

Baby talk: How early childhood centers can help multilingual children

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Dr Fiona Zheng (pictured) investigated potential differences in how educators and children talk to each other depending on the infants' language background. Credit: Macquarie University

Infants from multilingual backgrounds "talk" less with their early childhood educators, which could slow their language development, according to a new study. But researchers also found the children catch up over time.

The study, published in the journal *Infant Behavior and Development*, is the first major analysis from the MQ TaLK project, currently the biggest study in Australia to investigate how [early childhood](#) education settings support infant and toddler [language](#) development.

The researchers found that English-speaking infants from 12 to 18 months old in early childhood centers "vocalized" (spoke or made speech-like sounds) more than multilingual infants.

"The extent to which children vocalize in infancy strongly predicts their language development and it also affects how much they are spoken to, so these are significant findings," says Professor Sheila Degotardi, who is the Director of the Center for Research in Early Childhood Education at Macquarie University.

"However, we found that as multilingual children spent more time in their early childhood center, the difference in vocalization rates between the two groups disappeared," she says.

Words count

The research team studied more than 180 children aged 12 to 18 months old attending early childhood centers, 45% of whom were multilingual, and compared language environments between monolingual and multilingual children in their homes and in early childhood centers.

"This is a very comprehensive study, gathering data on aspects of language environments such as how many words infants hear from their parents or educators. How many vocalizations they produce, and how many conversational turns they are engaged in," says Professor Degotardi. "We also looked at the quality of those language interactions."

Along with [video recordings](#), the researchers had participating children wear a specialized recording device called LENA (Language Environment Analysis), which records their speech interactions across a full day.

Postdoctoral research fellow and study co-author Dr. Fiona Zheng analyzed the LENA data.

"We wanted to find out about how the language environments might differ for children who are growing up speaking or hearing a language other than English," she says.

The findings are particularly significant because the 2021 Census showed that nearly half of Australians (48%) had a parent born overseas, 27% were born overseas and 22% spoke a language other than English at home.

The study suggests that early childhood center attendance during infancy may support early language development, Dr. Zheng explained.

"In the future our analysis will look at how 4-year-olds use their language, from how they construct a story narrative to how they describe things in a picture. And we also plan to look at how they use language to express what they know and understand," says Dr. Zheng.

Shining a light

Professor Degotardi says this study could shed light on Australian data showing that children from non-English speaking backgrounds often start school with weaker language skills than their English-speaking peers.

"Early childhood educators often ask about aiding language development

in young children, and how to support children from non-English speaking backgrounds—this project is all about getting that data," Professor Degotardi says.

The study takes a deep dive into language interactions in early childhood, she says.

"We're observing how educators might consciously or unconsciously adjust the ways they interact with children depending on their language background, and whether the children themselves vocalize differently depending on their language background."

"These findings suggest that educators need to be aware of individual differences in language environment experienced by multilingual and monolingual infants," says Dr. Zheng.

Group sizes matter

The study also found that infants in smaller groups also vocalized more frequently than those in larger groups.

"There is no limitation on [group size](#) in Australia and the largest class size we studied was over 25 children—these big classes are likely to be noisier and busier, which runs the risk of impacting on the quality of their interactions with educators," Professor Degotardi says.

One surprising result from the study was that the number of words adult caregivers spoke differed according to the gender of the infant.

"In general, educators talked more to female infants than to male infants," says Professor Degotardi.

"Regardless of their multilingual status, all girls were exposed to

significantly more language than boys."

This finding was a sideline to the current research, but will be explored in more detail in future, Professor Degotardi says.

"Could female infants be already socialized into wanting more language interactions than male infants by this young age? Is there a [genetic predisposition](#), or even unconscious bias on behalf of educators—there's a number of avenues to explore further."

Bridging the gap

The study highlights the importance of understanding multilingual infants' language environments in [early childhood education](#) settings, says Professor Degotardi.

"Early [childhood](#) education plays a critical role in [language development](#) for a large group of Australian children," she says.

"Our research highlights the need for educators to be supported so they can focus on providing a rich and varied language environment for all children regardless of their multilingual status."

That should include frequent conversational turns, rich experience with adult talk and the encouragement of infant vocalizations, she says.

"These findings should encourage centers to have smaller group settings to support frequent opportunities for one-on-one interaction with educators," Professor Degotardi says.

More information: Zhijun Zheng et al, Effects of multilingualism on Australian infants' language environments in early childhood education centers, *Infant Behavior and Development* (2022). [DOI:](#)

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