

Teachers' experiences of promoting young students' language development in inclusive settings

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Abstract: Early education is essential in promoting language development for all young students. Teachers will meet 6-year-olds with various language skills in the preschool class in Sweden. They are expected to engage and involve all students in language education to promote each student's language development. The study aimed to explore teachers' experiences promoting language development among young students in inclusive settings. Semi-structured interviews were conducted with 17 teachers working with young students in the preschool class. All interviews were transcribed and analyzed with thematic analysis. Three themes were identified, representing the teachers' knowledge of language development, the pedagogical approach to promoting language development, and students with special needs in oral and written language. The results are related to Shulman's (1986, 1987) framework on teachers' competence in integrating content and pedagogical knowledge for successful teaching. Teachers in preschool classes might need education and in-service training to master young students' diverse language abilities and needs.

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Introduction

Reading and writing are crucial in education and have social and democratic values (e.g., United Nations Educational, Scientific and Cultural Organization [UNESCO], 2018). Students with good reading ability have better opportunities to pass elementary school than those with limited reading ability (Duncan et al., 2007; Hulme & Snowling, 2016). Consequently, reading and writing are related to further education and employment opportunities (de Beer et al., 2014; Hulme & Snowling, 2016). Students who struggle with reading and writing are at risk of marginalization (Pickard, 2021; World Literacy Foundation, 2012). With the knowledge that reading and writing are related to students' early oral language and language teaching (Castles et al., 2018), early education is essential in promoting language development for all young students.

Among young students, education needs to focus on oral language and pre-reading skills to encourage learning to read and write (Lonigan & Shanahan, 2008). Oral language is an ability including vocabulary, grammar, and listening comprehension (Language and Reading Research Consortium, 2017), and pre-reading skills refer to alphabet knowledge, phonemic awareness, knowledge about letter-sound correspondence, and concepts about prints (Suggate et al., 2018). Comprehensive research demonstrates that teachers must offer young students explicit teaching on phoneme-grapheme correspondence to support them in learning to read, especially students at risk of reading difficulties (Castles et al., 2018; Melby-Lervåg et al., 2012). More seldom, oral language is highlighted, but longitudinal research has also revealed that students with mature oral language are better equipped for developing pre-reading skills (NICHD Early Child Care Research Network, 2005). Subsequently, young students with limited oral language should also receive systematic oral language education to support those at risk of future reading and writing difficulties (Genesee et al., 2005). In general, teaching focusing on pre-reading skills will help

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the students in developing word decoding skills, whereas oral language is emphasized as essential for reading comprehension (Castles et al., 2018; Hulme & Snowling, 2016; NICHD Early Child Care Research Network, 2005) and writing (Dockrell et al., 2019; Kirby et al., 2021).

Early language education is reported to be affected by the teachers' content and pedagogical knowledge (Hammond, 2015; Piasta et al., 2020). The teachers must also know how to integrate these two types of knowledge in language education for young students (cf., Evens et al., 2018). Therefore, the teachers need to understand how language is structured and related to each other (Piasta et al., 2020). In addition, they should know efficient strategies to promote students' oral language and pre-reading skills to develop their language abilities. Such knowledge also includes competence in teaching pre-reading skills in small groups to students at risk of reading and writing difficulties (Kaminski et al., 2014; Zucker et al., 2013). Hence, teachers should be aware of and understand the characteristics of different language difficulties to meet the needs of students (Dockrell et al., 2017). However, many teachers cannot identify and struggle with supporting students with special needs in language abilities because of a lack of training and education.

Although oral language is fundamental for reading and writing (Lonigan & Shanahan, 2008; NICHD Early Child Care Research Network, 2005), efforts to develop young students' oral language do not have to exclude education in pre-reading skills. For example, young students with specific language disorders are demonstrated to enhance their listening comprehension, vocabulary, oral narrative skills, and phonological awareness after one-hour individualized sessions combined with language activities at home for six weeks (Munro et al., 2008). These students will also develop phonemic awareness similar to typical speech and language developing peers when offered 20 hours of individual teaching on phonemic awareness and letter-sound correspondence (Gillon, 2000). Furthermore, intervention studies demonstrate that oral language, phonemic skills, and alphabetic knowledge can be enhanced among students with weak oral language (Bowyer et al., 2008; Fricke et al., 2013). According to Bowyer et al. (2008), about 50% of the students needed additional support to develop oral language and pre-reading skills after a 10-week intervention. Also, Fricke et al. (2013) reported that the 10-week phoneme awareness and alphabetic knowledge intervention was too short, but the young students enhanced these skills during these weeks. The oral language was supported during a more extended period (30 weeks), and Fricke et al. (2013) demonstrated that the students' oral narrative skills were efficiently enhanced and maintained. Findings by Gillon et al. (2020) point in the same direction since young students with speech and language difficulties improved their phoneme awareness and vocabulary after half-hour lessons offered four times a week for ten weeks. Gillon et al. stated that the students needed additional support to transfer these skills into word decoding and spelling.

According to Costantino-Lane (2021), some teachers believe that young students must first master the oral language before practicing pre-reading skills such as phonemic awareness. Therefore, teachers consider social interaction, play, and conversations fundamental in young students' language development. Nevertheless, this belief should not be regarded as exceptional because early childhood education has had a tradition of literacy-related play and shared storybook reading but converted to more academic achievements focusing on reading education due to national policies (Saracho, 2017). These policies have been criticized for putting too much effort into academic achievement instead of students' play and social development (Brown, 2018; Costantino-Lane, 2021).

Pre-reading skills have received more attention in Swedish preschool classes in the last ten years (cf., Axelsson et al., 2020; Norling, 2019). The preschool class is the first compulsory year within the Swedish school system, and students start preschool class the year when they turn six. According to the Swedish national curriculum (Swedish National Agency for Education, 2018), there are no explicit national curriculum goals for language education in the first year, but the teaching should cover content such as;

- rhymes, jingles, and other word games
- letter and other symbols to convey a message
- discussing, listening, and asking questions

- expressing thoughts, opinions, and arguments
- words and concepts that express needs, emotions, knowledge, and opinions
- discussing different types of texts
- digital tools for communication
- safe and responsible communication, including digital situations

However, without specific goals for language education in the preschool class, the content of early language education can vary with the individual teachers' beliefs and knowledge of early language education. The preschool classes in Sweden are reported to be equipped with children's books, name signs, and alphabet pictures (Hofslundsengen et al., 2020). Toys are also prevalent (Axelsson et al., 2020), whereas digital tools for supporting pre-reading skills are less accessible (Hofslundsengen et al., 2020).

Teachers will meet young students with various language skills (Norbury et al., 2016; Sandberg et al., 2015). Some young students might be able to read (Lundberg et al., 2012) and tell stories (Massonnié et al., 2022). Others might have a limited vocabulary (Norbury et al., 2016), weak listening comprehension (Massonnié et al., 2022), difficulties retelling stories (Massonnié et al., 2022; Norbury et al., 2016), a limited alphabetic knowledge (Sandberg et al., 2015), or weak phonemic awareness (Lundberg et al., 2012). They might not be developmentally ready for formal reading education even though teachers are expected to provide them with early education, preparing them for developing good reading ability (Saracho, 2017). Consequently, in inclusive education, the teachers should meet the needs of young students with various language abilities. Therefore, they are also expected to engage and involve all students in language education to promote language development. The teachers face a complex task, but each child needs to be given good learning conditions with their peers. Therefore, the aim was to explore teachers' experiences promoting language development among young students in inclusive settings. The study had the following research question:

- How are the teachers understanding of promoting language development expressed?

Method

A qualitative research approach was applied as the aim was to explore the teachers' experiences in promoting language development among young students. To capture the participants' experiences and understanding of a phenomenon, such as students' language development, interviews as a data collection method and thematic analysis as an analysis method were considered suitable (cf., Braun & Clarke, 2013).

Context of the Study

The current study was conducted among teachers working with students in preschool classes in Sweden. The students will start in a preschool class the year they turn six, which will be their first compulsory year in the Swedish school system. According to the Swedish national curriculum (Swedish National Agency for Education, 2018), play is valued of great importance, and the educational activities in the preschool class should stimulate development and prepare the students for future learning. Education is free, and parents can choose a school (Swedish Education Act, 2010:800).

About 8% of the preschool class students are reported to have special needs (Swedish Schools Inspectorate, 2021), and 25% have another home language than Swedish (Swedish National Agency for Education, 2021). The teachers who work in preschool classes are responsible for meeting the needs of all children (Swedish Education Act, 2010:800), which means that they encounter a diversity of students, such as students with disabilities and various cultural and language backgrounds.

Participants

The participants were 17 female teachers working with 6-year-old students in preschool classes in Sweden. Ten of the teachers had a preschool teacher's degree, six had a teacher's degree, and one had no pedagogical degree. Two had also completed a special educator teacher degree among those with a

teacher's degree. The teachers had worked between 3 and 40 years ($M=20$, $SD=11$) in preschool or elementary school. Their experience in educating 6-year-olds was between 3 and 21 years ($M=12$, $SD=6$). During the current study, they were teaching between 13 and 58 students. Some teachers were solely responsible for a preschool class. Others educated larger groups of children in collaboration with 2 to 4 teachers and elementary school assistants.

Participant Selection and Recruitment Process

We used a purposive sampling strategy for the study (cf., Braun & Clarke, 2013). Therefore, we asked teachers interested in a new teaching material focusing on phonemic awareness to participate in the present study. During the second half of 2021, about 35 teachers had shown interest in trying the material among young students in a preschool class in Sweden. The teachers had not tried the new material, and the current study was based on their experience working in the preschool class. None of us had a previous relationship with the schools or the teachers. Further, we had an independent relationship with the producers of the teaching material.

An information letter about the present study was sent to the teachers. They were asked to participate in an interview focusing on teachers' experiences of their work with language development among students in the preschool class. In addition, we informed the teachers that we are not involved in the work with the teaching material and that we are independent researchers interested in teachers' experiences working with language development among young students. Seventeen teachers agreed to participate in the present study and scheduled themselves for an interview. Before the interviews, we informed the teachers about the study and provided information on the ethical considerations. We promised to maintain confidentiality regarding the content of each interview, and consent was sought from all participants.

Data Collection

We developed a semi-structured interview guide according to the aim of the present study. Initially, the participating teachers were asked about their teaching experiences, education, and the number of teachers and students in their group. After that, the interview guide consisted of eight questions about language skills teachers consider essential to work with among young students and how they enhance students' language abilities. With follow-up questions, the teachers were sometimes asked to elaborate on their descriptions or to give more detailed examples. Each interview lasted between 15 and 32 minutes ($M=25$ minutes), and the length of the interviews varied according to teachers' individual experiences and knowledge of working with young students' language development. All interviews were audio-recorded and performed on Zoom in September and October 2021.

Analysis

All interviews were transcribed, and we performed an inductive thematic analysis (cf., Braun & Clarke, 2006, 2013) without a theoretical framework or a coding guide. We were guided by our academic background in psychology and pedagogy and previous experiences in reading and writing research and work as special education teachers.

Initially, we read through the materials and familiarized ourselves with the transcriptions (Braun & Clarke, 2006, 2013). The first author performed a semantic, complete coding on all transcribed interviews resulting in a long list of codes. These codes were then organized and interpreted to identify how teachers have experienced promoting language development among young students in inclusive settings. The first author suggested an initial thematic map of the codes sorted into potential themes. Codes and themes were discussed with the second author to enhance the depth of the interpretation (cf., Braun & Clarke, 2022). We also examined and discussed whether the analysis reflected the individual teachers equitably. We strived to generate themes without researcher bias and existing theory. After that, we defined the themes and gave them names. All themes are exemplified with quotes from the participating teachers. The teachers were

given pseudonyms to strengthen confidentiality. For examples of the analysis process from data extract to themes, see Table 1.

Table 1. Example of data extract, condensed data extract, code, and theme from thematic analysis of interviews with teachers

Data extract	Condensed data extract	Code	Theme
When we have read aloud, it can be with or without pictures to create listening comprehension (Betsy)	Reading loud for practicing listening comprehension.	Listening comprehension	Teachers' knowledge of young students' language development
It's also about interest; of course, it's about finding things that arouse their interest. As a teacher, you can adapt as much as you like, but it's difficult if the students aren't interested. (Hanna)	Adaptations are not working without students' interests.	Interesting for students	Teachers' pedagogical approach to promoting language development

Results

We identified three themes reflecting the teachers' experiences promoting language development among young students in inclusive settings in Sweden with the thematic analysis. These themes represent the teachers' knowledge of language development, especially pre-reading skills, among young students and how they used different pedagogical approaches to promote language development. Also, teachers supported students with special needs in oral and written language by applying different pedagogical strategies.

Teachers' Knowledge of Young Students' Language Development

Our thematic analysis resulted in one theme constructed on teachers' knowledge of young students' language development. Their understanding varied from being confident and competent in how students develop different language skills to insecurity or unawareness about what language skills young students should learn to enhance oral and written language abilities.

Early language education was based on the teachers' formal competence and experience in students' language development. Teachers with many years of experience educating 6-year-olds had acquired tacit knowledge about young students' language development. They identified a general level of language ability among the students in their groups, and they thought the curriculum provided endless language education opportunities. In addition, these teachers were aware of how teaching materials are structured to develop students' pre-reading skills. They expressed how they could distinguish specific language skills and difficulty levels within teaching materials. Accordingly, they explained how explicit materials could suit students with varying pre-reading skills and how they could use materials to promote language development.

I use a colleague's material and choose her way, so I haven't had deeper thought. (Gina)

I think it's tough because I don't have the experience to see children's language development yet, and I'm pretty clear about that. I'm not afraid to ask for help. (Cathy)

When I went to teacher training, it was very... we got very poor education on how to work with writing and reading. It was really flawed. (Noel)

Nowadays, there is more focus on whole word reading in early reading books. Students must [according to the curriculum] read whole words. - - - But I haven't worked that way. I've been more prone to sounding in my profession, and now I've confirmed that those who have difficulties should practice sounding words. (Liza)

Moreover, some teachers described the importance of in-service training, teacher network, and support from colleagues to develop their language education. Others expressed that they lacked teaching experiences and felt insecure when planning and teaching language skills to young students. They expressed the need for more guidance from the national curriculum. Consequently, the content in less competent teachers' language teaching was mainly based on others' recommendations, trends in using

teaching materials, or demands for the municipality to work with a specific method. They were often unaware of what specific language skills were taught in different language activities. Sometimes, they could not see the need or importance of teaching particular language skills to young students and lacked an understanding of the language structure and complexity. According to their description, language education seemed unsystematically offered to the students. Due to their limited knowledge, they could not efficiently support students in developing knowledge about the Swedish alphabet (including 9 vowels and 20 consonants where the 26-letter Latin alphabet is used plus the three additional letters Å/å, Ä/ä, and Ö/ö), phoneme-grapheme correspondence, or communication skills. For instance, they described how they followed the order in the alphabet and presented letters without consideration of difficulty or frequency in the Swedish language. In contrast, those with more formal competence and experience stated the importance of starting with letters that are easy to discriminate, both auditorily and visually, and possible to blend into short words consisting of three letters. Besides practicing alphabetic knowledge and phonemic awareness with young students, the teachers focused on vocabulary, listening comprehension, oral narrative skills, and literacy knowledge. They also mentioned activities related to phonological awareness, such as rhymes, syllables, and alliteration. Some teachers did not teach phoneme-grapheme correspondence, and they considered teaching students phonemes more critical in preschool class than phoneme-grapheme correspondence.

When we introduce letters, we start with two-word, three-word, and four-word sounds. Automatically, some letters are best suited. (Quinnlyn)

We have worked on A, B, C, D, and E. We have made five letters so far. (Cathy)

The children listen to how many phonemes there are in a word and then put markers for each phoneme they hear. It becomes visible to the children. Because otherwise, the phonemes are very abstract for the children, so it must be something quite concrete. (Elly)

The teachers' understanding of the structure of the Swedish language was reflected in how they described the content of their teaching. Some teachers allowed students to practice specific language skills to develop more complex skills such as communication skills. For instance, the teachers planned lessons where the students were asked to do presentations, listen to each other, and ask questions. These lessons could be prepared by teaching storylines, specific vocabulary, and rules for communication. Conversely, other teachers believed language should be taught as a whole and therefore not focused on specific language skills. There were also teachers without thoughts about how students acquire written and oral language abilities. For example, their statements reflect that they are unaware of how students learn to read and how they, as teachers, could support students in extending vocabulary to build listening comprehension and narrative skills. Nevertheless, the interviewed teachers agreed that working with language is essential, and the students can practice communication during the whole school day.

Some teachers emphasized the importance of teaching phoneme-grapheme correspondence several times weekly with a systematic and explicit approach. They thought they could notice the effect of such teaching. Consequently, without reasonable tuition on phonemic awareness in the preschool class, the teachers have experienced that many students will need support from special education teachers to learn to read and write in the following school years. Also, teachers emphasized that teaching language takes time. In addition, as a teacher, you must accept that students will develop differently as young students are heterogeneous in their language development. Therefore, teachers must realize that language needs vary from student to student and year to year. For instance, in some years, students have progressed well in their language development. Teachers will also meet students with weak oral language skills and phonemic awareness in other years. However, statements from those with limited teaching experience revealed that they had difficulties identifying the needs of each student.

Last year, we used books suitable for linguistically proficient students who needed a little more challenges. This year we've gone back to basic, back to the Bornholm method, and started from the beginning. (Alice)

You mustn't forget repetitions. You shouldn't go too fast forward. It's very important to rehearse. (Penny)

Teachers present letters very quickly, and the children have to put the letters together. This means that teachers sometimes forget to practice the first and last sounds, divide compound words, practice phonemes and rhyme (Isabel)

Teachers' Pedagogical Approach to Promoting Language Development

Our analysis revealed that the teachers' pedagogical approach to young students' language development reflected their diverse perspectives on planning and implementing language activities. Good relationships with students and variation in language education were highlighted. Their different starting points for language education mirrored their pedagogical approaches to promoting students' language. Interests and curiosity among the students were used when planning language teaching. The teachers explained that they prepared education for the students to enjoy within the preschool class. Early education was told to lay the ground for school motivation. In addition, the teachers believed their teaching engagement was essential for students learning. They articulated the importance of making teaching meaningful to the students, which was related to all students' participation. Therefore, the teachers emphasize student involvement as fundamental for language education. Accordingly, the teachers planned language education based on the students with the lowest language skills. They tried to relate their teaching to the interests of the students. Therefore, the teachers allowed students to choose assignments by their interests and motivation. Teachers made education meaningful for talented and lingually gifted students by giving these students additional assignments that challenged the students' language skills.

Digital tools and various apps capture the children who are difficult to motivate. I can show the children how they can work with the language with an app. (Elly)

I think it's a lot of joy. You should consider it fun too. That you're doing something with pleasure. (Liza)

We play, so it gets fun. Above all, it should be something that feels positive for the students, and if it doesn't, we should try to find an adaptation. (Joanne)

Teachers believed variation in language education is fundamental due to students' different learning styles and to motivate and stimulate students in language development. Therefore, the teachers combined teacher-led activities with collaborative language education. Also, they tried to meet the needs of each student by mixing materials and methods and offering the students possibilities to use different senses. For example, they used drama, music, videos, computer programs, games, puzzles besides circle time, and traditional tuition with paper and pen. Teachers organized different stations to have the possibility to manage small groups of students when giving explicit teaching on pre-reading skills. The teachers expressed how they used guided play to promote students' engagement in language education, especially in groups of students with limited language skills who quickly drop their motivation for language education. Free play was considered a valuable approach to stimulate communication between students. Thus, teachers also thought the free play was challenging for students with limited oral language skills.

We've been detectives looking for sounds, looking for letters. We've put letters together and reasoned about which word it will be. (Hanna)

The children get to trace pieces of wood that represent a letter. I've got a small box of sand, and they can try to make the letter in sand. And then, I also have a worksheet. I'm a bit divided, some can write, and some think it's a plague and pain. Still, they write the letter on a piece of paper I've prepared and copied. (Gina)

Music reinforces the feeling for language because they hear it better. The word or the rhythm of the meaning. I support the feeling with a rhythm instrument. (Felicia)

Some teachers planned and implemented language lessons focusing on explicit teaching and teacher-led discussion to encourage the students' language awareness and learning. Such teachers mentioned the importance of offering language education to small homogeneous groups of students, whereas others highlighted the importance of mixing students with different language skills to promote development. The latter meant that students learn more from peers than from the teachers.

In the whole group, we try to come up with rhyming words on, for example, car (Swedish: *bil*), and then we discuss why does not rhyme bus (Swedish: *buss*) on the car, but the file (Swedish: *fil*) does? - - - So, I use much cooperative education as well when the children sit and work together. Once a day, we work with different stations, and the children work in four different groups. (Alice)

I'm striving for clarity and structure and much encouragement. For students that I find difficult to reach, I usually really make an effort and try to like them and encourage every little positive hint, like this "How nice you hold the pen" (Noel)

For the past three years, teachers in Swedish preschool classes have been required to make compulsory assessments of students' language abilities (Swedish National Agency for Education, 2019). Teachers in the current study brought up these assessments. However, they had different attitudes and approaches to assessments to promote language development among young students. They could see the usefulness of making the group's needs visible with the assessment and thereby use the result as a basis for their teaching. Still, they also thought the individual assessments of every student take time away from regular education, and they were unsure whether the assessment benefitted their teaching. However, results from language assessments were also regarded as necessary to divide the students into homogenous small-group. They also underscored the need for valid tests and that the compulsory assessment was not efficient enough to identify students at risk of future reading and writing difficulties. Therefore, some of the teachers added phonological tests to avoid planning teaching that is not appropriate concerning the needs of the students.

We look a little at how far they have come in their linguistic consciousness, some not far at all. Then we put together those who haven't come so far into a group. We do this so everyone will be at about the same development level as the others in a group. (Diana)

Everyone passed the compulsory evaluation material, and only one child was a borderline case. Still, 13 out of 27 failed when I made phonological tests with them. I thought everyone would be okay if I had only used the compulsory evaluation material. But it turned out they were not. - - - If we look back at those who have reading and writing difficulties in the fifth grade, they've already been weak on the phonological test in the preschool class. (Kate)

Students with special Needs in Oral and Written Language Development

According to the teachers, some students have special needs in language education. These students might have a language disorder, a home language other than the school language, or challenges with social relationships. Teachers' statements indicated that it could be a considerable challenge for a teacher to succeed in including these students in language education. For instance, the teachers mentioned the challenge of involving or engaging students with special needs in the teaching. Furthermore, another challenge highlighted by the teachers is students who cannot discriminate different phonemes from each other, which makes it difficult for the teachers to develop the students' phoneme awareness and knowledge of phoneme-grapheme correspondence in the classroom.

The teachers had two main pedagogical strategies for students with special needs in language development. One of these main strategies was giving the students individualized language development support. The other main strategy was to strive for increased participation in language activities by increasing the adjustments in the classroom. When the teachers offered individualized support to students with special needs, they tried to identify how the individual student learned and supported the student with additional tuition besides regular education. Individualized support was sometimes specified in a written action plan for the student. According to the Swedish Education Act (2010:800), such a plan is meant for students at risk of not achieving knowledge requirements despite additional adjustments (Swedish National Agency for Education, 2014, 2015). An action plan presupposes evaluation of the teaching and the student's difficulties, and the efforts must be clearly stated. Teachers in the current study received support from special needs teachers or speech therapists in making the action plans. The special needs teachers and the speech therapist could also support and guide the teachers in promoting individualized support to students with special needs. In addition, the parents were asked to support the students at home, and sometimes the teachers provided the parents with advice on practicing a specific language skill with the child. However, some teachers thought they did not have time to give students individualized support or that the students were too young for an action plan in early language education.

If we notice a student has difficulties, we raise it at student health team meetings. These include a special educator, principal, school nurse, and school counselor. They decide how the student should be treated and what resources are needed. (Elly)

When a child scores low on phonological tests, we make it very clear to the parents that their children may need support to achieve the goals in year 3. It's been very successful because these children have caught up with the reading when they come to first grade. It feels like it has made the parents take it seriously, too. (Kate)

When the other main pedagogical strategy was expressed among the teachers, there were statements about how they were striving for increased participation in language activities. The teachers expressed how they attempt to promote all students' learning and involvement in the classroom. For example, the teachers believed adjustments such as short and intensive instructions and visual aids would support participation in language education. Therefore, they used guiding and supporting questions to encourage the students' learning and communication and made them more noticeable in the classroom. Furthermore, the teachers consider the physical placements of the students to enable participation, and they plan for pedagogical and organizational differentiation to meet the needs of the students. For example, the students could be divided into smaller groups for shared book reading. Some students need pictures and shorter texts, whereas others can listen to more complex stories and create their inner images. Consequently, in smaller groups, the teacher could meet the student's proximal zone for learning and increase participation in language activities.

The teachers also believed that students who have not reached so far in language development should be able to choose language assignments to become more engaged and motivated. Language education must include play and excitement for these students to encourage them to participate in language activities. However, those teachers who did not strive for all students' participation assumed that some students would not be motivated for language assignments due to their special needs. For instance, the teachers thought that the students with special needs should have the opportunity to play instead of attending the language lesson. Still, the teachers did not reflect on the student's lack of language education and participation.

We have children with special needs. They get involved in their way, and sometimes you have to adapt a little. (Mary)

All children want to do the same thing. They also want the same material, and we let them have it, but then we adapt the assignment to each child. (Quinnlyn)

The student may prefer to build with Lego or play with something else than doing language activities, so you have to look after the child's interest. It's not a disaster if the child does not think these [language activities] are fun right now. (Betsy)

Children with a home language other than Swedish can teach the other children in the group to learn to count to five in their first language. - - They became so proud, and that's how we want it to be. We highlight all languages represented in our group so that each language is important and valuable. (Olga)

The current study explored the teachers' perspective on how young students' language development can be promoted. According to the thematic analysis, teachers' understanding of language development and pedagogical approaches were central to promoting language development among all young students in inclusive settings. However, young students with special needs in oral and written language development might need individualized support besides regular education. In addition, teachers experienced that inclusive education gave these young students more motivation to learn with their peers. The language activities must be meaningful to the students. The teachers believe that inclusive language education should be based on the students with the weakest language skills, whereas language-gifted students require additional assignments. The teachers expressed that they had to differentiate language education to offer all students appropriate language-related challenges.

Teachers' Knowledge Promotes Young Students' Language Development

Already, in the 1980s, teachers' competence in integrating content and pedagogical knowledge was argued to be vital for students' education (Shulman, 1986, 1987). Content knowledge refers to the teacher's knowledge of a subject's basic concepts and principles (e.g., written language development) and awareness of what facts students must learn (e.g., alphabet). In addition, the teacher needs to understand what makes the subject comprehensible for students. For instance, what makes the written language easy or hard to learn, and what kind of analogies, illustrations, and examples will support the young students' language education. Hence, teachers must consider all students' thinking and learning to organize and manage successful teaching (Shulman, 1986, 1987). Similarly, UNESCO (2022) has also emphasized the importance of teachers having subject knowledge and appropriate teaching strategies to promote educational

achievement among students.

Our results point in the same direction as Shulman's (1986, 1987) framework that teachers' pedagogical approaches and content knowledge about oral and written language development promote language development among young students. However, the participating teachers did not explicitly mention integrating their content and pedagogical knowledge as crucial for early language education. Still, through their examples of teaching young students oral and written language, the integration of such knowledge was expressed in the interviews. Previous research has also stressed the importance of teachers' understanding of pedagogy and language development for successful early language education (Hammond, 2015; Piasta et al., 2020). Accordingly, teachers need the competence to integrate these two types of knowledge to promote language development among young students (cf., Evens et al., 2018).

However, our results also revealed that some teachers seemed to have a weak understanding of students' language development although they had a teacher's degree. Similarly, Dockrell et al. (2017) reported that many teachers could not identify and struggle with supporting students with special needs in language development. In the current study, teachers' descriptions of their language education gave a picture of unawareness about students' oral and written language development and what type of language skills should be expected from 6-year-olds. Compared to the teachers in the study by Dockrell et al. (2017), the teachers in our study were also unaware of typical language development and not only students with special needs in language education. They seem to lack content knowledge and therefore tend to struggle in early language education. The lack of content knowledge in child language development was sometimes explicitly put forward by themselves. They tried to develop their language teaching by asking more experienced colleagues for guidance or attending in-service teacher training. Thus, some teachers did not express that they lacked content knowledge, but their descriptions indicated that their teaching did not support students' language development. For example, specific pre-reading skills such as alphabetic knowledge and phoneme awareness could be presented to make it difficult for students to comprehend the structure and meaning of written language. Such teachers introduced the letters as they come in the alphabet (A, B, C...) rather than the Swedish orthography. In Swedish, some consonants are easier (e.g., S, L, M) for students to start with than others (e.g., C, D, H, K, P) (cf., Alatalo, 2011). There are also more prevalent vowels (e.g., A, E, O, I) than others (e.g., Y, Å, Ö) in the Swedish written language. Consequently, some letters are more appropriate in early reading education in Swedish.

Early Language Education in Inclusive Settings

Although Shulman's (1986, 1987) framework for integrating pedagogical skills and content knowledge in teaching was formulated before the Salamanca Statement (UNESCO, 1994), he argues for teaching meeting the needs of all students. Hence, teachers must find representation that works as a practical example for all students. Teachers must also choose how they should give instructions and in what way these may need to be adapted to work for all students in the classroom. In addition, he underlines the importance of tailoring the teaching to the students' backgrounds, interests, motivation, and abilities. In the current study, teachers also explain how education can be more meaningful to students, especially those with special needs, when their interests, motivation, and language abilities are considered. Teachers also relate meaningful teaching to participation. To encourage students' participation, the teachers plan for pedagogical and organizational differentiation to meet the needs of the students. They also explain how important it is for students with special needs to use the same materials as their peers in the classroom to give them the feeling of belonging to the group and being involved in the language activities.

In the framework by Shulman (1986, 1987), fundamental aspects of inclusive education such as presence, participation, and achievement (cf., Ainscow, 2020) are not presented. Still, he is not discussing segregated solutions for students struggling at school. He argued that teachers must know about student diversity and reflect on their teaching to promote learning. The achievement aspect is prominent in the framework. Similarly, teachers in the current study focus on language achievement when they support students with special needs by offering additional individualized support. Their strategy to increase participation was also intended to support students in becoming more motivated to be involved in

language activities and learn alongside their peers.

Strengths and Limitations

The study was conducted during the Covid-19 pandemic; therefore, all interviews were performed using the Zoom digital meeting program. Not interviewing people in the same room and face-to-face might have limited our opportunities to create a good interview climate. Still, zoom enabled us to reach participants from all over the country. The participating teachers worked in municipal and privately owned schools in metropolitan and rural areas. We believe that the teachers tried to answer to the best ability our questions and were interested in sharing their experiences working with students' language development in the preschool class. In addition, we perceived that after about twelve interviews, data saturation was achieved. However, we chose to conduct the additional interviews scheduled with teachers. These provided additional concrete examples of the teachers' experiences promoting language development among young students.

The selection of teachers working in preschool classes consists of those who have shown particular interest in working with visual support in phoneme learning. Consequently, they may not be representative of teachers working with younger students. Thus, according to the interviews, the teachers work in varied ways to promote language development and did not place any particular emphasis on visual support in students' language development. They may be a group of teachers looking for different pedagogical strategies to use in their teaching to meet the needs of young students. Further, it is also possible that they are interested in developing their language education by using new materials and methods.

The first author was responsible for the thematic analysis, which was reviewed and discussed with the second author. Such an analysis process can be considered to strengthen the depth of the study (cf., Braun & Clarke, 2022). However, the transferability of the study must be viewed in its context and the sampling procedure. In addition, the study was conducted in Sweden among teachers working in a preschool class with students turning six years old. This class is the first year of compulsory schooling in Sweden, which might differ from school systems in some other countries where students are younger when they start compulsory education and have other legal rights to special educational support. Besides, the Swedish curriculum has no specific language goals that must be achieved in the first year, which might differ from national curriculums in other countries. This means that teachers may have different expectations regarding the content in language teaching in different countries. The national policies can guide what should be considered necessary in early language teaching and limit teachers' use of pedagogical strategies. Consequently, it is conceivable that teachers in Sweden and other countries might have different experiences promoting students' language development as their conditions and requirements for teaching in inclusive environments might vary. Thus, we can assume that teachers should have competence in students' language development and pedagogical strategies. The current study results might not be unique for the participating teachers as teachers are expected to promote language development among younger students. Similar findings have also been previously reported (Hammond, 2015; Piasta et al., 2020).

Implications

Most students learn to read and write without teaching (Ehri et al., 2001; Gough, 1996). Thus, explicit language education is crucial for students at risk for reading and writing difficulties (Castles et al., 2018; Genesee et al., 2005; Melby-Lervåg et al., 2012). These students need competent teachers to develop oral language and pre-reading skills that will support them in learning to read and be readers with good comprehension. According to the current study and previous research (Hammond, 2015; Piasta et al., 2020), early language education requires teachers with pedagogical and content knowledge of young students' oral and written language development. Therefore, students meeting teachers without such knowledge might lose the education they need to prevent future reading failures. In addition, more language-gifted students are at risk of being under-stimulated and losing interest in reading and educational motivation

(cf., Barbier et al., 2022).

School leaders should also be aware of the importance of recruiting competent staff in language development and pedagogy. Previous research has shown that it takes several years for a teacher to develop solid knowledge (Podolsky et al., 2019). It presupposes that the teacher has the opportunity to work with students in the same grade over a more extended period, which is an organizational aspect the school leaders should be aware of. In addition, collegiate learning has proven to develop teaching effectively (Podolsky et al., 2019). Therefore, school leaders should create time for collegial learning, especially when newly graduated teachers are employed. Generous and experienced teachers might have much to contribute to developing colleagues' language teaching. Without content knowledge of children's language development, a pedagogically skilled teacher will still have significant challenges in promoting language development.

Besides the school leaders striving to allow teachers to develop knowledge and teaching, it is essential that teacher education and in-service teacher training focus on how content and pedagogical knowledge can be integrated into early language education to promote all students' language development. Therefore, we suggest further studies on how collegial learning and teacher training can enhance teachers' pedagogical and content knowledge to encourage all students' language development. There is also a need for further studies on how teachers integrate their content and pedagogical knowledge in the inclusive classroom.

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References

- Ainscow, M. (2020) Promoting inclusion and equity in education: Lessons from international experiences. *Nordic Journal of Studies in Educational Policy*, 6(1), 7-16. <https://doi.org/10.1080/20020317.2020.1729587>
- Alatalo, T. (2011). Skicklig läs- och skrivundervisning i åk 1-3: Om lärares möjligheter och hinder [*Skilled reading and writing teaching in grades 1-3: About teachers' opportunities and obstacles*] (Göteborg studies in Educational Sciences, No 311). Göteborg, Sweden: Acta Universitatis Gothoburgensis.
- Axelsson, A., Lundqvist, J., & Sandberg, G. (2020). Influential factors on children's reading and writing development: The perspective of parents in a Swedish context. *Early Child Development and Care*, 190(16), 2520-2532. <https://doi.org/10.1080/03004430.2019.1590348>
- Barbier, K., Struyf, E., Verschuere, K., & Donche, V. (2022). Fostering cognitive and affective-motivational learning outcomes for high-ability students in mixed-ability elementary classrooms: A systematic review. *European Journal of Psychology of Education*, <https://doi-org.ezp.sub.su.se/10.1007/s10212-022-00606-z>
- Bowyer, C. C., Snowling, M. J., Duff, F. J., Fieldsend, E., Carroll, J. M., Miles, J., Götz, K., & Hulme, C. (2008). Improving early language and literacy skills: Differential effects of an oral language versus a phonology with reading intervention. *Journal of Child Psychology & Psychiatry*, 49(4), 422-432. <https://doi.org/10.1111/j.1469-7610.2007.01849.x>
- Braun, V. & Clarke, C. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>

- Braun, V. & Clarke, V. (2013). *Successful qualitative research. A practical guide for beginners*. Sage.
- Braun, V., & Clarke, V. (2022). Conceptual and design thinking for thematic analysis. *Qualitative Psychology*, 9(1), 3-26. <https://doi.org/10.1037/qup0000196>
- Brown, C. (2018). We need to make kindergarten engaging again. *Psychology Today*. <https://www.psychologytoday.com/us/blog/thefundamentals/201811/we-need-make-kindergarten-engaging-again>
- Castles, A., Rastle, K., & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest*, 19(1), 5–51. <https://doi.org/10.1177/1529100618772271>
- Costantino-Lane, T. (2021). "Mr. Toad's Wild Ride": Teachers' perceptions of reading instruction in kindergarten. *Early Childhood Education Journal*, 49(2), 235–245. <https://doi.org/10.1007/s10643-020-01065-1>
- de Beer, J., Engels, J., Heerkens, Y., & van der Klink, K. (2014). Factors influencing work participation of adults with developmental dyslexia: A systematic review. *BMC Public Health*, 14, 77. <https://doi.org/10.1186/1471-2458-14-77>
- Dockrell, J. E., Connelly, V., & Arfè, B. (2019). Struggling writers in elementary school: Capturing drivers of performance. *Learning and Instruction*, 60, 75–84. <https://doi.org/10.1016/j.learninstruc.2018.11.009>
- Dockrell, J. E., Howell, P., Leung, D., & Fugard, A. J. B. (2017). Children with speech language and communication needs in England: Challenges for practice. *Frontiers in Education*, 2, Article 3. <https://doi.org/10.3389/feduc.2017.00035>
- Duncan, G. J., Dowsett, C. J., Claessens, A., Magnuson, K., Huston, A. C., Klebanov, P., Pagani, L. S., Feinstein, L., Engel, M., Brooks-Gunn, J., Sexton, H., Duckworth, K., & Japel, C. (2007). School readiness and later achievement. *Developmental Psychology*, 43(6), 1428-1446. <https://doi.org/10.1037/0012-1649.43.6.1428>
- Ehri, L. C., Nunes, S. R., Willows, D. M., Schuster, B. V., Yaghoub-Zadeh, Z., & Shanahan, T. (2001). Phonemic awareness instruction helps children learn to read: Evidence from the National Reading Panel's meta-analysis. *Reading research quarterly*, 36(3), 250-287. <https://doi.org/10.1598/rrq.36.3.2>
- Evens, M., Elen, J., Larmuseau, C., & Depaape, F. (2018). Promoting the development of teacher professional knowledge: Integrating content and pedagogy in teacher education. *Teaching and Teacher Education*, 75, 244–258. <https://doi.org/10.1016/j.tate.2018.07.001>
- Fricke, S., Bowyer-Crane, C., Haley, A. J., Hulme, C., & Snowling, M. J. (2013). Efficacy of language intervention in the early years. *Journal of Child Psychology and Psychiatry*, 54(3), 280–290. <https://doi.org/10.1111/jcpp.12010>
- Genesee, F., Lindholm-Leary, K., Saunders, W., Christian, D. (2005). English language learners in U.S. schools: An overview of research findings. *Journal of Education for Students Placed at Risk*, 10(4), 363–385. https://doi.org/10.1207/s15327671espr1004_2
- Gillon, G.T. (2000). The efficacy of phonological awareness intervention for children with spoken language impairment. *Language, Speech, and Hearing Services in Schools*, 31(2), 126-141. <https://doi.org/10.1044/0161-1461.3102.126>
- Gillon, G., McNeill, B., Denston, A., Scott, A., & Macfarlane, A. (2020). Evidence-based class literacy instruction for children with speech and language difficulties. *Topics in Language Disorders*, 40(4), 357-374. <https://doi.org/10.1097/tld.0000000000000233>
- Gough, P. B. (1996). How children learn to read and why they fail. *Annals of Dyslexia*, 46(1), 1-20. <https://doi.org/10.1007/bf02648168>
- Hammond, L. (2015). Early childhood educators' perceived and actual metalinguistic knowledge, beliefs, and enacted practice about teaching early reading. *Australian Journal of Learning Difficulties*, 20(2) 113-128. <https://doi.org/10.1080/19404158.2015.1023208>
- Hofslundsengen, H., Magnusson, M., Svensson, A.K., Jusslin, S., Mellgren, E., Hagtvet, B.E., & Heilä-Ylikallio, R. (2020). The literacy environment of preschool classrooms in three Nordic countries: Challenges in a multilingual and digital society. *Early Child Development and Care*, 190(3), 414-427. <https://doi.org/10.1080/03004430.2018.1477773>
- Hulme, C., & Snowling, M.J. (2016). Reading disorder and dyslexia. *Current Opinion in Pediatrics*, 28(6), 731-735. <https://doi.org/10.1097/MOP.0000000000000411>
- Kaminski, R., Powell-Smith, K., Hommel, A., McMahon, R., & Aguayo, K. (2014). Development of a tier 3 curriculum to teach early literacy skills. *Journal of Early Intervention*, 36(4), 313-332. <https://doi.org/10.1177/1053815115581210>
- Kirby, M.S., Spencer, T.D., & Chen, Y.J.I. (2021). Oral narrative instruction improves kindergarten. *Reading & Writing Quarterly*, 37(6), 574-591. <https://doi.org/10.1080/10573569.2021.1879696>
- Language and Reading Research Consortium (2017). Oral language and listening comprehension: Same or different constructs? *Journal of Speech, Language, and Hearing Research*, 60(5), 1273-1284. https://doi.org/10.1044/2017_JSLHR-L-16-0039
- Lonigan, C. J., & Shanahan, T. (2008). *Developing early literacy: Report of the national early literacy panel. A scientific synthesis of early literacy development and implications for intervention. Executive summary*. National Institute for Literacy. <https://doi.org/10.1037/e548602010-001>
- Lundberg, I., Larsman, P., & Strid, A. (2012). Development of phonological awareness during the preschool year: The influence of gender and socio-economic status. *Reading and Writing: An Interdisciplinary Journal*, 25(2), 305–320.

<https://doi.org/10.1007/s11145-010-9269-4>

- Massonnié, J., Llaurado, A., Sumner, E., & Dockrell, J.E. (2022). Oral language at school entry: Dimensionality of speaking and listening skills. *Oxford Review of Education*, 48(6), 743-766. <https://doi.org/10.1080/03054985.2021.2013189>
- Melby-Lervåg, M., Lyster, S.-A. H., & Hulme, C. (2012). Phonological skills and their role in learning to read: A meta-analytic review. *Psychological Bulletin*, 138(2), 322–352. <https://doi.org/10.1037/a0026744>
- Munro, N., Lee, K., & Baker, E. (2008). Building vocabulary knowledge and phonological awareness skills in children with specific language impairment through hybrid language intervention: A feasibility study. *International Journal of Language and Communication Disorders*, 43(6), 662-682. <https://doi.org/10.1080/13682820701806308>
- NICHD Early Child Care Research Network (2005). Pathways to reading: The role of oral language in the transition to reading. *Developmental Psychology*, 41(2), 428–442. <https://doi.org/10.1037/0012-1649.41.2.428>
- Norbury, C. F., Gooch, D., Wray, C., Baird, G., Charman, T., Simonoff, E., Vamvakas, G., & Pickles, A. (2016). The impact of nonverbal ability on prevalence and clinical presentation of language disorder: Evidence from a population study. *Journal of Child Psychology & Psychiatry*, 57(11), 1247–1257. <https://doi.org/10.1111/jcpp.12573>
- Norling, M. (2019). En studie om hur förskollärare och lärare resonerar om undervisningens innehåll i relation till barns språk-, läs- och skrivutveckling i förskola och förskoleklass [A study of how preschool teachers and teachers reason about the content of teaching in relation to children's language, reading and writing development in preschool and preschool class]. *Nordisk barnehageforskning*, 18(4), 1-16. <https://doi.org/10.7577/nbf.2958>
- Piasta, S. B., Park, S., Farley, K. S., Justice, L. M., & O'Connell, A. A. (2020). Early childhood educators' knowledge about language and literacy: Associations with practice and children's learning. *Dyslexia*, 26(2), 137–152. <https://doi.org/10.1002/dys.1612>
- Pickard, A. (2021). Accountability in adult basic education: The marginalization of adults with difficulty reading. *Journal of Literacy Research*, 53(1), 53–74. <https://doi.org/10.1177/1086296X20986910>
- Podolsky, A., Kini, T., & Darling-Hammond, L. (2019). Does teaching experience increase teacher effectiveness? A review of US research. *Journal of Professional Capital and Community*, 4(4), 286-308. <https://doi.org/10.1108/JPC-12-2018-0032>
- Sandberg, G., Hellblom-Thibblin, T., & Garpelin, A. (2015). Teacher's perspective on how to promote children's learning in reading and writing. *European Journal of Special Needs Education*, 30(4), 505-517. <https://doi.org/10.1080/08856257.2015.1046738>
- Saracho, O.N. (2017). Literacy and language: New developments in research, theory, and practice. *Early Child Development and Care*, 187(3-4), 299-304. <https://doi.org/10.1080/03004430.2017.1282235>
- Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4–14. <https://doi.org/10.3102/0013189x015002004>
- Shulman, L.S. (1987). Knowledge and teaching: Foundation of the new reform. *Harvard Educational Review*, 57(1), 1-23. <http://doi.org/10.17763/haer.57.1.j463w79r56455411>
- Suggate, S., Schaughency, E., McAnally, H., & Reese, E. (2018). From infancy to adolescence: The longitudinal links between vocabulary, early literacy skills, oral narrative, and reading comprehension. *Cognitive Development*, 47, 82–95. <https://doi.org/10.1016/j.cogdev.2018.04.005>
- Swedish Education Act (2010:800). https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/skollag-2010800_sfs-2010-800.
- Swedish National Agency for Education. (2014). *Arbete med extra anpassningar, särskilt stöd och åtgärdsprogram* [General guidelines for working with additional adjustments, special support and action programmes]. <https://www.skolverket.se/getFile?file=3299>
- Swedish National Agency for Education. (2015). *Support activities in school – What do I need to know as a parent?* <https://www.skolverket.se/getFile?file=3477>
- Swedish National Agency for Education. (2018). *Curriculum for the compulsory school, preschool class and school-age educare*. <https://www.skolverket.se/getFile?file=3984>
- Swedish National Agency for Education. (2019). *Skolverkets föreskrifter om obligatoriska nationella kartläggningsmaterial i språklig medvetenhet och i matematiskt tänkande i förskoleklass*, SKOLF5 2019:16 [The Swedish National Agency for Education's regulations on compulsory national evaluation materials in language awareness and in mathematical thinking in preschool classes]. <https://skolfs-service.skolverket.se/api/v1/download/grundforfattning/2019:16>
- Swedish National Agency for Education. (2021). *Elever i förskoleklassen läsåret 2020/21* [Students in preschool class academic year 2020/21]. <https://www.skolverket.se/download/18.5a061df817791f8257b17fd/1616773274509/pdf7921.pdf>
- Swedish Schools Inspectorate. (2021). *Skolenkäten* [School questionnaire]. <https://www.skolinspektionen.se/beslut-rapporter-statistik/statistik/statistik-fran-skolenkaten/resultat-skolenkaten-2021>
- United Nations Educational, Scientific and Cultural Organization. [UNESCO]. (1994, June 7-10). *The Salamanca Statement and Framework for action on special needs education: Adopted by the World Conference on Special Needs Education; Access and Quality*.

Salamanca, Spain.

- United Nations Educational, Scientific and Cultural Organization [UNESCO]. (2018, October 17-18). *Functional literacy and Numeracy: Definitions and Options for Measurement of SDG 4.6*. GAML Fifth Meeting, Hamburg, Germany.
- United Nations Educational, Scientific and Cultural Organization [UNESCO]. (2022). Teacher content knowledge. <https://policytoolbox.iiep.unesco.org/policy-option/teacher-content-knowledge/#policies-for-children-with-disabilities>
- World Literacy Foundation. (2012). The economic and social cost of illiteracy: A snapshot of illiteracy in a global context. <http://hdl.voced.edu.au/10707/321997>
- Zucker, T., Solari, E., Landry, S., & Swank, P. (2013). Effects of a brief tiered language intervention for prekindergartners at risk. *Early Education and Development*, 24(3), 366-392. <https://doi.org/10.1080/10409289.2012.664763>