Koi Tū Centre for Informed Futures

Chloe Wright Policy Unit

Evidence brief

Preparing our children for language learning

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Koi Tū Centre for Informed Futures is an independent, non-partisan, future-focused boundary organisation dedicated to tackling the complex, long-term challenges shaping Aotearoa New Zealand's future.

We provide high-quality, evidence-based insights to address critical national and global issues arising from rapid social, economic, technological, and environmental change.

Our name, Koi Tū, was gifted by Ngāti Whātua Ōrākei. Koi means "the sharp end of an arrow" and "to be bright and clever," while Tū means "to stand" and conveys resilience. Like our namesake, Koi Tū aims to get to the heart of the most pressing long-term issues.

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Key points

- Language experiences during early childhood shape the development of the child's learning capabilities in later life.
- Parents, caregivers and educators have important roles in building language-rich environments for children.
- Caregiver-child interactions that are warm, responsive and reciprocal are important for facilitating language acquisition.
- Conversing and reading with children, singing and reciting nursery rhymes are effective activities that provide language-rich environments for children.
- Engaging with children in more than one language can enhance the child's language skills and learning capabilities.
- Community- and population-level policies are needed to promote awareness of the importance of early language experiences and to support caregivers to ensure that all children grow up in language-rich environments.

The importance of early language experiences

The first roots of language are acquired in utero, when the brain's neural connections begin to form. Those neural connections expand rapidly during the first three years of life, by which 85% of them are formed, including in areas of the brain that are involved with language, communication and literacy.[1-4] Neural connections form as the child engages with sights and sounds in their environment, including language experiences such as talking, shared reading, singing, and literacy experiences such as engaging with printed words and pictures found within children's storybooks. By the age of three, many children are talking in full sentences.

In Aotearoa New Zealand, one in five children aged 5 are currently struggling with oral language skills.[5] This has been exacerbated by the COVID-19 pandemic, with nearly two-thirds of teachers reporting that children are experiencing difficulties with using oral language to communicate their needs. Boys are more likely to struggle with oral language skills than girls, and children living in lower socio-economic communities are more likely to struggle with oral language skills than those living in higher socio-economic communities.

Exposure to language and literacy throughout early childhood builds a strong foundation for later learning and provides a myriad of benefits for the child. These benefits include enhancing the child's executive functioning skills, their emotional understanding and social skills, and their wellbeing and mental health.[6-10] Language development and other aspects of executive function development are closely linked. Strengthening language skills also enables children to accurately and confidently communicate their experiences and needs, which is paramount for building meaningful connections, support networks and resilience.[11] Sharing language experiences with children is therefore crucial for their developmental trajectory, and there are numerous ways for parents, caregivers and whānau to integrate language into the child's care routine.

Building language-rich environments

Building environments rich in interactive and engaging language experiences helps to introduce language to children. A key part of this involves warm, responsive and reciprocal interactions between the child and the caregiver. These interactions are also known as 'serve and return' interactions, which describe the responsive back-and-forth nature of the interactions between the child and the caregiver.[4,12,13] When the child initiates and reaches out for interaction through babbles, gestures, eye contact or touch, the caregiver responds promptly, warmly and appropriately by smiling or embracing the child. These interactions are intentional, where both the caregiver and the child are engaged in a back-and-forth exchange of gestures, sounds, eye contact and attention. Some common infant games such as Peekaboo and Copycat actively use this concept.

Responsive and nurturing interactions are crucial in strengthening the relationship between the caregiver and the child, as they provide room for the caregiver to actively engage with the child, learn about them and understand them.[14] For instance, if the child begins fussing or grimacing, this may indicate overstimulation and may be a cue for the caregiver to change activities or try again another time.[15] The inherently language-rich nature of 'serve and return' interactions facilitates the development of language and literacy skills, and higher levels of both the quality and quantity of language interactions with children are associated with greater language ability, cognitive development, social skills and emotional competence.[8-10,16]

Earlier and more frequent 'serve and return' interactions with children allow for a greater amount of exposure to language experiences, which can build the child's interest in language and literacy. This can then increase the breadth of language experiences that the caregivers share with the child, such as introducing more challenging or elaborate books, or using a more extensive vocabulary when talking with the child.

Language-rich activities

There are many language-rich activities that can enhance the learning capacities of children, starting from birth and throughout childhood. The types of language interactions between the caregiver and the child vary depending on the child's age. For newborns and infants, research suggests that talking, reading, singing and reciting nursery rhymes are effective ways to nurture language skills.[16-20] As the child becomes older, parents can begin increasing the range of reading and writing materials, and engage in shared reading and storytelling activities that further encourage the child's participation and the caregiver's feedback.[20-23]

Talking with children

Responding to the infant's gestures, expressions or attention (e.g., which direction the infant is looking) is an effective way to introduce language experiences to the infant (Figure 1). For instance, if the infant makes a babbling sound, the caregiver may respond by making similar sounds.[24] Communicating with infants using a higher pitch and slower, exaggerated pronunciation may help infants learn to form words.[25] Another language-rich interaction is to describe the infant's surroundings. If the infant is looking or gesturing towards an object, the caregiver can respond by naming the object or describing what the object is. Caregivers can also name and describe actions, people, places, and even abstract constructs such as emotions, to the child. A good opportunity to narrate in this way and build vocabulary growth is during home errands (e.g., "*I am now folding the clothes. Look at this red shirt.*").

Reminiscing, where the caregiver talks about past events with their children, can also support the development of children's learning capabilities. An example is looking at a photo and talking about what happened when the photo was taken. How caregivers reminisce may differ depending on their cultural background and upbringing. For instance, in Māori culture, reminiscing can be a very elaborate conversation that honours the importance of the past, ancestors and memories.[26,27] A study of the home learning environment of Māori preschoolers found that reminiscing with elaboration, repetition, emphasis on key aspects of the story, and phrases that prompted children to recall ("*Do you remember?*") was linked to improved comprehension, phonological awareness (the understanding of the ways that language can be broken down into smaller parts), and letter identification in the child.[28]

Although infants may appear as though they do not understand complex language, caregivers should still engage with them using their everyday language. Both the quantity and quality of language shared with the child as they grow older are linked with improved speech processing and language development.[10,29,30] Conversing with children using broad vocabulary and complex grammar and syntax structures can aid the development of their language and cognitive capacities. However, it is important that these interactions encourage the child's engagement so that they are conversations *with* the child, instead of words spoken *at* the child. There should be opportunities for the child to contribute to the interaction verbally or non-

verbally, where the caregiver waits and encourages a response while maintaining eye contact.[10,31]

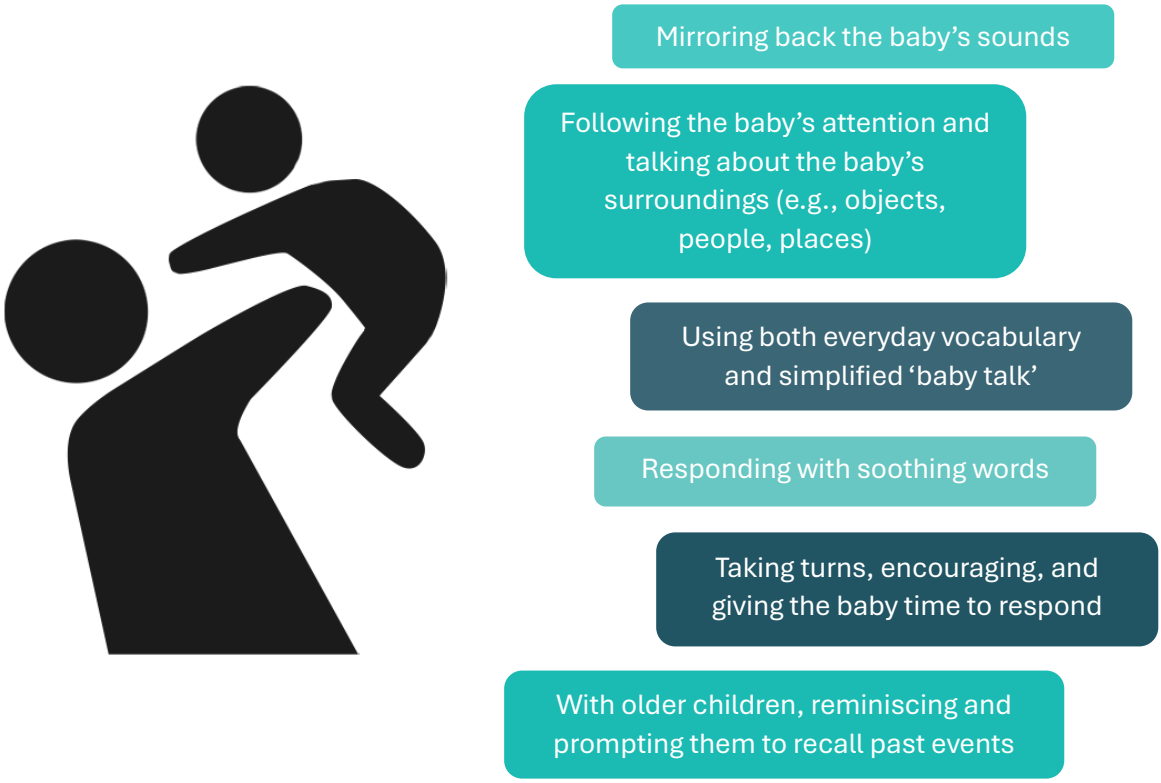

Figure 1. Ways to talk with infants and children that can facilitate their language development.

Reading with children

Surrounding a young child with picture books with or without words is associated with the development of language and cognitive skills, and increases the child's interest in reading, even when children have not started reading on their own yet.[32-34] In addition, sharing reading experiences beyond the story, such as holding or touching the book, turning the pages, or interacting with the pictures within books, can effectively promote language development in infants, as this involves active and reciprocal engagement between the child and the caregiver (Figure 2).[20,21]

Reading experiences are ideally a shared engagement between the caregiver and the child, where the focus is centred around the child's feedback throughout the reading session and the caregiver's warm and appropriate responses to that feedback.[35-37] The key lies within the shared, back-and-forth interactions when reading with children, whereas simply reading *to* a child, with the child passively listening, may not facilitate language development as effectively.

The caregiver can use a variety of techniques within a warm and safe environment to engage and encourage children to actively participate in the shared reading. These techniques include holding the child close while asking questions, such as "*What is this?*" or "*Do we have this at home?*" and pausing to wait for the child's response, linking and making connections between the book content and the child's own experiences, and expanding on certain aspects of the story such as emotion-related content while using a voice or expression that corresponds with the emotion.[21,38,39] Caregivers can also link words with pictures in the books for further interaction with the child. With infants, caregivers can respond to the infant's verbalisations and

name objects and actions in the book, repeating these at least once or acting out action sequences together with the infant. Having bedtime routines that involve shared book reading or storytelling can further contribute to early language acquisition and cognitive development.[40,42]

Shared reading is also linked to benefits beyond language development. The Growing Up in New Zealand study has found that children who read together with a parent throughout childhood were more likely to report positive childhood experiences and greater family support at age 11.[40]

Figure 2. Reading activities that can facilitate language development in infants and children.

Singing with children

Singing is another way to introduce language to children, and it can facilitate their language and socioemotional development and phonetic perception (Figure 3).[43-46] Singing that is directed to infants typically has higher pitch and slow tempo, and uses repetition, short sequences and sustained pauses.[46,47] The rhythmic, repetitive and predictable nature of songs are effective in holding the child's attention and enhancing the child's ability to distinguish between sounds and words.[42] Reciting nursery rhymes to children also enhances their cognitive capacities and language development in similar ways.[48-50]

When children hear the caregiver's voice, the rhyme and rhythm of words in the songs, and emotional expression through the song, this can enhance the development of cognitive abilities and self-regulation skills, and facilitate bonding between the child and the caregiver.[51] Songs can also be accompanied by gestures, like 'Head, Shoulders, Knees and Toes', especially if the lyrics refer to actions or emotions.

Singing comes with additional benefits. These include emotional regulation and reducing stress in both the child and the caregiver, and providing a medium through which caregivers can connect children with traditions and culture.[17,52,53] Singing is also a great way to engage with children in more than one language.[54] For example, singing waiata to pēpi can be a great way to introduce te reo Māori and allow pēpi to become familiar with sounds specific to the language.

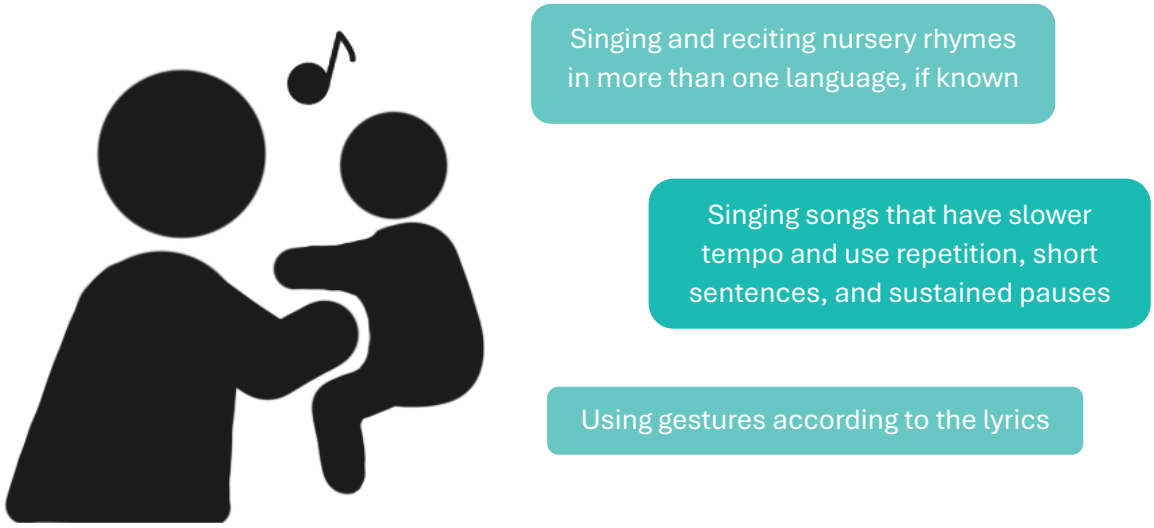

Figure 3. Singing activities that can facilitate language development in infants and children.

Bilingualism in children

Engaging with children in more than one language from a young age can enhance the child's learning capacities and executive functioning, such as cognitive flexibility, inhibitory control, attentional control and working memory.[55,56] These improvements in cognitive abilities can be observed irrespective of the child's socioeconomic background. In a rural kura (school) that provides curriculum in a bilingual context of both te reo Māori and English, the development of phonological awareness, vocabulary and writing skills was correlated with classes taught in equal parts te reo Māori and English.[57] There were also significant improvements in English literacy skills of children who took classes that were taught predominantly in te reo Māori. This suggests that learning related to one language can be applied to another language.

Further benefits of bilingualism include enhanced creativity, communication skills, cultural competence, self-esteem and wellbeing.[58-60] For example, Māori who speak both te reo and English tend to report stronger ethnic identity, higher self-esteem and personal wellbeing than those who speak only English.[60] Bilingual Pasifika peoples, who speak their community or other languages and English, also tend to report stronger ethnic identity compared to those who only spoke English.

Taken together, creating language-rich environments that allow children to engage with the caregiver in more than one language can be highly beneficial for the child's developmental trajectory, sense of identity and wellbeing.

Ensuring all children experience language-rich environments

There is a need to promote greater awareness of the importance of creating language-rich environments for all children in New Zealand. Early childhood centres, schools, healthcare providers including Well Child providers, and social support services have a pivotal role in

increasing awareness among parents, caregivers and education providers, and assisting them in accessing resources on introducing language-rich experiences to children.

However, an increase in awareness alone is likely insufficient to ensure all children are provided with language-rich environments. Many caregivers encounter barriers such as a lack of time, availability, access to resources and uncertain financial circumstances. Additional barriers include living with disabilities or chronic health conditions, chronic stress, psychological distress, and caring for children with complex needs, for which support should be accessible and available.[61,62] The challenges of the caregiving role are likely to be exacerbated in contexts where there is intergenerational disadvantage, such as poverty, crime, unemployment and trauma.[63]

Addressing these barriers involves community- and population-level policies that provide social, financial and mental wellbeing support to caregivers. This helps caregivers be better placed to interact responsively with their child and create environments rich in language experiences. For example, improvements in paid parental leave such as higher payment rates and longer duration will not only offer financial relief but also enable parents to spend more interactive time with their infant.[4] Paid parental leave for fathers is an under-recognised yet vital component of supporting caregivers to share nurturing language-rich interactions with their children. At the community level, examples of initiatives promoting language experiences could include library events and book fairs for families with young children. More specific measures include providing accessible and tailored parenting support to families living in difficult circumstances and having early oral language outcomes as deliverables in government contracts with services. Parenting has historically been highly dependent on the support of the family's 'village', the nature of which has been gradually declining over recent decades. This has made the contribution of community and population-level support more crucial.[64]

Caregivers who are limited in time or resources can be reassured that any amount of time they can spend engaged in warm and reciprocal interactions with their child and sharing in language-rich activities will be beneficial for their child's language development. For example, a study has shown that 10-month-old infants who engaged in shared reading activities with their mothers showed improved language skills at 18 months – even though each activity was just 2.3 minutes long on average.[65] Another study has found that reading with two and three-year-old children for a minimum of just one hour each week is linked to greater vocabulary and phonological awareness at four years of age, compared with children experiencing less than an hour of shared reading per week.[66] These studies suggest that the shared attention and engagement within the relatively short amount of time spent reading together may be a significant contributor of language development in children. Notably, the benefits of shared reading were substantially greater in children from lower-income families than those in higher-income families. The beneficial effects were also observed in children whose families had experienced a decrease in household income since the time they were first tested, suggesting that shared reading at a young age may act as a buffer against potential negative effects of economic hardship on language learning.

Reciprocal interactions and responsive engagement during shared reading activities with children who are neurodiverse are also associated with enhanced language development.[67-69] Ultimately, it is the quality rather than the duration of shared engagement that has a greater role in facilitating language development in children.

The first few years of life are a critical time for brain development and learning. A child's language skills are best developed when they consistently experience language-rich environments that involve warm, responsive interactions with their caregiver. Caregiving is not an individual endeavour, and community- and population-level policies supporting parents, caregivers and educators are an indispensable component of ensuring that all children can grow up in and benefit from language-rich environments.

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