essential for language development: communicating with a more competent speaker who can model the language, and offering children experiences where they can take

part in language interaction (Hoff, 2006). The quality within these interactions between adult-child interaction (e.g. when adult offers vocabulary instructions, feedback and language modeling) seems particularly important for multilingual children with limited majority language exposure in home setting (Kohl et al., 2019). When translating this knowledge into practice, two adult behaviors have been associated with increased language skills. The first is to engage children in multi-turn conversation (Cabell et al., 2015), and the second is to use prompts that encourage active participation by children (Justice et al., 2018). In dialogic reading, multi-turn conversation and active participation are elicited by the scripted interaction of PEER and CROWD. Shared reading can be effective even with more loosely scripted instructions, provided that teachers are offered a support structure for introducing these new practices, including professional development with a specified set of books, and target words with examples of child-friendly definitions (Grøver et al., 2020). In other words, a systematic structure around the reading sessions seems an important component for realizing repeated shared reading that generates language improvements. Offering a tangible, manualized method targets some of the observed barriers to shared reading in preschool, such as logistical and practical challenges (Alatalo & Westlund, 2021; Damber, 2015).

The results of this thesis truly come to life in the context of overcoming these obstacles, i.e., not utilizing book reading as a language-promoting strategy, not having enough time for planning, and lacking a structure for carrying out repeated reading because organizational issues and practical difficulties are difficult for the individual teacher to overcome. Apart from the manualized and pre-planned material, the principals, special education teachers, and all teachers were engaged in the study (See figure 4). On the organizational level, the principals enabled the reading by prioritizing the reading activities in relation to other events and ensuring sufficient staffing to perform small group activities. The special education teachers were engaged in practical and organizational support to improve the quality of the reading (coaching) as well as to function as a connection between research and practice. The teachers were engaged to the extent that they all received information about the project, and after the current study, they were offered the opportunity to participate in a follow-up study the following year. Through this organizational engagement in the dialogic reading, both logistical and practical challenges could be solved and ownership of the new reading practice could be strengthened (Størksen et al., 2021). Central to this ownership and general acceptance among teachers was the dialogic reading with the practice-embedded design that corresponded to their problems of practice (Snow, 2015). A sign of this ownership is the

additional 75 staff that have received training in dialogic reading, organized by the municipal school district and an independent school service provider. These teachers are in addition to the 25 teachers who participated in Study III and a related study. The successful partnership has also been documented elsewhere (Siljehag, 2023; Siljehag et al., 2022; Siljehag & Westling Allodi, 2023).

Following the theory of change presented in Figure 2, improved teacher practices from professional development will lead to improved students outcomes. Starting with the professional development, it comprised several components known to support implementation, including workshops with embedded practice, reflection after each reading session, on-site coaching, and weekly follow-up by the special education teachers, summing up to 25 hours, distributed over eight months. The effectiveness of an intervention may depend on the fidelity with which educators implement it (Blases et al., 2023). The reported fidelity of the dialogic reading was within the range of 60.9 to 85.5% for the targeted practices, which can be considered acceptable (Durlak & DuPre, 2008). The primary sources used to improve fidelity were the short checklist, the more extensive personal log, and the support offered by special education teachers. From the short reports on the checklists, the first reading sessions were described as difficult by several teachers, but gradually they became more positive in their accounts, mainly due to their ability to engage all or some specific child in the reading. Their reflections also mirrored an increased confidence in their skills, indicating self-efficacy, i.e., believing that they could perform the dialogic reading as intended. Using self-reflection as a tool to improve fidelity, assimilate self-monitoring where the teacher is repeatedly reminded about the targeted practices. It seems that the more effort the teacher put in to assessing their own behaviors, the better the student outcomes (Scheibel et al., 2023). By combining the short checklist and the personal log, the teacher's in the current study indeed had multiple opportunities to analyze and reflect that likely supported their fidelity.

## The study design and the measures of change

Since the works of Whitehurst et al. (1988), few studies have examined the optimal dosage of shared reading, expect studies focusing on specific sub-populations such as children with developmental language disorders (Storkel et al., 2017, 2019). The study design and specifically the mode of intervention in the current thesis are, to some extent, different from the Norwegian studies,

as these combined the dialogic reading with additional language activities. In Grøver et al. (2020), the teachers were offered play themes in line with the books they read, and caregivers were instructed to read the same book to their children in the language used in the home setting. Furthermore, Rogde et al. (2016) and Hagen et al. (2017) complemented the dialogic reading with individual sessions that particularly focused on the target words. Therefore, an additional study could examine the standalone effect of a longer duration of only dialogic reading in order to determine the relative effect of additional activities. On the topic of the duration and distribution of the language intervention, Bleses et al., (2018) said there should be 30 minutes of reading twice a week for 20 weeks, which corresponds to almost a doubled intervention dosage to the one performed in Study III. Still, it was not realistic, at this introductory stage, to expect the teachers to attend and deliver the intervention over a longer period of time. A longer intervention period at this stage could, for example, have compromised the fidelity. Some advantages can also be suggested for delivering the intervention in an intensive, everyday format. First, the children were immersed in repeated reading, which in turn facilitated the consolidation of new words. Second, because of the intensive format, children could miss a few sessions due to sickness and still receive the majority of the intervention (the mean attendance was around 75%). Third, the teachers were also immersed in the method of doing the daily reading, which helped to establish the new practices.

Another dimension of the intervention concerns the outcome measures used and their potential to capture meaningful changes in language development. It is possible that instruments are not sensitive or specified in a way that they can assess the change in language development for children. For instance, several studies have shown that standardized vocabulary measures are fairly robust against intervention (Grøver et al., 2020; Rogde et al., 2016). However, recent meta-analyses point out that important and meaningful gains can be made from an oral language intervention, including standardized measures (Rogde et al., 2019). The central aspects related to successful language intervention are suggested to be the high quality of implementation and the use of small group settings (Hulme et al., 2020). Study III has to some extent met these criteria, with a rigorous introduction and group sizes ranging from three to eight children.

One feature that we were not able to fully capture through our studies was the social aspects of dialogic reading. To recapitulate, previous literature suggests that relationships between caregiver and child (Canfield et al., 2020; Ganotice et al., 2017; Jimenez et al., 2019), as well as relationships between

peers, can improve after shared reading (Clasen & Jensen de López, 2017). The HIFAMS includes items that target feelings toward peers, the teacher, and during an activity (which requires interaction with adults and peers). Through an ad hoc analysis in Study III, a significant positive correlation was noticed between the social aspects of HIFAMS and engaging in dialogic reading. In practice, this means that participating in dialogic reading can have a positive impact on relationships and possibly affect the social climate. According to teachers' accounts, the reading contributed to peer relations among children. For example, increased verbal participation even outside of the reading sessions, and children attending the same reading group increased their interpersonal interaction in everyday activities. This type of positive additional effect may further strengthen the possibilities for children to interact and develop their language skills. Given that the reading sessions only account for a portion of the preschooler's overall time of a school day, it might be worthwhile to investigate in a subsequent study whether dialogic reading contributes to increased interaction.

## Child well-being

For a long time, limited attention has been devoted to subjective child well-being. Instead, the wording 'subjective' has been used while relying on caregiver or teacher accounts. Only by assessing children or asking how they are feeling can their subjective perceptions be understood (Axford et al., 2014). The concept of child well-being has gradually shifted from objective aspects of bare survival to also include aspects of modern society, such as quality of life. Furthermore, the perspective on child well-being has evolved from primarily focusing on their future effects (known as 'well-becoming') to instead valuing their well-being in the present (Ben-Arieh, 2008). Recent changes, including the ratification and adoption of the UNCRC, require Sweden, along with other countries, to develop new and effective ways of monitoring child well-being i.e., if we are to adhere to the Convention. However, health perspectives still dominate the conception of well-being in preschool settings; for instance, the curriculum only mentions well-being in relation to physical activities (SNAE, 2019a). As a result, the HIFAMS measure contributes by highlighting well-being as an important area in its own right.

During HIFAMS trials, some children have offered spontaneous motivations for their self-reports of preschool. As described in Study I, one child provided a "sad" response due to feelings of being separated from his mother. This indicates not only that the child has provided an answer that is relevant

to the question, but also that he was capable of generalizing the feelings related to that situation. Moreover, this description also emphasizes that the HIFAMS corresponds to a first tier of screening that can be used for further discussion with the child. The use of “Sad” is correct in terms of response, but the underlying thoughts would have passed unknown if the child had not explicitly described the feeling. The HIFAMS may require additional investigation with respect to various child age groups since distinct latent variables of the instruments were found in the SEM models in Study II and III.

In a broader sense, child well-being at the group level can be considered an indicator of quality in the learning environment. Still, well-being is not static and results from an interaction with the environment. Today, aspects of preschool quality are oftentimes defined by objective indicators such as the number of qualified staff, the ratio of children per teacher, and the level of satisfaction from teachers or caregivers (e.g., SSI, 2018; Swedish Association of Local Authorities and Regions, 2024; Williams et al., 2019). All these aspects are obviously important for comparing quantitative aspects and facets that, in turn, can guide policy. Yet descriptions of well-being can function as means to inform policy. For instance, Sandseter and Sandseter and Seland, (2018), in their study of well-being in preschool, stressed the importance of establishing secure bonds between children and practitioners in preschool. They also found that social well-being, such as positive perceptions of peers and the social climate in preschool, was related to general subjective well-being. These results can inform policy, such as guidelines for an adequate size of groups where teachers can nurture and develop these social bonds.

## Universal intervention of special education

The current thesis and the included studies stem from the problems of practice (Snow, 2015), as preschool teachers requested a method to support language development at a universal level. Since several reports indicate that the quality of Swedish preschool varies (Garvis & Lunneblad, 2018; SSI, 2018), universal methods that support the general quality may be a solution. Still, it is necessary to consider what aspects of quality that may contribute to improved outcomes for children in early childhood education. As previously mentioned it seems beneficial to focus on aspects of process quality e.g. how teachers interact with children (Hadley et al., 2022; Walker et al., 2020). Meanwhile, recent observations in Swedish settings indicate that a child may have few interactions with peers or adults during a day in preschool (Åström et al., 2020; Coelho et al., 2021) or even not use the majority language when interacting with peers

(Larsson et al., 2022). Under these circumstances, a method that offers rich language exchanges contributes to both quality and equity (Dahlström et al., 2023). Still, each reading session only lasted about 20 minutes, which only made up a small proportion of the day. In light of the total time spent in preschool, the results of this thesis are hopeful, showing that relatively brief exposure can affect language development.

Central to the introduction of dialogic reading were the special education teachers. Through their on-site coaching, the teachers received recurring feedback on their performance, which supported the implementation of the reading practices (Dunst, 2015). Sims and Fletcher-Wood (2021), suggest that the underlying reason for the usefulness of coaching in teachers' professional development relates to its similarities with aspects known to support behavior change. These aspects refer to the repeated practice of the new skill in an ecologically valid context, the classroom, to overwrite old behaviors. However, coaching may involve mixed feelings, as some teachers were initially skeptical about being videotaped and observed. These reluctant feelings have also been reported by Lepola et al. (2022), where several teachers declined participation due to reluctance about being recorded. In the matter of video-based coaching, it was beneficial that the special education teachers were already familiar with the teachers, and none of our teachers declined to be videotaped.

The introduction of dialogic reading as a universal intervention has several advantages. To begin with, reading is part of the preschool curriculum, but more significant is that teachers value shared reading as important (Alatalo & Westlund, 2021). Given that teachers think highly of shared reading, it is also likely that they are more interested and motivated in performing reading activities. This thesis shows that dialogic reading is possible to introduce without any additional staffing or external financing. With the universal application of the method, there is also a sense of fairness, as all children can participate. Fairness was also explicitly stated as important for the teachers that participated in the professional development, as they disagreed with a randomized trial with a control group. Moreover, the dialogic format is interactive, and it highlights that book reading should not only be part of a reading rest (Damber, 2015) but should involve active participation from children for optimal language benefits. The dialogic reading is also tangible within the framework of PEER and CROWD, as is the additional focus on vocabulary development. The distinct framework and targeted practices clearly show what is expected from the teachers, and although it is likely that several of these actions are familiar and currently used, they are not used in a systematic or deliberate

fashion. With the relatively recent introduction of teaching in the early childhood and care curriculum, this evidence-based practice offers a language-promoting strategy that matches the needs expressed by teachers.

Another advantage of dialogic reading is that teachers like it, perhaps due to the fact that it builds on following a child's lead and interests. Finally, dialogic reading can produce visible results for the teacher. In addition to the new social connections between peers who previously had little interaction, teacher accounts also describe increased verbal participation from children and the use of target words outside of reading sessions. A future study will also further examine the correlation between the reported practices of reading behaviors and recordings.

### Future directions

The number of studies that aim to promote language skills in preschool is scarce, particularly those that are conducted with an inclusive format. The interest in early intervention in preschool is increasing, and teachers need effective methods to improve quality and deliver teaching that can foster language development. Following the results of this thesis, implications for educational practice and research are recommended.

### **Educational implications**

For teachers working in early childhood education, our findings suggest that dialogic reading can be introduced in the Swedish preschool environment and can contribute to the language development of children. The benefits of dialogic reading concern the structured way of reading, where the adult focuses on engaging children in conversation and supporting their attempts through dialog. In addition, special education teachers may have a central role in introducing new evidence-based practices in early childhood education, for instance, through on-site coaching. Our findings also suggests that The HI-FAMS can be used to measure how children perceive their well-being in early childhood education.

### **Implications for research**

Dialogic reading is promising in the Swedish context, where a relatively short and intensive reading improved the language skills of a sample of children with a high proportion of children with a different language background than Swedish. Furthermore, the findings show that with sufficient support from principals and guidance for special education teachers, this method could be introduced without additional funding.

Another aspect that may warrant further investigation is social interaction related to dialogic reading, such as participation and interaction with peers. The teachers acknowledged new interaction patterns between children who attended reading sessions together. If dialogic reading also creates additional opportunities for interaction, this will probably support language development. It would also be useful to explore the social interaction pattern related to the teachers to see if the teachers can generalize the language-promoting strategies to other situations in preschool, such as circle time or during meals.

Concerning narrative abilities, our findings suggest that dialogic reading is effective for language development in terms of targeted vocabulary and, to some extent, narrative telling abilities. The assessment of narratives provides a wealth of linguistic data that it is possible to further explore in terms of both micro- and macrostructural aspects.

Although we presented some of the data concerning teacher views, it is also beneficial to evaluate the model in terms of implementation. Inspired by implementation science, several facilitators or potential barriers may exist to introducing shared reading in preschool.

Another factor that would be useful to consider in further research is reading quality. In Study III, we relied on the judgment of experienced special education teachers. When this type of experience, or perhaps tacit knowledge, is not available, an instrument would guide the judgment of reading quality.

Well-being in preschool needs further exploration, and the measure of HIFAMS can be one way to contribute to this investigation.

To corroborate its usefulness, HIFAMS needs to be additionally tested with both older and younger samples than those presented in this thesis. Further studies with HIFAMS could also target populations with suspected lower well-being in early education.

## Conclusions

The conclusions in this thesis can be summarized as follows:

(1) Dialogic reading can be introduced in Swedish preschools and may offer a systematic way to present rich language exposure for children. (2) The results of dialogic reading are promising, showing that teachers can introduce the method with support from special education teachers. (3) Given the previous shortage of intervention studies in the Swedish early childhood education context, this study shows that it is possible to perform randomized trials

with a practice-embedded design. (4) It is possible to perform dialogic reading in Swedish preschools with organizational support and it is probably possible to introduce it on a larger scale if teachers are offered support to implement it. (5) Special education teachers can have a central role in terms of the early implementation of new, evidence-based practices. (6) Dialogic reading showed positive effects on language development after only 25 sessions delivered over five weeks. (7) Children with a minority language background show comparable levels of narrative skills in the majority language as their peers, indicating that comparatively low vocabulary skills can be supported by sufficient language exposure. (8) Monitoring well-being in early education is possible, where the HIFAMS can be used to capture self-reported aspects of the school environment. (9) The HIFAMS requires further studies that target different age groups, ideally including samples with suspected lower well-being. (10) The relationship between well-being and language could not be established in this thesis, but engaging in dialogic reading may influence social aspects of peer interaction. (11) Additional studies of dialogic reading should also include measures covering opportunities for language interaction outside of the reading session.

## Swedish abstract

Språklig förmåga är av stor betydelse under förskoleåldern för utveckling, inlärning och välbefinnande, i synnerhet för barn med lägre språklig förmåga i majoritetsspråket som används av kamrater och lärare vid kommunikation och lärtillfällen. Det övergripande syftet med denna avhandling är att undersöka effekten av ett verksamhetsnära införande av specifik läsmetod som kallas dialogisk läsning där de vuxna engagerar barnen i läsningen genom att använda språkutvecklande strategier. Lärare genomförde dialogisk läsning för 85 femåringar i förskolan. Barnens språkliga förmåga mättes samtidigt som barnens självrapporterade sitt välbefinnande. Baserat på temat språk och välbefinnande i förskolan genomfördes tre studier. För studie I översattes, validerades och utvärderades ett brittiskt mått på välbefinnande för unga elever, "How I Feel About My School (HIFAMS)", med avseende på psykometriska egenskaper. Totalt 228 barn självrapporterade sitt välbefinnande i förskolan. Studie I omfattade ett kombinerat urval av barn i skolåldern ( $n = 143$ ) och förskolebarn ( $n = 85$ ), där de senare även var deltagare i studie II och studie III. Resultaten från studie I bekräftade en enfaktorsstruktur för HIFAMS, i en konfirmatorisk faktoranalys, med god modellanpassning. Studie I visade att HIFAMS kan användas i en svensk utbildningskontext och att den korta enkäten kan användas för att mäta barns välbefinnande i förskolan och i de tidiga skolåren.

Studie II var en tvärsnittsstudie som undersökte sambandet mellan språkfärdigheter och självrapporterat välbefinnande genom strukturell ekvationsmodellering för samma urval av förskolebarn som i delstudie I ( $N = 85$ ). Bedömningen av språkfärdigheter omfattade både narrativ förmåga och ordförråd, och välbefinnande mättes med HIFAMS. Språkfärdigheterna och välbefinnandet undersöktes ytterligare genom deras respektive påverkan av språkbakgrund (språkexponering i hemmiljön) och kön. I studie II fann man inget samband mellan språkfärdigheter och välbefinnande. Resultaten för barn med annan språkbakgrund än svenska indikerade jämförbara nivåer av narrativ förmåga, men lägre ordförrådskunskap jämfört med kamrater med svensk språkbakgrund. Resultaten från studie II är i linje med tidigare forskning och

understryker vikten av en rik språklig exponering för barn med en annan språklig exponering i hemmet än den som används i förskolan.

Studie III analyserade effekten av en dialogisk läsintervention avseende språkutveckling, samtidigt som elevernas välbefinnande följdes upp. Den dialogiska läsinterventionen var ett resultat av ett professionellt utvecklingsprogram som syftade till att förbättra den muntliga språkförmågan hos förskolebarnen. Insatsen genomfördes i små grupper (4 till 8 barn) av tio förskollärare. Lärarna läste böcker under två perioder och barnen på varje förskola randomiserades till att delta i direkt (grupp A) eller fördröjd intervention (grupp B). Utfallsmåtten var detsamma som i studie II och bedömdes före, under och efter interventionen. Studie III visade att barnen förbättrade sina språkkunskaper efter att ha deltagit i en dialogisk läsintervention, med förbättringar oberoende av språkbakgrund.

Sammantaget visar resultaten från dessa tre studier att språkutveckling i form av ordförråd kan främjas genom dialogisk läsning och att barn med annan språkbakgrund än svenska visar jämförbar utveckling som sina jämnåriga. Vidare visar dessa studier att självrapporterat välbefinnande kan mätas i förskolan och att barns självupplevda välbefinnande i förskolan inte var förknippat med tidiga språkkunskaper. Implikationer av dessa studier och betydelsen av resultaten för pedagogisk praktik kommer att behandlas.

**Nyckelord: högläsning med mer dialog, språkutveckling, förskola, barns välmående, ordförråd, berättarförmåga, professionsutveckling, universella insatser**

## References

- Agirdag, O., & Vanlaar, G. (2018). Does more exposure to the language of instruction lead to higher academic achievement? A cross-national examination. *International Journal of Bilingualism*, 22(1), 123–137. <https://doi.org/10.1177/1367006916658711>
- Alatalo, T., Norling, M., Magnusson, M., Tjäru, S., Hjetland, H. N., & Hofslundsengen, H. (2023). Read-aloud and writing practices in Nordic preschools. *Scandinavian Journal of Educational Research*, 0(0), 1–16. <https://doi.org/10.1080/00313831.2023.2175243>
- Alatalo, T., & Westlund, B. (2021). Preschool teachers' perceptions about read-alouds as a means to support children's early literacy and language development. *Journal of Early Childhood Literacy*, 21(3), 413–435. <https://doi.org/10.1177/1468798419852136>
- Allen, K., Marlow, R., Edwards, V., Parker, C., Rodgers, L., Ukoumunne, O. C., Seem, E. C., Hayes, R., Price, A., & Ford, T. (2018). 'How I Feel About My School': The construction and validation of a measure of wellbeing at school for primary school children. *Clinical Child Psychology and Psychiatry*, 23(1), 25–41. <https://doi.org/10.1177/1359104516687612>
- Allodi, M. W. (2010). The meaning of social climate of learning environments: Some reasons why we do not care enough about it. *Learning Environments Research*, 13(2), 89–104. <https://doi.org/10.1007/s10984-010-9072-9>
- Ambridge, B., Kidd, E., Rowland, C. F., & Theakston, A. L. (2015). *The ubiquity of frequency effects in first language acquisition*. 35.
- Amholt, T. T., Dammeyer, J., Carter, R., & Niqlasen, J. (2020). Psychological Well-Being and Academic Achievement among School-Aged Children: A Systematic Review. *Child Indicators Research*, 13(5), 1523–1548. <https://doi.org/10.1007/s12187-020-09725-9>
- Anderson, N. J., Graham, S. A., Prime, H., Jenkins, J. M., & Madigan, S. (2021). Linking Quality and Quantity of Parental Linguistic Input to Child Language Skills: A Meta-Analysis. *Child Development*, 92(2), 484–501. <https://doi.org/10.1111/cdev.13508>
- Andersson, K., Hansson, K., Rosqvist, I., Lyberg Åhlander, V., Sahlén, B., & Sandgren, O. (2019). The Contribution of Bilingualism, Parental Education, and School Characteristics to Performance on the Clinical Evaluation of Language Fundamentals: Fourth Edition, Swedish.

- Frontiers in Psychology*, 10, 1586.  
<https://doi.org/10.3389/fpsyg.2019.01586>
- Ardasheva, Y., Tretter, T. R., & Kinny, M. (2012). English Language Learners and Academic Achievement: Revisiting the Threshold Hypothesis. *Language Learning*, 62(3), 769–812. <https://doi.org/10.1111/j.1467-9922.2011.00652.x>
- Åström, F., & Almqvist, L. (2022). Patterns of observed child participation and proximity to a small group including teachers in Swedish preschool free play. *Frontiers in Education*, 7. <https://www.frontiersin.org/articles/10.3389/educ.2022.982837>
- Åström, F., Björck-Åkesson, E., Sjöman, M., & Granlund, M. (2020). Everyday environments and activities of children and teachers in Swedish preschools. *Early Child Development and Care*, 0(0), 1–16. <https://doi.org/10.1080/03004430.2020.1754209>
- Axford, N., Jodrell, D., & Hobbs, T. (2014). Objective or Subjective Well-Being? In A. Ben-Arieh, F. Casas, I. Frønes, & J. E. Korbin (Eds.), *Handbook of Child Well-Being: Theories, Methods and Policies in Global Perspective* (pp. 2699–2738). Springer Netherlands. [https://doi.org/10.1007/978-90-481-9063-8\\_108](https://doi.org/10.1007/978-90-481-9063-8_108)
- Baraldi, E., Allodi, M. W., Löwing, K., Smedler, A.-C., Westrup, B., & Ådén, U. (2020). Stockholm preterm interaction-based intervention (SPIBI)—Study protocol for an RCT of a 12-month parallel-group post-discharge program for extremely preterm infants and their parents. *BMC Pediatrics*, 20(1), 49. <https://doi.org/10.1186/s12887-020-1934-4>
- Barkaoui, K. (2014). Quantitative Approaches for Analyzing Longitudinal Data in Second Language Research. *Annual Review of Applied Linguistics*, 34, 65–101. <https://doi.org/10.1017/S0267190514000105>
- Barnett, A. G., van der Pols, J. C., & Dobson, A. J. (2005). Regression to the mean: What it is and how to deal with it. *International Journal of Epidemiology*, 34(1), 215–220. <https://doi.org/10.1093/ije/dyh299>
- Barnombudsmannen. (2019). *Barns röster från förskolan* (Barnombudsmanens Förskoleundersökning) [BO 2018-0771]. Barnombudsmannen. <https://www.barnombudsmannen.se/globalassets/dokument-for-nedladdning/barns-roster-fran-forskolan.pdf>
- Beck, I. L., McKeown, M. G., & Kucan, L. (2013). *Bringing words to life: Robust vocabulary instruction* (2nd ed). The Guilford Press.
- Bejnö, H., Roll-Pettersson, L., Klintwall, L., Långh, U., Odom, S. L., & Bölte, S. (2019). Cross-Cultural Content Validity of the Autism Program Environment Rating Scale in Sweden. *Journal of Autism and Developmental Disorders*. <https://doi.org/10.1007/s10803-018-03870-5>
- Ben-Arieh, A. (2008). The Child Indicators Movement: Past, Present, and Future. *Child Indicators Research*, 1(1), 3–16. <https://doi.org/10.1007/s12187-007-9003-1>

- Ben-Arieh, A., Casas, F., Frønes, I., & Korbin, J. E. (2014). Multifaceted Concept of Child Well-Being. In A. Ben-Arieh, F. Casas, I. Frønes, & J. E. Korbin (Eds.), *Handbook of Child Well-Being: Theories, Methods and Policies in Global Perspective* (pp. 1–27). Springer Netherlands. [https://doi.org/10.1007/978-90-481-9063-8\\_134](https://doi.org/10.1007/978-90-481-9063-8_134)
- Bergelson, E., Soderstrom, M., Schwarz, I.-C., Rowland, C. F., Ramírez-Esparza, N., R. Hamrick, L., Marklund, E., Kalashnikova, M., Guez, A., Casillas, M., Benetti, L., Alphen, P. van, & Cristia, A. (2023). Everyday language input and production in 1,001 children from six continents. *Proceedings of the National Academy of Sciences*, *120*(52), e2300671120. <https://doi.org/10.1073/pnas.2300671120>
- Berman, R. A., & Slobin, D. I. (1994). Narrative Structure. In R. A. Berman & D. I. Slobin (Eds.), *Relating Events in Narrative: A cross-linguistic developmental study* (pp. 39–84). Psychology Press.
- Bernardini, P., & Schlyter, S. (2004). Growing syntactic structure and code-mixing in the weaker language: The Ivy Hypothesis. *Bilingualism: Language and Cognition*, *7*(1), 49–69. <https://doi.org/10.1017/S1366728904001270>
- Bialystok, E. (2017). The Bilingual Adaptation: How Minds Accommodate Experience. *Psychological Bulletin*, *143*(3), 233–262. <https://doi.org/10.1037/bul0000099>
- Bleses, D., Højen, A., Dale, P. S., Justice, L. M., Dybdal, L., Piasta, S., Markussen-Brown, J., Kjærbaek, L., & Haghish, E. F. (2018). Effective language and literacy instruction: Evaluating the importance of scripting and group size components. *Early Childhood Research Quarterly*, *42*, 256–269. <https://doi.org/10.1016/j.ecresq.2017.10.002>
- Bleses, D., Makransky, G., Dale, P. S., Højen, A., & Ari, B. A. (2016). Early productive vocabulary predicts academic achievement 10 years later. *Applied Psycholinguistics*, *37*(6), 1461–1476. <https://doi.org/10.1017/S0142716416000060>
- Bleses, D., Willemsen, M. M., Purtell, K. M., Justice, L. M., Slot, P., Dybdal, L., & Højen, A. (2023). Early childhood educator’s implementation readiness and intervention fidelity: Findings from a person-centered study. *Early Childhood Research Quarterly*, *63*, 156–168. <https://doi.org/10.1016/j.ecresq.2022.12.006>
- Blewitt, P., & Langan, R. (2016). Learning words during shared book reading: The role of extratextual talk designed to increase child engagement. *Journal of Experimental Child Psychology*, *150*, 404–410. <https://doi.org/10.1016/j.jecp.2016.06.009>
- Borgers, N., Hox, J., & Sikkel, D. (2004). Response Effects in Surveys on Children and Adolescents: The Effect of Number of Response Options, Negative Wording, and Neutral Mid-Point. *Quality & Quantity*, *38*(1), 17–33. <https://doi.org/10.1023/B:QUQU.0000013236.29205.a6>

- Bornstein, M. H., Hahn, C.-S., Putnick, D. L., & Suwalsky, J. T. D. (2014). Stability of Core Language Skill from Early Childhood to Adolescence: A Latent Variable Approach. *Child Development, 85*(4), 1346–1356. <https://doi.org/10.1111/cdev.12192>
- Bornstein, M. H., Hahn, C.-S., & Suwalsky, J. T. D. (2013). Language and Internalizing and Externalizing Behavioral Adjustment: Developmental Pathways from Childhood to Adolescence. *Development and Psychopathology, 25*(3), 857–878. <https://doi.org/10.1017/S0954579413000217>
- Boudreau, D. (2008). Narrative Abilities: Advances in Research and Implications for Clinical Practice. *Topics in Language Disorders, 28*(2), 99–114. <https://doi.org/10.1097/01.TLD.0000318932.08807.da>
- Broman, I. T., Roth, A.-C. V., Palla, L., & Persson, S. (2015). *Förskola tidig intervention*. Vetenskapsrådet. [https://www.vr.se/download/18.2412c5311624176023d25ac7/1555423105913/Foerskola-tidig-intervention\\_VR\\_2015.pdf](https://www.vr.se/download/18.2412c5311624176023d25ac7/1555423105913/Foerskola-tidig-intervention_VR_2015.pdf)
- Broström, S. (2017). A dynamic learning concept in early years' education: A possible way to prevent schoolification. *International Journal of Early Years Education, 25*(1), 3–15. <https://doi.org/10.1080/09669760.2016.1270196>
- Brown, T. A. (2015). *Confirmatory factor analysis for applied research* (Second edition). The Guilford Press.
- Brownlie, E. B., Beitchman, J. H., Escobar, M., Young, A., Atkinson, L., Johnson, C., Wilson, B., & Douglas, L. (2004). Early Language Impairment and Young Adult Delinquent and Aggressive Behavior. *Journal of Abnormal Child Psychology, 32*(4), 453–467. <https://doi.org/10.1023/B:JACP.0000030297.91759.74>
- Bruder, M. B. (2016). Personnel Development Practices in Early Childhood Intervention. In B. Reichow, B. A. Boyd, E. E. Barton, & S. L. Odom (Eds.), *Handbook of Early Childhood Special Education* (pp. 289–333). Springer International Publishing. [https://doi.org/10.1007/978-3-319-28492-7\\_16](https://doi.org/10.1007/978-3-319-28492-7_16)
- Brunsek, A., Perlman, M., McMullen, E., Falenchuk, O., Fletcher, B., Nocita, G., Kamkar, N., & Shah, P. S. (2020). A meta-analysis and systematic review of the associations between professional development of early childhood educators and children's outcomes. *Early Childhood Research Quarterly, 53*, 217–248. <https://doi.org/10.1016/j.ecresq.2020.03.003>
- Buckingham, J., Wheldall, K., & Beaman-Wheldall, R. (2013). Why poor children are more likely to become poor readers: The school years. *Australian Journal of Education, 57*, 1–15. <https://doi.org/10.1177/0004944113495500>
- Buyse, V., Winton, P., Rous, B., Epstein, D., & Cavanaugh, C. (2011). *CONNECT Module 6: Dialogic Reading Practices*. FPG Child Development Institute, CONNECT: The Center to Mobilize Early Childhood

- Knowledge. <https://connectmodules.dec-sped.org/connect-modules/learners/module-6/>
- Byers-Heinlein, K., Burns, T., & Werker, J. (2010). The Roots of Bilingualism in Newborns. *Psychological Science*, 21, 343–348. <https://doi.org/10.1177/0956797609360758>
- Byrnes, J. P., & Wasik, B. A. (2019). *Language and Literacy Development: What Educators Need to Know*. Guilford Publications.
- Cabell, S. Q., Justice, L. M., McGinty, A. S., DeCoster, J., & Forston, L. D. (2015). Teacher–child conversations in preschool classrooms: Contributions to children’s vocabulary development. *Early Childhood Research Quarterly*, 30, 80–92. <https://doi.org/10.1016/j.ecresq.2014.09.004>
- Canfield, C. F., Miller, E. B., Shaw, D. S., Morris, P., Alonso, A., & Mendelsohn, A. (2020). Beyond Language: Impacts of Shared Reading on Parenting Stress and Early Parent-Child Relational Health. *Developmental Psychology*, 56(7), 1305–1315. <https://doi.org/10.1037/dev0000940>
- Celik, P., Ozdereli, Z., Bayram Sen, M., Karakutuk, A., Baykal Altunkaya, G., & Celenk, N. (2023). Shared reading: Parental attitudes, practices and barriers in Turkey. *Journal of Paediatrics and Child Health*, 59(2), 264–270. <https://doi.org/10.1111/jpc.16279>
- Cenoz, J., & Gorter, D. (2023). Multilingualism. In L. Wei, Z. Hua, & J. Simpson, *The Routledge Handbook of Applied Linguistics* (2nd ed., pp. 7–18). Routledge. <https://doi.org/10.4324/9781003082637-3>
- Cho, E. Y.-N., & Yu, F.-Y. (2020). A review of measurement tools for child wellbeing. *Children and Youth Services Review*, 119, 105576. <https://doi.org/10.1016/j.childyouth.2020.105576>
- Clasen, L. E., & Jensen de López, K. (2017). BookFun – ‘There’s more to it than reading a book’ – Implementing a Danish early literacy programme that supports professionalism, language development and social inclusion. *Journal of Early Childhood Literacy*, 17(2), 254–279. <https://doi.org/10.1177/1468798416638405>
- Clements, D. H., & Sarama, J. (2011). Early Childhood Mathematics Intervention. *Science*, 333(6045), 968–970. <https://doi.org/10.1126/science.1204537>
- Coelho, V., Åström, F., Nesbitt, K., Sjöman, M., Farran, D., Björck-Åkesson, E., Christopher, C., Granlund, M., Almquist, L., Grande, C., & Pinto, A. I. (2021). Preschool practices in Sweden, Portugal, and the United States. *Early Childhood Research Quarterly*, 55, 79–96. <https://doi.org/10.1016/j.ecresq.2020.11.004>
- Cohrssen, C., Niklas, F., & Tayler, C. (2016). ‘Is that what we do?’ Using a conversation-analytic approach to highlight the contribution of dialogic reading strategies to educator–child interactions during story-

- book reading in two early childhood settings. *Journal of Early Childhood Literacy*, 16(3), 361–382. <https://doi.org/10.1177/1468798415592008>
- Collins, B. A., Toppelberg, C. O., Suárez-Orozco, C., O’Connor, E., & Nieto-Castañón, A. (2011). Cross-sectional associations of Spanish and English competence and well-being in Latino children of immigrants in kindergarten. *International Journal of the Sociology of Language*, 2011(208). <https://doi.org/10.1515/ijsl.2011.010>
- Collishaw, S., Goodman, R., Ford, T., Rabe-Hesketh, S., & Pickles, A. (2009). How far are associations between child, family and community factors and child psychopathology informant-specific and informant-general? *Journal of Child Psychology and Psychiatry*, 50(5), 571–580. <https://doi.org/10.1111/j.1469-7610.2008.02026.x>
- Conway, C. M., Arciuli, J., Lum, J. A. G., & Ullman, M. T. (2019). *Seeing problems that may not exist: A reply to West et al.’s (2018) questioning of the procedural deficit hypothesis*. 4. <http://search.ebscohost.com/login.aspx?direct=true&db=edsbl&AN=vdc.100087218562.0x000001&site=eds-live&scope=site>
- Cook, B. G., & Odom, S. L. (2013). Evidence-Based Practices and Implementation Science in Special Education. *Exceptional Children*, 79(3), 135–144. <https://doi.org/10.1177/001440291307900201>
- Cooke, P. J., Melchert, T. P., & Connor, K. (2016). Measuring Well-Being: A Review of Instruments. *The Counseling Psychologist*, 44(5), 730–757. <https://doi.org/10.1177/0011000016633507>
- Cummins, J. (1979). Linguistic Interdependence and the Educational Development of Bilingual Children. *Review of Educational Research*, 49(2), 222–251. <https://doi.org/10.2307/1169960>
- Cummins, J. (2000). Language, Power and Pedagogy: Bilingual Children in the Crossfire. In *Language, Power and Pedagogy*. Multilingual Matters. <https://doi.org/10.21832/9781853596773>
- Dahlberg, A., Fält, E., Ghaderi, A., Sarkadi, A., & Salari, R. (2020). Swedish norms for the Strengths and Difficulties Questionnaire for children 3–5 years rated by parents and preschool teachers. *Scandinavian Journal of Psychology*, 61(2), 253–261. <https://doi.org/10.1111/sjop.12606>
- Dahlström, H., Damber, U., & Rasmusson, M. (2023). Prerequisites for emergent literacy in Swedish preschools. *Early Child Development and Care*, 0(0), 1–17. <https://doi.org/10.1080/03004430.2023.2248417>
- Dale, P. S., Tosto, M. G., Hayiou-Thomas, M. E., & Plomin, R. (2015). Why does parental language input style predict child language development? A twin study of gene–environment correlation. *Journal of Communication Disorders*, 57, 106–117. <https://doi.org/10.1016/j.jcomdis.2015.07.004>

- Damber, U. (2015). Read-alouds in preschool – A matter of discipline? *Journal of Early Childhood Literacy*, 15(2), 256–280. <https://doi.org/10.1177/1468798414522823>
- Danielsdóttir, S., & Ingudóttir, J. (2022). *The First 1000 Days in the Nordic Countries: Policy Recommendations*. Nordic Council of Ministers. <https://doi.org/10.6027/nord2022-006>
- De Houwer, A. (2015). Harmonious bilingual development: Young families' well-being in language contact situations. *International Journal of Bilingualism*, 19(2), 169–184. <https://doi.org/10.1177/1367006913489202>
- De Houwer, A. (2017). Minority Language Parenting in Europe and Children's Well-Being. In N. J. Cabrera & B. Leyendecker (Eds.), *Handbook on Positive Development of Minority Children and Youth* (pp. 231–246). Springer International Publishing. [https://doi.org/10.1007/978-3-319-43645-6\\_14](https://doi.org/10.1007/978-3-319-43645-6_14)
- de Leeuw, E., Borgers, N., & Smits, A. (2004). Pretesting Questionnaires for Children and Adolescents. In S. Presser, J. M. Rothgeb, M. P. Couper, J. T. Lessler, E. Martin, J. Martin, & E. Singer (Eds.), *Wiley Series in Survey Methodology* (pp. 409–429). John Wiley & Sons, Inc. <https://doi.org/10.1002/0471654728.ch20>
- Dick, A. S., Garcia, N. L., Pruden, S. M., Thompson, W. K., Hawes, S. W., Sutherland, M. T., Riedel, M. C., Laird, A. R., & Gonzalez, R. (2019). No evidence for a bilingual executive function advantage in the ABCD study. *Nature Human Behaviour*, 3(7), Article 7. <https://doi.org/10.1038/s41562-019-0609-3>
- Dickinson, D. K., Hofer, K. G., Barnes, E. M., & Grifenhagen, J. F. (2014). Examining teachers' language in Head Start classrooms from a Systemic Linguistics Approach. *Early Childhood Research Quarterly*, 29(3), 231–244. <https://doi.org/10.1016/j.ecresq.2014.02.006>
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95(3), 542–575. <https://doi.org/10.1037/0033-2909.95.3.542>
- Dodge, R., Daly, A. P., Huyton, J., & Sanders, L. D. (2012). The challenge of defining wellbeing. *International Journal of Wellbeing*, 2(3), Article 3. <https://www.internationaljournalofwellbeing.org/index.php/ijow/article/view/89>
- Dolean, D., Melby-Lervåg, M., Tincas, I., Damsa, C., & Lervåg, A. (2019). Achievement gap: Socioeconomic status affects reading development beyond language and cognition in children facing poverty. *Learning and Instruction*, 63, 101218. <https://doi.org/10.1016/j.learninstruc.2019.101218>
- Donovan, M. S., Snow, C., & Daro, P. (2013). The SERP Approach to Problem-Solving Research, Development, and Implementation. *Teachers College Record*, 115(14), 400–425. <https://doi.org/10.1177/016146811311501411>

- Dowdall, N., Melendez-Torres, G. J., Murray, L., Gardner, F., Hartford, L., & Cooper, P. J. (2020). Shared Picture Book Reading Interventions for Child Language Development: A Systematic Review and Meta-Analysis. *Child Development, 91*(2), e383–e399. <https://doi.org/10.1111/cdev.13225>
- Duff, D. (2019). Has vocabulary intervention had an effect? A valid, reliable, and (fairly) quick outcome measure for semantic knowledge. *Language, Speech, and Hearing Services in Schools, 50*(4), 506–517. [https://doi.org/10.1044/2019\\_LSHSS-VOIA-18-0134](https://doi.org/10.1044/2019_LSHSS-VOIA-18-0134)
- Dunn, L. M., Dunn, L. M., & Nelson Nfer. (1997). *British Picture Vocabulary Scale II*. (2nd ed.). GL Assessment Limited.
- Dunst, C. J. (2015). Improving the Design and Implementation of In-Service Professional Development in Early Childhood Intervention: *Infants & Young Children, 28*(3), 210–219. <https://doi.org/10.1097/IYC.0000000000000042>
- Durlak, J. A., & DuPre, E. P. (2008). Implementation Matters: A Review of Research on the Influence of Implementation on Program Outcomes and the Factors Affecting Implementation. *American Journal of Community Psychology, 41*(3–4), 327–350. <https://doi.org/10.1007/s10464-008-9165-0>
- Eadie, P. (2022). Oral Language Skills as a Foundation for Learning to Learn. In C. McKean, J. Law, & S. Reilly (Eds.), *Language Development: Individual Differences in a Social Context* (pp. 397–419). Cambridge University Press. <https://doi.org/10.1017/9781108643719.021>
- Edmonds, W. A., & Kennedy, T. D. (2017). *An Applied Guide to Research Designs: Quantitative, Qualitative, and Mixed Methods*. SAGE Publications, Inc. <https://doi.org/10.4135/9781071802779>
- Einarsdottir, J., Purola, A.-M., Johansson, E. M., Broström, S., & Emilson, A. (2015). Democracy, caring and competence: Values perspectives in ECEC curricula in the Nordic countries. *International Journal of Early Years Education, 23*(1), 97–114. <https://doi.org/10.1080/09669760.2014.970521>
- Ellis, N. C., Römer, U., & O'Donnell, M. B. (2016). Constructions and Usage-based Approaches to Language Acquisition: Usage-based Approaches to Language Acquisition. *Language Learning, 66*(S1), 23–44. [https://doi.org/10.1111/lang.1\\_12177](https://doi.org/10.1111/lang.1_12177)
- Enders, C. K., & Bandalos, D. L. (2001). The Relative Performance of Full Information Maximum Likelihood Estimation for Missing Data in Structural Equation Models. *Structural Equation Modeling: A Multidisciplinary Journal, 8*(3), 430–457. [https://doi.org/10.1207/S15328007SEM0803\\_5](https://doi.org/10.1207/S15328007SEM0803_5)
- Eninger, L., Ferrer-Wreder, L., Eichas, K., Olsson, T. M., Hau, H. G., Allodi, M. W., Smedler, A.-C., Sedem, M., Gull, I. C., & Herkner, B. (2021). A Cluster Randomized Trial of Promoting Alternative Thinking Strat-

- egies (PATHS®) With Swedish Preschool Children. *Frontiers in Psychology*, 12. <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.695288>
- Eriksson, M. (2017). The Swedish Communicative Development Inventory III: Parent reports on language in preschool children. *International Journal of Behavioral Development*, 41(5), 647–654. <https://doi.org/10.1177/0165025416644078>
- Fälth, L., Selenius, H., & Egerhag, H. (2022). A cross-sectional study on reading among young L1 and L2 students in Sweden. *European Journal of Special Needs Education*, 0(0), 1–12. <https://doi.org/10.1080/08856257.2022.2050973>
- Fane, J. (2017). Using emoji as a tool to support child wellbeing from a strengths-based approach. *Learning Communities: International Journal of Learning in Social Contexts*, 21, 96–107. <https://doi.org/10.18793/lcj2017.21.08>
- Fane, J., MacDougall, C., Jovanovic, J., Redmond, G., & Gibbs, L. (2020). Preschool Aged Children’s Accounts of their Own Wellbeing: Are Current Wellbeing Indicators Applicable to Young Children? *Child Indicators Research*, 1893–1920. <https://doi.org/10.1007/s12187-020-09735-7>
- Fenson, L., Dale, P. S., Reznick, J. S., Bates, E., Thal, D. J., Pethick, S. J., Tomasello, M., Mervis, C. B., & Stiles, J. (1994). Variability in Early Communicative Development. *Monographs of the Society for Research in Child Development*, 59(5), i–185. <https://doi.org/10.2307/1166093>
- Fenson, L., Marchman, V. A., Thal, D. J., Dale, P. S., Reznick, J. S., & Bates, E. (2006). *MacArthur-Bates Communicative Development Inventories, Second Edition* [dataset]. <https://doi.org/10.1037/t11538-000>
- Fitton, L., McIlraith, A. L., & Wood, C. L. (2018). Shared Book Reading Interventions With English Learners: A Meta-Analysis. *Review of Educational Research*, 88(5), 712–751. <https://doi.org/10.3102/0034654318790909>
- Flack, Z. M., Field, A. P., & Horst, J. S. (2018). *The Effects of Shared Storybook Reading on Word Learning: A Meta-Analysis*. 13.
- Fleury, V. P., Miramontez, S. H., Hudson, R. F., & Schwartz, I. S. (2014). Promoting active participation in book reading for preschoolers with Autism Spectrum Disorder: A preliminary study. *Child Language Teaching and Therapy*, 30(3), 273–288. <https://doi.org/10.1177/0265659013514069>
- Florian, L. (2014). Reimagining Special Education: Why New Approaches are Needed. In L. Florian, *The SAGE Handbook of Special Education: Two Volume Set* (pp. 9–22). SAGE Publications Ltd. <https://doi.org/10.4135/9781446282236.n3>

- Flynn, K. S. (2011). Developing Children's Oral Language Skills Through Dialogic Reading: Guidelines for Implementation. *TEACHING EXCEPTIONAL CHILDREN*, 2, 8. <https://doi.org/10.1177/004005991104400201>
- Foorman, B. R., Herrera, S., Petscher, Y., Mitchell, A., & Truckenmiller, A. (2015). The structure of oral language and reading and their relation to comprehension in Kindergarten through Grade 2. *Reading and Writing*, 28(5), 655–681. <https://doi.org/10.1007/s11145-015-9544-5>
- Ford, T. (2013). *How I Feel About My School*. University of Exeter. [https://medicine.exeter.ac.uk/media/universityofexeter/medicalschool/research/healthservicesresearch/docs/childhealth/HI-FAMS\\_web\\_version.pdf](https://medicine.exeter.ac.uk/media/universityofexeter/medicalschool/research/healthservicesresearch/docs/childhealth/HI-FAMS_web_version.pdf)
- Fox, L., Carta, J., Strain, P. S., Dunlap, G., & Hemmeter, M. L. (2010). Response to intervention and the pyramid model. *Infants and Young Children*, 23(1), 3–13. Scopus. <https://doi.org/10.1097/IYC.0b013e3181c816e2>
- Frankenberg, S. J., Taguchi, H. L., Gerholm, T., Bodén, L., Kallioinen, P., Kjällander, S., Palmer, A., & Tonér, S. (2019). Bidirectional Collaborations in an Intervention Randomized Controlled Trial Performed in the Swedish Early Childhood Education Context. *Journal of Cognition and Development*, 20(2), 182–202. <https://doi.org/10.1080/15248372.2018.1520712>
- Fridell, A., Coco, C., Borg, A., & Bölte, S. (2023). School-based social skills group training (SKOLKONTAKT™): A pilot randomized controlled trial. *Frontiers in Psychology*, 14, 1128288. <https://doi.org/10.3389/fpsyg.2023.1128288>
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., Bohnacker, U., & Walters, J. (2012). MAIN: Multilingual assessment instrument for narratives. *ZAS Papers in Linguistics*, 56, 155–155. <https://doi.org/10.21248/zaspil.56.2019.414>
- Ganotice, F. A., Downing, K., Mak, T., Chan, B., & Lee, W. Y. (2017). Enhancing parent-child relationship through dialogic reading. *Educational Studies*, 43(1), 51–66. <https://doi.org/10.1080/03055698.2016.1238340>
- Garvis, S., & Lunneblad, J. (2018). *Inequalities in Access to Early Childhood Education and Care in Sweden. The Equal Access study* [ICEC Working Paper Series – Volume 3]. Deutsches Jugendinstitut.
- Gearing, R. E., El-Bassel, N., Ghesquiere, A., Baldwin, S., Gillies, J., & Ngeow, E. (2011). Major ingredients of fidelity: A review and scientific guide to improving quality of intervention research implementation. *Clinical Psychology Review*, 31(1), 79–88. <https://doi.org/10.1016/j.cpr.2010.09.007>
- Gersten, R., & Keating, T. (1987). Long-Term Benefits from Direct Instruction. *Educational Leadership*, 44(6), 28.

- Gertner, Y., Fisher, C., & Eisengart, J. (2006). Learning Words and Rules: Abstract Knowledge of Word Order in Early Sentence Comprehension. *Psychological Science*, 17(8), 684–691. <https://doi.org/10.1111/j.1467-9280.2006.01767.x>
- Gillanders, C. (2007). An english-speaking prekindergarten teacher for young latino children: Implications of the teacher-child relationship on second language learning. *Early Childhood Education Journal*, 35(1), 47–54. Scopus. <https://doi.org/10.1007/s10643-007-0163-x>
- Girard, L.-C., Pingault, J.-B., Doyle, O., Falissard, B., & Tremblay, R. E. (2017). Expressive language and prosocial behaviour in early childhood: Longitudinal associations in the UK Millennium Cohort Study. *European Journal of Developmental Psychology*, 14(4), 381–398. <https://doi.org/10.1080/17405629.2016.1215300>
- Gollan, T. H., Starr, J., & Ferreira, V. S. (2015). More than use it or lose it: The number-of-speakers effect on heritage language proficiency. *Psychonomic Bulletin & Review*, 22(1), 147–155. <https://doi.org/10.3758/s13423-014-0649-7>
- Government Office. (2017). *Uppdrag om försöksverksamhet med praktiktäna forskning [Commisson of near practice reserach experiment]*. Rege-ringskansliet. <https://www.regeringen.se/regeringsuppdrag/2017/03/uppdrag-om-forsoksverksamhet-med-praktiktarna-forskning/>
- Granfeldt, J. (2000). The acquisition of the determiner phrase in bilingual and second language French. *Bilingualism: Language and Cognition*, 3(3), 263–280. <https://doi.org/10.1017/S136672890000377>
- Greenhouse, S. W., & Geisser, S. (1959). On methods in the analysis of profile data. *Psychometrika*, 24(2), 95–112. <https://doi.org/10.1007/BF02289823>
- Greenwood, C. R., Schnitz, A. G., Carta, J. J., Wallisch, A., & Irvin, D. W. (2020). A systematic review of language intervention research with low-income families: A word gap prevention perspective. *Early Childhood Research Quarterly*, 50, 230–245. <https://doi.org/10.1016/j.ecresq.2019.04.001>
- Grolig, L. (2020). Shared Storybook Reading and Oral Language Development: A Bioecological Perspective. *Frontiers in Psychology*, 11, 1818. <https://doi.org/10.3389/fpsyg.2020.01818>
- Grolig, L., Cohrdes, C., Tiffin-Richards, S. P., & Schroeder, S. (2020). Narrative dialogic reading with wordless picture books: A cluster-randomized intervention study. *Early Childhood Research Quarterly*, 51, 191–203. <https://doi.org/10.1016/j.ecresq.2019.11.002>
- Grøver, V., Rydland, V., Gustafsson, J.-E., & Snow, C. E. (2020). Shared Book Reading in Preschool Supports Bilingual Children's Second-Language Learning: A Cluster-Randomized Trial. *Child Development*, 91(6), 2192–2210. <https://doi.org/10.1111/cdev.13348>

- Grøver, V., Rydland, V., Gustafsson, J.-E., & Snow, C. E. (2022). Do teacher talk features mediate the effects of shared reading on preschool children's second-language development? *Early Childhood Research Quarterly*, *61*, 118–131. <https://doi.org/10.1016/j.ecresq.2022.06.002>
- Grøver, V., Snow, C. E., Evans, L., & Strømme, H. (2023). Overlooked advantages of interactive book reading in early childhood? A systematic review and research agenda. *Acta Psychologica*, *239*, 103997. <https://doi.org/10.1016/j.actpsy.2023.103997>
- Gunnerud, H. L., ten Braak, D., Reikerås, E. K. L., Donolato, E., & Melby-Lervåg, M. (2020). Is bilingualism related to a cognitive advantage in children? A systematic review and meta-analysis. *Psychological Bulletin*. <https://doi.org/10.1037/bul0000301>
- Hadley, E. B., Barnes, E. M., & Hwang, H. (2023). Purposes, Places, and Participants: A Systematic Review of Teacher Language Practices and Child Oral Language Outcomes in Early Childhood Classrooms. *Early Education and Development*, *34*(4), 862–884. <https://doi.org/10.1080/10409289.2022.2074203>
- Hadley, E. B., Barnes, E. M., Wiernik, B. M., & Raghavan, M. (2022). A meta-analysis of teacher language practices in early childhood classrooms. *Early Childhood Research Quarterly*, *59*, 186–202. <https://doi.org/10.1016/j.ecresq.2021.12.002>
- Hadley, E. B., & Dickinson, D. K. (2020). Measuring young children's word knowledge: A conceptual review. *Journal of Early Childhood Literacy*, *20*(2), 223–251. <https://doi.org/10.1177/1468798417753713>
- Hagen, Å. M., Melby-Lervåg, M., & Lervåg, A. (2017). Improving language comprehension in preschool children with language difficulties: A cluster randomized trial. *Journal of Child Psychology and Psychiatry*, *58*(10), 1132–1140. <https://doi.org/10.1111/jcpp.12762>
- Hakuta, K. (1986). *Mirror of language: The debate on bilingualism* (Nachdr.). Basic Books.
- Hakuta, K., Goto Butler, Y., & Witt, D. (2000). How Long Does It Take English Learners to Attain Proficiency? *The University of California Linguistic Minority Research Institute Policy Report*, *1*.
- Hansen, J. E., & Broekhuizen, M. L. (2021). Quality of the Language-Learning Environment and Vocabulary Development in Early Childhood. *Scandinavian Journal of Educational Research*, *65*(2), 302–317. <https://doi.org/10.1080/00313831.2019.1705894>
- Harn, B., Parisi, D., & Stoolmiller, M. (2013). Balancing Fidelity with Flexibility and Fit: What Do We Really Know about Fidelity of Implementation in Schools? *Exceptional Children*, *79*(3), 181–193. <https://doi.org/10.1177/001440291307900204>
- Hascher, T. (2008). Quantitative and qualitative research approaches to assess student well-being. *International Journal of Educational Research*, *47*(2), 84–96. <https://doi.org/10.1016/j.ijer.2007.11.016>

- Haug, P. (2017). Understanding inclusive education: Ideals and reality. *Scandinavian Journal of Disability Research*, 19(3), 206–217. <https://doi.org/10.1080/15017419.2016.1224778>
- Heckman, J. J. (2006). Skill Formation and the Economics of Investing in Disadvantaged Children. *Science*, 312(5782), 1900–1902. <https://doi.org/10.1126/science.1128898>
- Hemmeter, M. L., Fox, L., & Hardy, J. K. (2016). Supporting the Implementation of Tiered Models of Behavior Support in Early Childhood Settings. In B. Reichow, B. A. Boyd, E. E. Barton, & S. L. Odom (Eds.), *Handbook of Early Childhood Special Education* (pp. 247–265). Springer International Publishing. [https://doi.org/10.1007/978-3-319-28492-7\\_14](https://doi.org/10.1007/978-3-319-28492-7_14)
- Hendry, A., Jones, E. J. H., & Charman, T. (2016). Executive function in the first three years of life: Precursors, predictors and patterns. *Developmental Review*, 42, 1–33. <https://doi.org/10.1016/j.dr.2016.06.005>
- Hindman, A. H., Farrow, J., & Wasik, B. A. (2022). Teacher–Child Conversations in Preschool: Insights Into How Teacher Feedback Supports Language Development. *Topics in Language Disorders*, 42(4), 336. <https://doi.org/10.1097/TLD.0000000000000295>
- Hjetland, H. N., Brinchmann, E. I., Scherer, R., Hulme, C., & Melby-Lervåg, M. (2020). Preschool pathways to reading comprehension: A systematic meta-analytic review. *Educational Research Review*, 30, 100323. <https://doi.org/10.1016/j.edurev.2020.100323>
- Hoff, E. (2003). The Specificity of Environmental Influence: Socioeconomic Status Affects Early Vocabulary Development via Maternal Speech. *Child Development*, 74(5), 1368–1378.
- Hoff, E. (2006). How social contexts support and shape language development. *Developmental Review*, 26(1), 55–88. <https://doi.org/10.1016/j.dr.2005.11.002>
- Hoff, E., Core, C., Place, S., Rumiche, R., Señor, M., & Parra, M. (2012). Dual language exposure and early bilingual development. *Journal of Child Language*, 39(1), 1–27. <https://doi.org/10.1017/S0305000910000759>
- Hoffman, J. L., Teale, W. H., & Paciga, K. A. (2014). Assessing vocabulary learning in early childhood. *Journal of Early Childhood Literacy*, 14(4), 459–481. <https://doi.org/10.1177/1468798413501184>
- Holmström, K. (2015). Lexikal organisation hos en- och flerspråkiga skolbarn med språkstörning [Thesis/doccomp, Lund University]. In *Lund University Faculty of Medicine Doctoral Dissertation Series: Vol. 2015:125*. <http://lup.lub.lu.se/record/8166993>
- Horst, J. S. (2015). Word learning via shared storybook reading. In B. Kümmerling-Meibauer, J. Meibauer, K. Nachtigäller, & K. J. Rohlfing (Eds.), *Learning from picturebooks: Perspectives from child development and literacy studies*. Routledge.

- Horst, J. S., & Samuelson, L. K. (2008). Fast Mapping but Poor Retention by 24-Month-Old Infants. *Infancy*, *13*(2), 128–157. <https://doi.org/10.1080/15250000701795598>
- Houen, S., Thorpe, K., van Os, D., Westwood, E., Toon, D., & Staton, S. (2022). Eliciting and responding to young children’s talk: A systematic review of educators’ interactional strategies that promote rich conversations with children aged 2–5 years. *Educational Research Review*, *37*, 100473. <https://doi.org/10.1016/j.edurev.2022.100473>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Hulme, C., Snowling, M. J., West, G., Lervåg, A., & Melby-Lervåg, M. (2020). Children’s Language Skills Can Be Improved: Lessons From Psychological Science for Educational Policy. *Current Directions in Psychological Science*, *0963721420923684*. <https://doi.org/10.1177/0963721420923684>
- Hume, L. E., Lonigan, C. J., & McQueen, J. D. (2015). Children’s literacy interest and its relation to parents’ literacy-promoting practices. *Journal of Research in Reading*, *38*(2), 172–193. <https://doi.org/10.1111/j.1467-9817.2012.01548.x>
- Huttenlocher, J., Haight, W., Bryk, A., Seltzer, M., & Lyons, T. (1991). Early Vocabulary Growth: Relation to Language Input and Gender. *Developmental Psychology*, *27*(2), 236–248. Scopus. <https://doi.org/10.1037/0012-1649.27.2.236>
- Huttenlocher, J., Waterfall, H., Vasilyeva, M., Vevea, J., & Hedges, L. V. (2010). Sources of Variability in Children’s Language Growth. *Cognitive Psychology*, *61*(4), 343–365. <https://doi.org/10.1016/j.cogpsych.2010.08.002>
- Hutton, J. S., Phelan, K., Horowitz-Kraus, T., Dudley, J., Altaye, M., DeWitt, T., & Holland, S. K. (2017). Shared Reading Quality and Brain Activation during Story Listening in Preschool-Age Children. *Journal of Pediatrics*, *191*, 204–211.e1. Scopus. <https://doi.org/10.1016/j.jpeds.2017.08.037>
- Huus, K., Morwane, R., Ramaahlo, M., Balton, S., Pettersson, E., Gimble Berglund, I., & Dada, S. (2021). Voices of children with intellectual disabilities on participation in daily activities. *African Journal of Disability*, *10*, 792. <https://doi.org/10.4102/ajod.v10i0.792>
- Huynh, H., & Feldt, L. S. (1976). Estimation of the Box Correction for Degrees of Freedom from Sample Data in Randomized Block and Split-Plot Designs. *Journal of Educational Statistics*, *1*(1), 69–82. <https://doi.org/10.3102/10769986001001069>
- IEA. (2023). *Countries’ Reading Achievement—PIRLS 2021*. <https://pirls2021.org/results/achievement/>
- Individuals with Disabilities Act, 20 U.S.C. § 1400 (2004).

- Janus, M., & Duku, E. (2007). The School Entry Gap: Socioeconomic, Family, and Health Factors Associated With Children's School Readiness to Learn. *Early Education & Development, 18*(3), 375–403. <https://doi.org/10.1080/10409280701610796a>
- Jimenez, M. E., Mendelsohn, A. L., Lin, Y., Shelton, P., & Reichman, N. (2019). Early Shared Reading Is Associated with Less Harsh Parenting. *Journal of Developmental and Behavioral Pediatrics : JDBP, 40*(7), 530–537. Scopus. <https://doi.org/10.1097/DBP.0000000000000687>
- Jurkic, A., Halliday, S. E., & Hascher, T. (2023). The relationship of language and social competence of preschool- and kindergarten-age single and dual language learners in Switzerland and Germany. *Early Childhood Research Quarterly, 64*, 72–83. Scopus. <https://doi.org/10.1016/j.ecresq.2023.02.003>
- Justice, L. M., Jiang, H., & Strasser, K. (2018). Linguistic environment of preschool classrooms: What dimensions support children's language growth? *Early Childhood Research Quarterly, 42*, 79–92. <https://doi.org/10.1016/j.ecresq.2017.09.003>
- Karlsen, J., Lyster, S.-A. H., & Lervåg, A. (2017). Vocabulary development in Norwegian L1 and L2 learners in the kindergarten–school transition. *Journal of Child Language, 44*(2), 402–426. <https://doi.org/10.1017/S0305000916000106>
- Kaya, M., & Erdem, C. (2021). Students' Well-Being and Academic Achievement: A Meta-Analysis Study. *Child Indicators Research, 14*(5), 1743–1767. <https://doi.org/10.1007/s12187-021-09821-4>
- Kennedy, C., & McLoughlin, A. (2023). Developing the Emergent Literacy Skills of English Language Learners Through Dialogic Reading: A Systematic Review. *Early Childhood Education Journal, 51*(2), 317–332. <https://doi.org/10.1007/s10643-021-01291-1>
- Keyes, C. L. M. (2003). *Flourishing: Positive psychology and the life well-lived [Electronic resource]*. American Psychological Association.
- Klapp, T., Klapp, A., & Gustafsson, J.-E. (2023). Relations between students' well-being and academic achievement: Evidence from Swedish compulsory school. *European Journal of Psychology of Education. https://doi.org/10.1007/s10212-023-00690-9*
- Klem, M., Hagtvet, B., Hulme, C., & Gustafsson, J.-E. (2016). Screening for Language Delay: Growth Trajectories of Language Ability in Low- and High-Performing Children. *Journal of Speech, Language and Hearing Research (Online), 59*(5), 1035–1045. [https://doi.org/10.1044/2016\\_JSLHR-L-15-0289](https://doi.org/10.1044/2016_JSLHR-L-15-0289)
- Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed). Guilford Press.
- Kohl, K., Willard, J. A., Agache, A., Bihler, L.-M., & Leyendecker, B. (2019). Classroom Quality, Classroom Composition, and Age at Entry: Experiences in Early Childhood Education and Care and Single and Dual

- Language Learners' German Vocabulary. *AERA Open*, 5(1), 2332858419832513. <https://doi.org/10.1177/2332858419832513>
- Korpi, B. M. (2015). *The politics of preschool. Intentions and decisions underlying the emergence and growth of Swedish preschool*. Ministry of Education and Research.
- Kraft, M. A., Blazar, D., & Hogan, D. (2018). The Effect of Teacher Coaching on Instruction and Achievement: A Meta-Analysis of the Causal Evidence. *Review of Educational Research*, 88(4), 547–588. <https://doi.org/10.3102/0034654318759268>
- Krosnick, J. A. (1991). Response strategies for coping with the cognitive demands of attitude measures in surveys. *Applied Cognitive Psychology*, 5(3), 213–236. <https://doi.org/10.1002/acp.2350050305>
- Labov, W., & Waletzky, J. (1967). Narrative analysis: Oral versions of personal experience. In J. Helm (Ed.), *Essays on the verbal and visual arts: Proceedings of the 1966 annual spring meeting of the American Ethnological Society*. Distributed by the University of Washington Press.
- Language and Reading Research Consortium. (2015). The Dimensionality of Language Ability in Young Children. *Child Development*, 86(6), 1948–1965. <https://doi.org/10.1111/cdev.12450>
- Larsson, K., Björk-Willén, P., Haraldsson, K., & Hansson, K. (2022). Children's use of English as lingua franca in Swedish preschools. *Multilingua*. <https://doi.org/10.1515/multi-2022-0062>
- Law, J., Charlton, J., & Asmussen, K. (2017). *Language as a child wellbeing indicator* (p. 56). Early Intervention Foundation.
- Law, J., Charlton, J., Dockrell, J., Gascoigne, M., McKean, C., & Theakston, A. (2017). *Early Language Development: Needs, provision, and intervention for preschool children from socioeconomically disadvantaged backgrounds* (p. 203). Education Endowment Foundation.
- Law, J., Rush, R., Schoon, I., & Parsons, S. (2009). Modeling Developmental Language Difficulties From School Entry Into Adulthood: Literacy, Mental Health, and Employment Outcomes. *Journal of Speech, Language, and Hearing Research*, 52(6), 1401–1416. [https://doi.org/10.1044/1092-4388\(2009/08-0142\)](https://doi.org/10.1044/1092-4388(2009/08-0142))
- Lee, J. (2011). Size matters: Early vocabulary as a predictor of language and literacy competence. *Applied Psycholinguistics*, 32(1), 69–92. <https://doi.org/10.1017/S0142716410000299>
- Lepola, J., Kajamies, A., & Tiilikainen, M. (2022). Opportunities and participation in conversations: The roles of teacher's approaches to dialogic reading and child's story comprehension. *Journal of Early Childhood Education Research*, 11(1), Article 1.
- Lervåg, A., & Aukrust, G. V. (2010). Vocabulary Knowledge Is a Critical Determinant of the Difference in Reading Comprehension Growth between First and Second Language Learners. *Journal of Child Psychology and Psychiatry*, 51(5), 612–620.

- Lervåg, A., Dolean, D., Tincas, I., & Melby-Lervåg, M. (2019). Socioeconomic background, nonverbal IQ and school absence affects the development of vocabulary and reading comprehension in children living in severe poverty. *Developmental Science*, 22(5), e12858. <https://doi.org/10.1111/desc.12858>
- Lever, R., & Sénéchal, M. (2011). Discussing stories: On how a dialogic reading intervention improves kindergartners' oral narrative construction. *Journal of Experimental Child Psychology*, 108(1), 1–24. <https://doi.org/10.1016/j.jecp.2010.07.002>
- Levickis, P., Eadie, P., Mensah, F., McKean, C., Bavin, E. L., & Reilly, S. (2023). Associations between responsive parental behaviours in infancy and toddlerhood, and language outcomes at age 7 years in a population-based sample. *International Journal of Language & Communication Disorders*, 58(4), 1098–1112. <https://doi.org/10.1111/1460-6984.12846>
- Lewis, A. D., Huebner, E. S., Reschly, A. L., & Valois, R. F. (2009). The Incremental Validity of Positive Emotions in Predicting School Functioning. *Journal of Psychoeducational Assessment*, 27(5), 397–408. <https://doi.org/10.1177/0734282908330571>
- Lewis, M., & Michalson, L. (1983). The Measurement of Emotion. In M. Lewis & L. Michalson (Eds.), *Children's Emotions and Moods: Developmental Theory and Measurement* (pp. 231–262). Springer US. [https://doi.org/10.1007/978-1-4613-3620-4\\_8](https://doi.org/10.1007/978-1-4613-3620-4_8)
- Lieven, E. (2019). Input, Interaction, and Learning in Early Language Development. In E. Lieven, M. Rowe, P. Uccelli, & V. Grøver (Eds.), *Learning through Language: Towards an Educationally Informed Theory of Language Learning* (pp. 19–30). Cambridge University Press. <https://doi.org/10.1017/9781316718537.003>
- Lindgren, J., & Vogels, J. (2018). Referential cohesion in Swedish preschool children's narratives. *Journal of Pragmatics*, 133, 45–62. <https://doi.org/10.1016/j.pragma.2018.06.007>
- Lindsay, G., Dockrell, J., Law, J., & Roulstone, S. (2012). *The Better Communication Research Programme: Improving provision for children and young people with speech, language and communication needs*. Department for Education. <https://www.bettercommunication.org.uk/BCRP/DFE-RR247-BCRP1.pdf>
- Lindström-Sandahl, H., Elwér, Å., Samuelsson, S., & Danielsson, H. (2023). Effects of a phonics intervention in a randomized controlled study in Swedish second-grade students at risk of reading difficulties. *Dyslexia*, 29(4), 290–311. <https://doi.org/10.1002/dys.1751>
- Lindvall, J., Kirsten, N., Eriksson, K., Brehmer, D., & Ryve, A. (2023). Does the duration of professional development programs influence effects on instruction? An analysis of 174 lessons during a national-scale program. *European Journal of Teacher Education*, 1–19. <https://doi.org/10.1080/02619768.2023.2198101>

- Little, T. D. (2013). *Longitudinal Structural Equation Modeling*. Guilford Publications. <http://ebookcentral.proquest.com/lib/sub/detail.action?docID=1137447>
- Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To Parcel or Not to Parcel: Exploring the Question, Weighing the Merits. *Structural Equation Modeling: A Multidisciplinary Journal*, 9(2), 151–173. [https://doi.org/10.1207/S15328007SEM0902\\_1](https://doi.org/10.1207/S15328007SEM0902_1)
- Loades, M. E., & Mastroyannopoulou, K. (2010). Teachers' Recognition of Children's Mental Health Problems. *Child and Adolescent Mental Health*, 15(3), 150–156. <https://doi.org/10.1111/j.1475-3588.2009.00551.x>
- Lundy, L., Kilkelly, U., Byrne, B., & Kang, J. (2012). *The UN Convention on the Rights of the Child: A study of legal implementation in 12 countries*. Queen's University Belfast.
- Lyster, A.-S., Horn, E., & Rygvold, A.-L. (2010). Ordforrad og ordforradsutvikling hos norske barn og unge. Resultater fra en utprøving av British Picture Vocabulary Scale, Second Edition (BPVS II). *Spesialpedagogikk*, 09, 35–43.
- Lyubomirsky, S., King, L., & Diener, E. (2005). The Benefits of Frequent Positive Affect: Does Happiness Lead to Success? *Psychological Bulletin*, 131(6), 803–855. <http://dx.doi.org/10.1037/0033-2909.131.6.803>
- Manolson, A. (1992). *It Takes Two To Talk: A Parent's Guide to Helping Children Communicate* (1st edition). Imaginart Pr.
- Marklund, K., Andershed, A.-K., Andershed, H., Kalland, M., Kouvonen, P., Ogden, T., Hjort Oldrup, H., Sundell, K., Simic, N., & Söderström, E. (2012). *Nordic children—Early intervention for children and families* (K. Marklund & N. Simic, Eds.). Nordic Centre for Welfare and Social Issues. [https://nordicwelfare.org/wp-content/uploads/2018/02/5ENG\\_LR.pdf](https://nordicwelfare.org/wp-content/uploads/2018/02/5ENG_LR.pdf)
- Martucci, K. (2016). Shared storybook reading in the preschool setting and considerations for young children's theory of mind development. *Journal of Early Childhood Research*, 14(1), 55–68. <https://doi.org/10.1177/1476718X14523750>
- Mashford-Scott, A., Church, A., & Tayler, C. (2012). Seeking Children's Perspectives on their Wellbeing in Early Childhood Settings. *International Journal of Early Childhood*, 44(3), 231–247. <https://doi.org/10.1007/s13158-012-0069-7>
- Masten, A. S., & Cicchetti, D. (2010). Developmental cascades. *Development and Psychopathology*, 22(3), 491–495. <https://doi.org/10.1017/S0954579410000222>
- Mauchly, J. W. (1940). Significance Test for Sphericity of a Normal  $\Sigma$ -Variate Distribution. *The Annals of Mathematical Statistics*, 11(2), 204–209. <https://doi.org/10.1214/aoms/1177731915>

- May, F., Ford, T., Janssens, A., Newlove-Delgado, T., Russell, A. E., Salim, J., Ukoumunne, O. C., & Hayes, R. (2020). Attainment, attendance, and school difficulties in UK primary schoolchildren with probable ADHD. *British Journal of Educational Psychology*. <https://doi.org/10.1111/bjep.12375>
- McKean, C., Mensah, F. K., Eadie, P., Bavin, E. L., Bretherton, L., Cini, E., & Reilly, S. (2015). Levers for Language Growth: Characteristics and Predictors of Language Trajectories between 4 and 7 Years. *PLOS ONE*, *10*(8), e0134251. <https://doi.org/10.1371/journal.pone.0134251>
- McKean, C., & Reilly, S. (2023). Creating the conditions for robust early language development for all: Part two: Evidence informed public health framework for child language in the early years. *International Journal of Language & Communication Disorders*, 1460-6984.12927. <https://doi.org/10.1111/1460-6984.12927>
- McLeod, A. N., & McDade, H. L. (2011). Preschoolers' Incidental Learning of Novel Words During Storybook Reading. *Communication Disorders Quarterly*, *32*(4), 256–266. <https://doi.org/10.1177/1525740109354777>
- Metz, A., & Bartley, L. (2012). Active Implementation Frameworks for Program Success: How to Use Implementation Science to Improve Outcomes for Children. *Zero to Three*. <https://www.semanticscholar.org/paper/Active-Implementation-Frameworks-for-Program-How-to-Metz-Bartley/eee4d9c7f88d2e5ae1cb080dbd-feb84efe30ebeb>
- Mol, S. E., Bus, A. G., & de Jong, M. T. (2009). Interactive Book Reading in Early Education: A Tool to Stimulate Print Knowledge as Well as Oral Language. *Review of Educational Research*, *79*(2), 979–1007. <https://doi.org/10.3102/0034654309332561>
- Mol, S. E., Bus, A. G., de Jong, M. T., & Smeets, D. J. H. (2008). Added Value of Dialogic Parent–Child Book Readings: A Meta-Analysis. *Early Education and Development*, *19*(1), 7–26. <https://doi.org/10.1080/10409280701838603>
- Montserrat, C., Savahl, S., Adams, S., Grigoraş, B. A., Bacter, C., & Bălăţescu, S. (2021). Children's Perspectives on Scale Response Options of Subjective Well-Being Measures: A Comparison between Numerical and Verbal-Response Formats. *Child Indicators Research*, *14*(1), 53–75. <https://doi.org/10.1007/s12187-020-09748-2>
- Mood, C., & Jonsson, J. O. (2023). *Karriärer och barriärer – en ESO-rapport om skolgång och etablering för unga med utländsk bakgrund*. SOU. [https://eso.expertgrupp.se/rapporter/2023\\_8\\_karriarer-och-barriarer/](https://eso.expertgrupp.se/rapporter/2023_8_karriarer-och-barriarer/)
- Müller, L.-M., Howard, K., Wilson, E., Gibson, J., & Katsos, N. (2020). Bilingualism in the family and child well-being: A scoping review. *International Journal of Bilingualism*, *24*(5–6), 1049–1070. <https://doi.org/10.1177/1367006920920939>

- Mullis, I., Von Davier, M., Foy, P., Fishbein, B., Reynolds, K., & Wry, E. (2023). *PIRLS 2021 International Results in Reading*. TIMSS & PIRLS International Study Center. <https://doi.org/10.6017/lse.tpisc.tr2103.kb5342>
- Munro, N., Baker, E., McGregor, K., Docking, K., & Arciuli, J. (2012). Why Word Learning is not Fast. *Frontiers in Psychology*, 3. <https://www.frontiersin.org/articles/10.3389/fpsyg.2012.00041>
- Muthén, L. K., & Muthén, B. O. (1998). *Mplus user's guide*. Muthén & Muthén. [https://www.statmodel.com/download/usersguide/MplusUserGuideVer\\_8.pdf](https://www.statmodel.com/download/usersguide/MplusUserGuideVer_8.pdf)
- Nasiopoulou, P., Mellgren, E., Sheridan, S., & Williams, P. (2023). Conditions for Children's Language and Literacy Learning in Swedish Preschools: Exploring Quality Variations with ECERS-3. *Early Childhood Education Journal*, 51(7), 1305–1316. <https://doi.org/10.1007/s10643-022-01377-4>
- NELP. (2008). *Developing Early Literacy: Report of the National Early Literacy Panel*. 260.
- Neu, R. A. (2013). An Exploration of Oral Language Development in Spanish-Speaking Preschool Students. *Early Childhood Education Journal*, 41(3), 211–218. <https://doi.org/10.1007/s10643-012-0545-6>
- Neuman, S. B., Kaefer, T., & Pinkham, A. M. (2018). A double dose of disadvantage: Language experiences for low-income children in home and school. *Journal of Educational Psychology*, 110(1), 102–118. <http://dx.doi.org/10.1037/edu0000201>
- Nicolopoulou, A., Hale, E., Leech, K., Weinraub, M., & Maurer, G. (2023). Shared Picturebook Reading in a Preschool Class: Promoting Narrative Comprehension Through Inferential Talk and Text Difficulty. *Early Childhood Education Journal*. <https://doi.org/10.1007/s10643-023-01497-5>
- Nordic Welfare Center. (2020). *Tidiga insatser för nyanlända barn, unga och föräldrar i Norden – evidens och lovande arbetssätt*. Nordic Welfare Center. <https://nordicwelfare.org/wp-content/uploads/2020/02/NWC-TidigaInsatser-NY.pdf>
- Nordström, T., Nilsson, S., Gustafson, S., & Svensson, I. (2019). Assistive technology applications for students with reading difficulties: Special education teachers' experiences and perceptions. *Disability and Rehabilitation: Assistive Technology*, 14(8), 798–808. <https://doi.org/10.1080/17483107.2018.1499142>
- Norling, M. (2014). Preschool staff's view of emergent literacy approaches in Swedish preschools. *Early Child Development and Care*, 184(4), 571–588. <https://doi.org/10.1080/03004430.2013.800511>
- Odom, S. L. (2009). The Tie That Binds: Evidence-Based Practice, Implementation Science, and Outcomes for Children. *Topics in Early Childhood Special Education*, 29(1), 53–61. <https://doi.org/10.1177/0271121408329171>

- Odom, S. L. (2016). The Role of Theory in Early Childhood Special Education and Early Intervention. In B. Reichow, B. A. Boyd, E. E. Barton, & S. L. Odom (Eds.), *Handbook of Early Childhood Special Education* (pp. 21–36). Springer International Publishing. [https://doi.org/10.1007/978-3-319-28492-7\\_2](https://doi.org/10.1007/978-3-319-28492-7_2)
- Odom, S. L., & Fettig, A. (2013). Evidence-Based Practice and Response to Intervention in Early Childhood. In *Handbook of Response to Intervention in Early Childhood*.
- OECD. (2001). *Starting Strong: Early Childhood Education and Care*. OECD. <https://doi.org/10.1787/9789264192829-en>
- OECD. (2006). *Where Immigrant Students Succeed: A Comparative Review of Performance and Engagement in PISA 2003*. OECD. <https://doi.org/10.1787/9789264023611-en>
- OECD. (2009). *Doing Better for Children*. OECD. <https://doi.org/10.1787/9789264059344-en>
- OECD. (2013). *PISA 2012 Results: Excellence through Equity (Volume II): Giving Every Student the Chance to Succeed*. OECD. <https://doi.org/10.1787/9789264201132-en>
- OECD. (2015). *OECD policy brief*. OECD. <https://www.oecd.org/sweden/sweden-achieving-greater-equality-of-opportunities-and-outcomes.pdf>
- OECD. (2017a). *Starting Strong 2017: Key OECD Indicators on Early Childhood Education and Care*. OECD. <https://doi.org/10.1787/9789264276116-en>
- OECD. (2017b). *The Pursuit of Gender Equality: An Uphill Battle*. Organisation for Economic Co-operation and Development. [https://www.oecd-ilibrary.org/social-issues-migration-health/the-pursuit-of-gender-equality\\_9789264281318-en](https://www.oecd-ilibrary.org/social-issues-migration-health/the-pursuit-of-gender-equality_9789264281318-en)
- OECD. (2019a). *PISA 2018 Insights and Interpretations*. OECD. <https://www.oecd.org/pisa/PISA%202018%20Insights%20and%20Interpretations%20FINAL%20PDF.pdf>
- OECD. (2019b). *TALIS 2018 Technical Report*.
- OECD. (2020). *Early Learning and Child Well-being: A Study of Five-year Olds in England, Estonia, and the United States*. OECD. <https://doi.org/10.1787/3990407f-en>
- OECD. (2022). *Education at a Glance 2022: OECD Indicators*. OECD. <https://doi.org/10.1787/3197152b-en>
- Ogden, T., & Fixsen, D. L. (2014). Implementation science: A brief overview and a look ahead. *Zeitschrift Für Psychologie/Journal of Psychology*, 222(1), 4–11. <http://dx.doi.org/10.1027/2151-2604/a000160>
- Oller, K., & Eilers, R. (Eds.). (2002). *Language and Literacy in Bilingual Children*. Multilingual Matters. <https://doi.org/10.21832/9781853595721>
- Peña, E. D., Bedore, L. M., Torres, J., & Prado, Y. (2022). Growing Up in Multilingual Communities. In C. McKean, J. Law, & S. Reilly (Eds.),

- Language Development: Individual Differences in a Social Context* (pp. 144–165). Cambridge University Press. <https://doi.org/10.1017/9781108643719.009>
- Pentimonti, J. M., Bowles, R. P., Zucker, T. A., Tambyraja, S. R., & Justice, L. M. (2021). Development and validation of the Systematic Assessment of Book Reading (SABR-2.2). *Early Childhood Research Quarterly*, *55*, 201–213. <https://doi.org/10.1016/j.ecresq.2020.11.007>
- Pentimonti, J. M., Walker, M. A., & Edmonds, R. Z. (2017). The Selection and Use of Screening and Progress Monitoring Tools in Data-Based Decision Making Within an MTSS Framework. *Perspectives on Language and Literacy*, *43*(3), 34–40.
- Perfetti, C. (2007). Reading Ability: Lexical Quality to Comprehension. *Scientific Studies of Reading*, *11*(4), 357–383. <https://doi.org/10.1080/10888430701530730>
- Persson, S. (2015). *En likvärdig förskola för alla barn—Innebörder och indikatorer*. Vetenskapsrådet.
- Pillinger, C., & Vardy, E. J. (2022). The story so far: A systematic review of the dialogic reading literature. *Journal of Research in Reading*, *45*(4), 533–548. <https://doi.org/10.1111/1467-9817.12407>
- Pillinger, C., & Wood, C. (2014). Pilot study evaluating the impact of dialogic reading and shared reading at transition to primary school: Early literacy skills and parental attitudes. *Literacy*, *48*(3), 155–163. <https://doi.org/10.1111/lit.12018>
- Pinto, A. I., Pessanha, M., & Aguiar, C. (2013). Effects of home environment and center-based child care quality on children’s language, communication, and literacy outcomes. *Early Childhood Research Quarterly*, *28*(1), 94–101. <https://doi.org/10.1016/j.ecresq.2012.07.001>
- Pistella, J., Zava, F., Sette, S., Baumgartner, E., & Baiocco, R. (2020). Peer Victimization, Social Functioning, and Temperament Traits in Preschool Children: The Role of Gender, Immigrant Status and Sympathy. *Child Indicators Research*, *13*(6), 2135–2156. Scopus. <https://doi.org/10.1007/s12187-020-09736-6>
- Plante, E., & Gómez, R. L. (2018). Learning Without Trying: The Clinical Relevance of Statistical Learning. *Language, Speech, and Hearing Services in Schools*, *49*(3 Suppl), 710–722. [https://doi.org/10.1044/2018\\_LSHSS-STLT1-17-0131](https://doi.org/10.1044/2018_LSHSS-STLT1-17-0131)
- Pollard, E. L., & Lee, P. D. (2003). Child Well-being: A Systematic Review of the Literature. *Social Indicators Research*, *61*(1), 59–78. <https://doi.org/10.1023/A:1021284215801>
- Pontoppidan, M., Keilow, M., Dietrichson, J., Solheim, O. J., Opheim, V., Gustafson, S., & Andersen, S. C. (2018). Randomised controlled trials in Scandinavian educational research. *Educational Research*, *60*(3), 311–335. <https://doi.org/10.1080/00131881.2018.1493351>
- Pool, J. L., Macy, M., Bells McManus, S., & Noh, J. (2008). An Exploratory Investigation of Frequently Cited Articles From the Early Childhood

- Intervention Literature, 1994 to 2005. *Topics in Early Childhood Special Education*, 28(3), 181–189. <https://doi.org/10.1177/0271121408321949>
- Preece, J., & Levy, R. (2018). *Understanding the barriers and motivations to shared reading with young children: The role of enjoyment and feedback* [Article in Press]. Scopus. <https://doi.org/10.1177/1468798418779216>
- Pring, R. (2000). The ‘False Dualism’ of Educational Research. *Journal of Philosophy of Education*, 34(2), 247–260. <https://doi.org/10.1111/1467-9752.00171>
- Prior, A., & MacWhinney, B. (2010). A bilingual advantage in task switching. *Bilingualism: Language and Cognition*, 13(2), 253–262. <https://doi.org/10.1017/S1366728909990526>
- Puskás, T. (2017). Picking up the threads. Languaging in a Swedish mainstream preschool. *Early Years*, 37(3), 313–325. <https://doi.org/10.1080/09575146.2016.1178712>
- Puskás, T., & Björk-Willén, P. (2017a). Dilemmatic aspects of language policies in a trilingual preschool group. *Multilingua*, 36(4), 425–449. <https://doi.org/10.1515/multi-2016-0025>
- Puskás, T., & Björk-Willén, P. (2017b). *Flerspråkighet och andraspråksutveckling*. Skolverket. <http://larportalen.skolverket.se>
- Quinn, J. M., Wagner, R. K., Petscher, Y., & Lopez, D. (2015). Developmental Relations Between Vocabulary Knowledge and Reading Comprehension: A Latent Change Score Modeling Study. *Child Development*, 86(1), 159–175. <https://doi.org/10.1111/cdev.12292>
- Reese, E. (2012). The tyranny of shared book-reading. In *Contemporary Debates in Childhood Education and Development*. Routledge.
- Reese, E., Leyva, D., Sparks, A., & Grolnick, W. (2010). Maternal Elaborative Reminiscing Increases Low-Income Children’s Narrative Skills Relative to Dialogic Reading. *Early Education and Development*, 21(3), 318–342.
- Reschly, A. L. (2010). Reading and School Completion: Critical Connections and Matthew Effects. *Reading & Writing Quarterly*, 26(1), 67–90. <https://doi.org/10.1080/10573560903397023>
- Rescorla, L. (2011). Late Talkers: Do Good Predictors of Outcome Exist? *Developmental Disabilities Research Reviews*, 17(2), 141–150. <https://doi.org/10.1002/ddrr.1108>
- Riad, R., Allodi, M. W., Siljehag, E., & Bölte, S. (2023). Language skills and well-being in early childhood education and care: A cross-sectional exploration in a Swedish context. *Frontiers in Education*, 8, 963180. <https://doi.org/10.3389/educ.2023.963180>
- Riad, R., Allodi, M. W., Siljehag, E., Wikman, C., Ford, T., & Bölte, S. (2021). How I Feel About My School—Adaptation and Validation of

- an Educational Well-Being Measure among Young Children in Sweden. *International Journal of Environmental Research and Public Health*, 18(10), Article 10. <https://doi.org/10.3390/ijerph18105075>
- Rinaldi, P., Pasqualetti, P., Volterra, V., & Caselli, M. C. (2023). Gender differences in early stages of language development. Some evidence and possible explanations. *Journal of Neuroscience Research*, 101(5), 643–653. <https://doi.org/10.1002/jnr.24914>
- Rodriguez Leon, L., & Payler, J. (2021). Surfacing complexity in shared book reading: The role of affordance, repetition and modal appropriation in children's participation. *Learning, Culture and Social Interaction*, 28, 100496. <https://doi.org/10.1016/j.lcsi.2021.100496>
- Rogde, K., Hagen, Å. M., Melby-Lervåg, M., & Lervåg, A. (2019). The effect of linguistic comprehension instruction on generalized language and reading comprehension skills: A systematic review. *Campbell Systematic Reviews*, 15(4). <https://doi.org/10.1002/cl2.1059>
- Rogde, K., Melby-Lervåg, M., & Lervåg, A. (2016). Improving the General Language Skills of Second-Language Learners in Kindergarten: A Randomized Controlled Trial. *Journal of Research on Educational Effectiveness*, 9(sup1), 150–170. <https://doi.org/10.1080/19345747.2016.1171935>
- Rose, E., Lehl, S., Ebert, S., & Weinert, S. (2018). Long-Term Relations Between Children's Language, the Home Literacy Environment, and Socioemotional Development From Ages 3 to 8. *Early Education and Development*, 29(3), 342–356. Scopus. <https://doi.org/10.1080/10409289.2017.1409096>
- Rosholm, M., Paul, A., Bleses, D., Højen, A., Dale, P. S., Jensen, P., Justice, L. M., Svarer, M., & Andersen, S. C. (2021). Are Impacts of Early Interventions in the Scandinavian Welfare State Consistent with a Heckman Curve? A Meta-Analysis. *Journal of Economic Surveys*, 35(1), 106–140. <https://doi.org/10.1111/joes.12400>
- Rowe, M. L. (2012). A longitudinal investigation of the role of quantity and quality of child-directed speech in vocabulary development. *Child Development*, 83(5), 1762–1774. <https://doi.org/10.1111/j.1467-8624.2012.01805.x>
- Ryan, R. M., & Deci, E. L. (2001). On Happiness and Human Potentials: A Review of Research on Hedonic and Eudaimonic Well-Being. *Annual Review of Psychology*, 52(1), 141–166. <https://doi.org/10.1146/annurev.psych.52.1.141>
- Rydland, V., & Grøver, V. (2020). Language use, home literacy environment, and demography: Predicting vocabulary skills among diverse young dual language learners in Norway. *Journal of Child Language*, 1–20. <https://doi.org/10.1017/S0305000920000495>
- Salameh, E.-K., Håkansson, G., & Nettelbladt, U. (2004). Developmental perspectives on bilingual Swedish-Arabic children with and without language impairment: A longitudinal study. *International Journal of*

- Language & Communication Disorders*, 39(1), 65–90.  
<https://doi.org/10.1080/13682820310001595628>
- SALAR. (2016a). *Classification of Swedish Municipalities 2017*.  
<https://skr.se/download/18.4d3d64e3177db55b16631b96/1615474478946/Classification%20of%20Swedish%20Municipalities%202017.pdf>
- SALAR. (2016b). *Classification of Swedish Municipalities 2017*.  
<https://skr.se/download/18.6b78741215a632d39cbcc85/1487772640274/Classification%20of%20Swedish%20Municipalities%202017.pdf>
- SALAR. (2022). *AB 20 Allmänna bestämmelser*. <https://www.sverigeslarrare.se/siteassets/1.-rad-och-stod/kollektivavtal/skrsobona/ab-20-ilydelse-2022-10-01.pdf>
- SALAR. (2024). *Öppna jämförelser: Förskola 2024 [open comparison of preschools 2024]* [Text]. <https://skr.se/skr/tjanster/statistik/oppna-jamforelser/skola/forskola.34903.html>
- Sandall, S. R. (2019). *Building blocks for teaching preschoolers with special needs* (Third Edition). Paul H. Brookes Publishing Co.
- Sandseter, E. B. H., & Seland, M. (2016). Children’s Experience of Activities and Participation and their Subjective Well-Being in Norwegian Early Childhood Education and Care Institutions. *Child Indicators Research*, 9(4), 913–932. <https://doi.org/10.1007/s12187-015-9349-8>
- Sandseter, E. B. H., & Seland, M. (2018). 4-6 year-Old Children’s Experience of Subjective Well-Being and Social Relations in ECEC Institutions. *Child Indicators Research*, 11(5), 1585–1601. <https://doi.org/10.1007/s12187-017-9504-5>
- Schaffer, G. E. (2023). *Multi-Tiered Systems of Support: A Practical Guide to Preventative Practice [Elektroic resource]*. SAGE Publications, Inc.
- Scharfen, J., Peters, J. M., & Holling, H. (2018). Retest effects in cognitive ability tests: A meta-analysis. *Intelligence*, 67, 44–66. <https://doi.org/10.1016/j.intell.2018.01.003>
- Scheibel, G., Chen, P.-Y., Zaeske, L. M., Wills, H. P., & Zimmerman, K. N. (2023). Improving Implementation Fidelity With Teacher-Directed Self-Monitoring Interventions: A Systematic Review. *Journal of Positive Behavior Interventions*, 25(4), 253–269. <https://doi.org/10.1177/10983007221137368>
- Schmerse, D., Anders, Y., Flöter, M., Wieduwilt, N., Roßbach, H.-G., & Tietze, W. (2018). Differential effects of home and preschool learning environments on early language development. *British Educational Research Journal*, 44(2), 338–357. <https://doi.org/10.1002/berj.3332>
- Schnepf, S. V. (2007). Immigrants’ educational disadvantage: An examination across ten countries and three surveys. *Journal of Population Economics*, 20(3), 527–545. <https://doi.org/10.1007/s00148-006-0102-y>

- Schoon, I., Parsons, S., Rush, R., & Law, J. (2010). Children's Language Ability and Psychosocial Development: A 29-Year Follow-up Study. *Pediatrics*, *126*(1), e73–e80. <https://doi.org/10.1542/peds.2009-3282>
- Seligman, M. E. P., Ernst, R. M., Gillham, J., Reivich, K., & Linkins, M. (2009). Positive education: Positive psychology and classroom interventions. *Oxford Review of Education*, *35*(3), 293–311. <https://doi.org/10.1080/03054980902934563>
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Houghton Mifflin.
- Shepherd, K. G., Fowler, S., McCormick, J., Wilson, C. L., & Morgan, D. (2016). The Search for Role Clarity: Challenges and Implications for Special Education Teacher Preparation. *Teacher Education and Special Education*, *39*(2), 83–97. <https://doi.org/10.1177/0888406416637904>
- Sheridan, S. (2009). Discerning Pedagogical Quality in Preschool. *Scandinavian Journal of Educational Research*, *53*(3), 245–261. <https://doi.org/10.1080/00313830902917295>
- Sheridan, S., & Gjems, L. (2017). Preschool as an Arena for Developing Teacher Knowledge Concerning Children's Language Learning. *Early Childhood Education Journal*, *45*(3), 347–357. <https://doi.org/10.1007/s10643-015-0756-8>
- Shneidman, L. A., Arroyo, M. E., Levine, S. C., & Goldin-Meadow, S. (2013). What counts as effective input for word learning? *Journal of Child Language*, *40*(3), 672–686. <https://doi.org/10.1017/S0305000912000141>
- Shonkoff, J. P., & Meisels, S. J. (2000). Preface. In J. P. Shonkoff & S. J. Meisels (Eds.), *Handbook of Early Childhood Intervention* (2nd ed., pp. xvii–xviii). Cambridge University Press. <https://doi.org/10.1017/CBO9780511529320.002>
- Shoshani, A., & Slone, M. (2017). Positive Education for Young Children: Effects of a Positive Psychology Intervention for Preschool Children on Subjective Well Being and Learning Behaviors. *Frontiers in Psychology*, *0*. <https://doi.org/10.3389/fpsyg.2017.01866>
- Siljehag, E. (2023). Specialpedagoger om ett hållbart partnerskap mellan fält och forskning i förskolan [Special education teacher's view of a sustainable partnership between practice and research in early childhood education]. In *Antologi tidiga insatser*. [Manuscript in preparation].
- Siljehag, E., Allodi, M. W., Riad, R., & Leymann, B. (2022). *Att följa barnet – specialpedagogiska dilemman vid implementering av en evidensbaserad praktik [Following the child—Special education dilemmas when implementing an evidence-based practice]*. Praktisknära skol-forskning – erfarenheter, dilemman och framtidsspaningar.

- Siljehag, E., & Allodi Westling, M. (2019). *Inkluderande lärandemiljöer och tidiga insatser, ILTI network*. <https://www.specped.su.se/samverkan/forskningsn%C3%A4tverk-ilti>
- Siljehag, E., & Westling Allodi, M. (Directors). (2023, June 6). *Högläsning med mer dialog* [video]. YouTube. <https://www.youtube.com/watch?v=hYGVv0O4AP0>
- Sims, S., & Fletcher-Wood, H. (2021). Identifying the characteristics of effective teacher professional development: A critical review. *School Effectiveness and School Improvement*, 32(1), 47–63. <https://doi.org/10.1080/09243453.2020.1772841>
- Siraj, I., Melhuish, E., Howard, S. J., Neilsen-Hewett, C., Kingston, D., De Rosnay, M., Huang, R., Gardiner, J., & Luu, B. (2023). Improving quality of teaching and child development: A randomised controlled trial of the leadership for learning intervention in preschools. *Frontiers in Psychology*, 13. <https://www.frontiersin.org/articles/10.3389/fpsyg.2022.1092284>
- Siraj-Blatchford, I. (2009). *Conceptualising progression in the pedagogy of play and sustained shared thinking in early childhood education: A Vygotskian perspective* (Vol. 26). Scopus. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-79952399913&partnerID=40&md5=7c8cdd1dc621a294f6395430840cf096>
- Skolverket. (2018). *Läroplan (Lpfö 18) för förskolan*. <https://www.skolverket.se/undervisning/forskolan/laroplan-for-forskolan/laroplan-lpfo-18-for-forskolan>
- Skrtic, T. M. (1995). *Disability and democracy: Reconstructing (special) education for postmodernity*. Teachers College Press.
- Slot, P. (2018). *Structural characteristics and process quality in early childhood education and care: A literature review*. <https://doi.org/10.1787/edaf3793-en>
- Smadja, M.-L., Ziv, M., & Aram, D. (2021). Children’s theory of mind referencing and contribution to discourse during different book sharing contexts in preschool. *Early Childhood Research Quarterly*, 56, 333–343. <https://doi.org/10.1016/j.ecresq.2021.04.006>
- SNAE. (n.d.). *Förskolekurser som anordnas i kommunen utifrån lokala behov* [Text]. Retrieved October 11, 2023, from <https://www.skolverket.se/skolutveckling/kurser-och-utbildningar/forskolekurser-som-anordnas-i-kommunen-utifran-lokala-behov>
- SNAE. (2012). *Educational equity in the Swedish school system—A quantitative analysis of equity over time—Summary of report 374*. Swedish National Agency for Education. <https://www.skolverket.se/download/18.6bfaca41169863e6a65b2f3/1553965825706/pdf3322.pdf>
- SNAE. (2017). *Analyser av familjebakgrundens betydelse för skolresultaten och skillnader mellan skolor—En kvantitativ studie av utvecklingen över tid i slutet av grundskolan* [Analysis of the influence of student

- family background in relation to academic achievement and the differences between schools—A quantitative study of long term development in the final years of elementary education*]. SNAE. <https://www.skolverket.se/download/18.6bfaca41169863e6a65d200/1553967875648/pdf3927.pdf>
- SNAE. (2019a). *Curriculum for the Preschool—Lpfö 18*. Norstedts Juridik AB.
- SNAE. (2019b). *Lista över socioekonomiskt index och den förväntade andelen obehöriga elever till gymnasieskolan [List of Socioeconomic index and the proportion of ineligible students to upper secondary school]*. SNAE. [https://www.skolverket.se/download/18.4fc05a3f164131a7418133b/1535448111495/Lista\\_socioekonomiskt\\_index-2019.pdf](https://www.skolverket.se/download/18.4fc05a3f164131a7418133b/1535448111495/Lista_socioekonomiskt_index-2019.pdf)
- SNAE. (2020). *Barn och personal i förskola 2019 [Children and staff in preschools 2019]*.
- SNAE. (2021). *Regeringsredovisning Läslyftet i förskolan 2017–2021*.
- SNAE. (2023a). *Barn och personal i förskola – hösten 2022 [Children and staff in preschool – autumn 2022]* [Text]. <https://www.skolverket.se/publikationsserier/beskrivande-statistik/2023/barn-och-personal-i-forskola---hosten-2022>
- SNAE. (2023b). *PIRLS 2021* [Text]. <https://www.skolverket.se/publikationsserier/rapporter/2023/pirls-2021>
- Snow, C. E. (2015). 2014 Wallace Foundation Distinguished Lecture: Rigor and Realism: Doing Educational Science in the Real World. *Educational Researcher*, 44(9), 460–466. <https://doi.org/10.3102/0013189X15619166>
- Snow, C. E. (2017). The role of vocabulary versus knowledge in children’s language learning: A fifty-year perspective / El papel del vocabulario frente al conocimiento en el aprendizaje lingüístico de los niños: una perspectiva de cincuenta años. *Infancia y Aprendizaje*, 40(1), 1–18. <https://doi.org/10.1080/02103702.2016.1263449>
- Snowling, M. J., Duff, F. J., Nash, H. M., & Hulme, C. (2016). Language profiles and literacy outcomes of children with resolving, emerging, or persisting language impairments. *Journal of Child Psychology and Psychiatry*, 57(12), 1360–1369. <https://doi.org/10.1111/jcpp.12497>
- Snyder, P., Hemmeter, M. L., & McLaughlin, T. (2011). Professional Development in Early Childhood Intervention: Where We Stand on the Silver Anniversary of PL 99-457. *Journal of Early Intervention*, 33(4), 357–370. <https://doi.org/10.1177/1053815111428336>
- SOU. (2020). *Förskola för alla barn - för bättre språkutveckling i svenska. SOU 2020: Betänkande från Utredningen om fler barn i förskolan för bättre språkutveckling i svenska [Preschool for all children - Towards language development in Swedish. SOU 2020: Report of the public inquiry of an increased number of children attending preschool to im-*

- prove language development in Swedish] (U 2019:01). Norstedts Juridik AB. <https://www.regeringen.se/rattsliga-dokument/statens-offentliga-utredningar/2020/11/sou-202067/>
- SOU 2018:19. (n.d.). *Forska tillsammans: Samverkan för lärande och förbättring: betänkande*. Norstedts Juridik.
- Srinivasan, M., Al-Mughairy, S., Foushee, R., & Barner, D. (2017). Learning language from within: Children use semantic generalizations to infer word meanings. *Cognition*, 159, 11–24. <https://doi.org/10.1016/j.cognition.2016.10.019>
- SSI. (2017). *Förskolans arbete med flerspråkiga barns språkutveckling*. Swedish School Inspectorate. <https://www.skolinspektionen.se/beslutsrapporter-statistik/publikationer/kvalitetsgranskning/2017/forskolans-arbete-med-flersprakiga-barns-sprakutveckling/>
- SSI. (2018). *Förskolans kvalitet och måluppfyllelse – ett treårigt regeringssupdrag att granska förskolan [The preschool quality and goal achievements—A three-year audit of preschool quality on behalf of the Swedish government]* [The preschool quality and goal achievements - A three year audit of preschool quality on behalf of Swedish government]. Skolverket. <https://www.skolinspektionen.se/globalassets/publikationssok/regeringsrapporter/redovisningar-regeringssupdrag/2018/forskolans-kvalitet-och-maluppfyllelse/forskolans-kvalitet-och-maluppfyllelse-slutrapport-feb-2018.pdf>
- Stangeland, E. B., Campbell, J. A., Kucirkova, N., & Hoel, T. (2023). Shared book reading: A Norwegian survey of reading practices in families. *Scandinavian Journal of Educational Research*. <https://doi.org/10.1080/00313831.2023.2229369>
- Stanovich, K. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *READING RESEARCH QUARTERLY*, 48.
- Statistics Sweden. (2022a). *Delmål 4.2 – Lika tillgång till förskola av god kvalitet*. Statistics Sweden. <https://www.scb.se/hitta-statistik/temaomraden/agenda-2030/mal-4/delmal-4.2>
- Statistics Sweden. (2022b). *Utrikesfödda efter födelseland och invandringsår. [Inhabitants born abroad by country of birth and immigration year]*. Statistiska Centralbyrån. <https://www.scb.se/hitta-statistik/sverige-i-siffror/manniskorna-i-sverige/utrikes-fodda-i-sverige/>
- Stein, N. L., & Policastro, M. (1984). The concept of a story: A comparison between children's and teacher's viewpoints. In H. Mandl, *Learning and comprehension of text*. Lawrence Erlbaum Assoc.
- Stensen, K., Lydersen, S., Stenseng, F., Wallander, J. L., Tveit, H., & Drugli, M. B. (2022). Childcare Providers' Nominations of Preschool Children at Risk for Mental Health Problems: Does it Discriminate Well Compared to the Caregiver-Teacher Report Form (C-TRF)? *Scandinavian Journal of Educational Research*, 66(3), 458–472. <https://doi.org/10.1080/00313831.2020.1869089>

- Storkel, H. L., Komesidou, R., Pezold, M. J., Pitt, A. R., Fleming, K. K., & Romine, R. S. (2019). The Impact of Dose and Dose Frequency on Word Learning by Kindergarten Children With Developmental Language Disorder During Interactive Book Reading. *Language, Speech & Hearing Services in Schools, 50*(4), 518–539. [https://doi.org/10.1044/2019\\_LSHSS-VOIA-18-0131](https://doi.org/10.1044/2019_LSHSS-VOIA-18-0131)
- Storkel, H. L., Voelmle, K., Fierro, V., Flake, K., Fleming, K. K., & Romine, R. S. (2017). Interactive Book Reading to Accelerate Word Learning by Kindergarten Children With Specific Language Impairment: Identifying an Adequate Intensity and Variation in Treatment Response. *Language, Speech, and Hearing Services in Schools, 48*(1), 16–30. [https://doi.org/10.1044/2016\\_LSHSS-16-0014](https://doi.org/10.1044/2016_LSHSS-16-0014)
- Størksen, I., Ertesvåg, S. K., & Rege, M. (2021). Implementing implementation science in a randomized controlled trial in Norwegian early childhood education and care. *International Journal of Educational Research, 108*, 101782. <https://doi.org/10.1016/j.ijer.2021.101782>
- Storli, R., & Hansen Sandseter, E. B. (2019). Children’s play, well-being and involvement: How children play indoors and outdoors in Norwegian early childhood education and care institutions. *International Journal of Play, 8*(1), 65–78. <https://doi.org/10.1080/21594937.2019.1580338>
- Strand, S., & Hessel, A. (2018). *English as an additional language, proficiency in English and pupils’ educational achievement: An analysis of local authority data*. <https://www.bell-foundation.org.uk/app/uploads/2018/10/EAL-PIE-and-Educational-Achievement-Report-2018-FV.pdf>
- Sun, H. (2019). Home Environment, Bilingual Preschooler’s Receptive Mother Tongue Language Outcomes, and Social-Emotional and Behavioral Skills: One Stone for Two Birds? *Frontiers in Psychology, 10*, 1640. <https://doi.org/10.3389/fpsyg.2019.01640>
- Suttora, C., Zuccarini, M., Aceti, A., Corvaglia, L., Guarini, A., & Sansavini, A. (2021). The Effects of a Parent-Implemented Language Intervention on Late-Talkers’ Expressive Skills: The Mediation Role of Parental Speech Contingency and Dialogic Reading Abilities. *Frontiers in Psychology, 12*, 723366. <https://doi.org/10.3389/fpsyg.2021.723366>
- Swanson, E., Vaughn, S., Wanzek, J., Petscher, Y., Heckert, J., Cavanaugh, C., Kraft, G., & Tackett, K. (2011). A Synthesis of Read-Aloud Interventions on Early Reading Outcomes Among Preschool Through Third Graders at Risk for Reading Difficulties. *Journal of Learning Disabilities, 44*(3), 258–275. <https://doi.org/10.1177/0022219410378444>
- Swedish Agency for Health Technology Assessment and Assessment of Social Services. (2022). *Främjande av psykiskt välbefinnande hos barn och ungdomar En systematisk översikt av universella programs*

- effekter på psykiskt välbefinnande, upplevelser av dessa program samt hälsoekonomiska och etiska aspekter [Promoting mental well-being in children and young people A systematic review of the effects of universal programs on mental well-being, perceptions of these programs, and health economic and ethical aspects].* <https://www.sbu.se/sv/publikationer/SBU-utvarderar/framjande-av-psykiskt-valbefinnande-hos-barn-och-ungdomar/>
- Swedish Department of Education. (2015). *Uppdrag-om-samverkan-for-basta-skola.pdf*. <https://www.regeringen.se/49cb50/contentassets/583f248e9baa4d9a80f73c30e5f53c30/uppdrag-om-samverkan-for-basta-skola.pdf>
- Swedish Education Act (2010:800)*. (2010). [https://www.riksdagen.se/sv/dokument-och-lagar/dokument/svensk-forfattningssamling/skollag-2010800\\_sfs-2010-800/](https://www.riksdagen.se/sv/dokument-och-lagar/dokument/svensk-forfattningssamling/skollag-2010800_sfs-2010-800/)
- Swedish Institute for Educational Research. (2019). *Att genom lek stödja och stimulera barns sociala förmågor – undervisning i förskolan [Supporting and stimulating children's social skills through play – teaching in pre-school]*. Skolforskningsinstitutet.
- Swedish National Agency for Education. (2017). *PIRLS 2016 Läsförmågan hos svenska elever i årskurs 4 i ett internationellt perspektiv*. <https://www.skolverket.se/getFile?file=3868>
- Swedish Parliament. (2011). *Förordning (2011:326) om behörighet och legitimation för lärare och förskollärare*. Swedish Parliament. [https://www.riksdagen.se/sv/dokument-och-lagar/dokument/svensk-forfattningssamling/forordning-2011326-om-behorighet-och\\_sfs-2011-326/](https://www.riksdagen.se/sv/dokument-och-lagar/dokument/svensk-forfattningssamling/forordning-2011326-om-behorighet-och_sfs-2011-326/)
- Swedish Parliament. (2018). *UN Convention on the Rights of the Child to become law in Sweden*. <https://www.riksdagen.se/en/news/2018/jun/18/un-convention-on-the-rights-of-the-child-to-become-law-in-sweden/>
- Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I., & Taggart, B. (Eds.). (2010). *Early Childhood Matters: Evidence from the Effective Pre-school and Primary Education Project*. Routledge. <https://doi.org/10.4324/9780203862063>
- Taguma, M., Litjens, I., & Makowiecki, K. (2013). *Quality Matters in Early Childhood Education and Care: Sweden 2013*. OECD. <https://doi.org/10.1787/9789264176744-en>
- The National Agency for Special Needs Education and Schools. (2023). *Garantin för tidigt stöd [The Early Intervention Guarantee]*. <https://www.spsm.se/stod-och-rad/skolutveckling/garantin-for-tidigt-stod/>
- The Public Health Agency of Sweden. (2020, November 12). *Hälsa hos barn och unga [Child and youth health]*. <https://www.folkhalsomyndigheten.se/livsvillkor-levnadsvanor/halsa-i-olika-grupper/barn-och-unga/>

- The Swedish Institute for Educational Research. (2020). *The Swedish Institute for Educational Research*. [https://www.skolfi.se/wp-content/uploads/2021/03/Infoblad-Skolfi\\_English\\_2021.pdf](https://www.skolfi.se/wp-content/uploads/2021/03/Infoblad-Skolfi_English_2021.pdf)
- Thomas, W., & Collier, V. (2002). *A National Study of School Effectiveness for Language Minority Students' Long-Term Academic Achievement*. <https://escholarship.org/uc/item/65j213pt>
- Thordardottir, E. (2019). Amount trumps timing in bilingual vocabulary acquisition: Effects of input in simultaneous and sequential school-age bilinguals. *International Journal of Bilingualism*, 23(1), 236–255. <https://doi.org/10.1177/1367006917722418>
- Tomasello, M. (2003). *Constructing a language: A usage-based theory of language acquisition*. Harvard University Press.
- Towson, J. A., Fettig, A., Fleury, V. P., & Abarca, D. L. (2017). Dialogic Reading in Early Childhood Settings: A Summary of the Evidence Base. *Topics in Early Childhood Special Education*, 37(3), 132–146. <https://doi.org/10.1177/0271121417724875>
- Trivette, C. M., & Dunst, C. J. (2007). *Relative Effectiveness of Dialogic, Interactive, and Shared Reading Interventions*. 1(2), 12.
- Twait, E., Farah, R., Shamir, N., & Horowitz-Kraus, T. (2019). Dialogic reading vs screen exposure intervention is related to increased cognitive control in preschool-age children. *Acta Paediatrica, International Journal of Paediatrics*. Scopus. <https://doi.org/10.1111/apa.14841>
- UK Department for Education. (2021). *SEN support: Findings from a qualitative study*. Government Social Research, IFF Research Ltd. [https://assets.publishing.service.gov.uk/media/61af936fd3bf7f055c4b77bb/SEN\\_support\\_-\\_Findings\\_from\\_a\\_qualitative\\_study.pdf](https://assets.publishing.service.gov.uk/media/61af936fd3bf7f055c4b77bb/SEN_support_-_Findings_from_a_qualitative_study.pdf)
- UK, Department of Education. (2020). *English proficiency of pupils with English as an additional language*. [https://assets.publishing.service.gov.uk/media/5e55205d86650c10e8754e54/English\\_proficiency\\_of\\_EAL\\_pupils.pdf](https://assets.publishing.service.gov.uk/media/5e55205d86650c10e8754e54/English_proficiency_of_EAL_pupils.pdf)
- Ullman, M. T., & Pierpont, E. I. (2005). *Specific Language Impairment Is Not Specific to Language: The Procedural Deficit Hypothesis*. 35.
- UN. (1993). *Standard rules on the equalization of opportunities for persons with disabilities: Resolution / adopted by the General Assembly ((48th sess. : 1993-1994))*. <https://www.refworld.org/docid/3b00f2e80.html>
- UNICEF. (2021). *Gender Equality Statistics*. UNICEF DATA. <https://data.unicef.org/topic/gender/overview/>
- United Nations. (1989). *United Nations Convention on the Rights of the Child (UNCRC)*. <https://www.ohchr.org/en/professionalinterest/pages/crc.aspx>
- Vally, Z., Murray, L., Tomlinson, M., & Cooper, P. J. (2015). The impact of dialogic book-sharing training on infant language and attention: A randomized controlled trial in a deprived South African community.

- Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 56(8), 865–873. <https://doi.org/10.1111/jcpp.12352>
- Van Daal, J., Verhoeven, L., & Van Balkom, H. (2007). Behaviour problems in children with language impairment. *Journal of Child Psychology and Psychiatry*, 48(11), 1139–1147. <https://doi.org/10.1111/j.1469-7610.2007.01790.x>
- Velázquez, I. (2018). *Household Perspectives on Minority Language Maintenance and Loss: Language in the Small Spaces*. Multilingual Matters.
- Viberg, Å. (2001). 4. Age-related and L2-related features in bilingual narrative development in Sweden. In L. Verhoeven & S. Strömquist (Eds.), *Studies in Bilingualism* (Vol. 23, p. 87). John Benjamins Publishing Company. <https://doi.org/10.1075/sibil.23.04vib>
- Vik, S., & Hausstätter, R. (2014). Fra «early intervention» til tidlig innsats—Utfordringer ved adopsjon av amerikanske intervensjonsprogrammer til norsk pedagogikk. *Spesialpedagogikk*, 6, 47–59.
- von Grünigen, R., Kochenderfer-Ladd, B., Perren, S., & Alsaker, F. D. (2012). Links between local language competence and peer relations among Swiss and immigrant children: The mediating role of social behavior. *Journal of School Psychology*, 50(2), 195–213. <https://doi.org/10.1016/j.jsp.2011.09.005>
- Voukelatou, V., Gabrielli, L., Miliou, I., Cresci, S., Sharma, R., Tesconi, M., & Pappalardo, L. (2021). Measuring objective and subjective well-being: Dimensions and data sources. *International Journal of Data Science and Analytics*, 11(4), 279–309. <https://doi.org/10.1007/s41060-020-00224-2>
- Vygotsky, L. S. (1978). *Mind in Society: Development of Higher Psychological Processes*. Harvard University Press. <https://doi.org/10.2307/j.ctvjf9vz4>
- Wackerle-Hollman, A., Spencer, T. D., Artman-Meeker, K., Spencer Kelley, E., Durán, L., & Foster, M. E. (2021). Multi-tiered system of supports in early childhood: Identifying gaps, considerations for application, and solutions. *Early Childhood Research Quarterly*, 56, 201–212. <https://doi.org/10.1016/j.ecresq.2021.03.010>
- Walker, D., Sepulveda, S. J., Hoff, E., Rowe, M. L., Schwartz, I. S., Dale, P. S., Peterson, C. A., Diamond, K., Goldin-Meadow, S., Levine, S. C., Wasik, B. H., Horm, D. M., & Bigelow, K. M. (2020). Language intervention research in early childhood care and education: A systematic survey of the literature. *Early Childhood Research Quarterly*, 50, 68–85. <https://doi.org/10.1016/j.ecresq.2019.02.010>
- Walsh, R. L., & Hodge, K. A. (2018). Are we asking the right questions? An analysis of research on the effect of teachers' questioning on children's language during shared book reading with young children. *Journal of Early Childhood Literacy*, 18(2), 264–294. <https://doi.org/10.1177/1468798416659124>

- Wasik, B. A., Hindman, A. H., & Snell, E. K. (2016). Book reading and vocabulary development: A systematic review. *Early Childhood Research Quarterly*, 37, 39–57. <https://doi.org/10.1016/j.ecresq.2016.04.003>
- Waterman, A. S., Schwartz, S. J., Zamboanga, B. L., Ravert, R. D., Williams, M. K., Agocha, V. B., Kim, S. Y., & Donnellan, M. B. (2010). The Questionnaire for Eudaimonic Well-Being: Psychometric properties, demographic comparisons, and evidence of validity. *The Journal of Positive Psychology*, 5(1), 41–61. <https://doi.org/10.1080/17439760903435208>
- Weadman, T., Serry, T., & Snow, P. C. (2023). Oral Language and Emergent Literacy Strategies Used by Australian Early Childhood Teachers During Shared Book Reading. *Early Childhood Education Journal*, 51(8), 1335–1348. <https://doi.org/10.1007/s10643-022-01381-8>
- Weisleder, A., & Fernald, A. (2013). Talking to children matters: Early language experience strengthens processing and builds vocabulary. *Psychological Science*, 24(11), 2143–2152. <https://doi.org/10.1177/0956797613488145>
- West, G., Lervåg, A., Snowling, M. J., Buchanan-Worster, E., Duta, M., & Hulme, C. (2022). Early language intervention improves behavioral adjustment in school: Evidence from a cluster randomized trial. *Journal of School Psychology*, 92, 334–345. <https://doi.org/10.1016/j.jsp.2022.04.006>
- West, G., Vadillo, M. A., Shanks, D. R., & Hulme, C. (2018). The procedural learning deficit hypothesis of language learning disorders: We see some problems. *Developmental Science*, 21(2). <https://doi.org/10.1111/desc.12552>
- Westberg, J. (2021). Designing preschools for an independent and social child: Visions of preschool space in the Swedish welfare state. *Early Years*, 41(5), 458–475. <https://doi.org/10.1080/09575146.2019.1608426>
- What Works Clearinghouse. (2007). *WWC Intervention Report: Dialogic Reading*. (p. 33) [WWC Intervention report]. U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, What Works Clearinghouse. <https://ies.ed.gov/ncee/wwc/Intervention/271#ta-7>
- Whitehurst, G. J., Epstein, J. N., Angell, A. L., Payne, A. C., Crone, D. A., & Fischel, J. E. (1994). *Outcomes of an Emergent Literacy Intervention in Head Start*. 14.
- Whitehurst, G. J., Falco, F. L., Lonigan, C. J., Fischel, J. E., DeBaryshe, B. D., Valdez-Menchaca, M. C., & Caulfield, M. (1988). Accelerating Language Development Through Picture Book Reading. *Developmental Psychology*, 8. <https://doi.org/10.1037/0012-1649.24.4.552>

- WHO. (2018). *Mental health: Strengthening our response*. <https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response>
- Wikman, C. (2023). *Social Climate and the Student in the Learning Environment Advances in Assessment, Observation, and Coaching* [Stockholm University]. <https://su.diva-portal.org/smash/get/diva2:1793788/FULLTEXT01.pdf>
- Williams, P., Sheridan, S., & Samuelsson, I. P. (2019). A Perspective of Group Size on Children's Conditions for Wellbeing, Learning and Development in Preschool. *Scandinavian Journal of Educational Research*, 63(5), 696–711. <https://doi.org/10.1080/00313831.2018.1434823>
- Wolff, U., & Gustafsson, J.-E. (2022). Early phonological training preceding kindergarten training: Effects on reading and spelling. *Reading and Writing*, 35. <https://doi.org/10.1007/s11145-022-10261-x>
- Zhao, J., Zhu, M., de Ruiter, L., & Chen, S. (2022). Linguistic Indicators for Text Complexity in Picture Books for Young Chinese Children Learning English as a Foreign Language. *Frontiers in Education*, 7. <https://doi.org/10.3389/feduc.2022.758736>
- Zucker, T. A., Cabell, S. Q., Petscher, Y., Mui, H., Landry, S. H., & Tock, J. (2021). Teaching Together: Pilot study of a tiered language and literacy intervention with Head Start teachers and linguistically diverse families. *Early Childhood Research Quarterly*, 54, 136–152. <https://doi.org/10.1016/j.ecresq.2020.09.001>
- Zucker, T. A., Cabell, S. Q., & Pico, D. L. (2021). Going Nuts for Words: Recommendations for Teaching Young Students Academic Vocabulary. *The Reading Teacher*, 74(5), 581–594. <https://doi.org/10.1002/trtr.1967>