

# From Isolation to Interaction: A Data-Driven Path Forward



## Understanding the Challenge

Approximately 1 in 8 children in early education settings spends most of their day in language isolation.

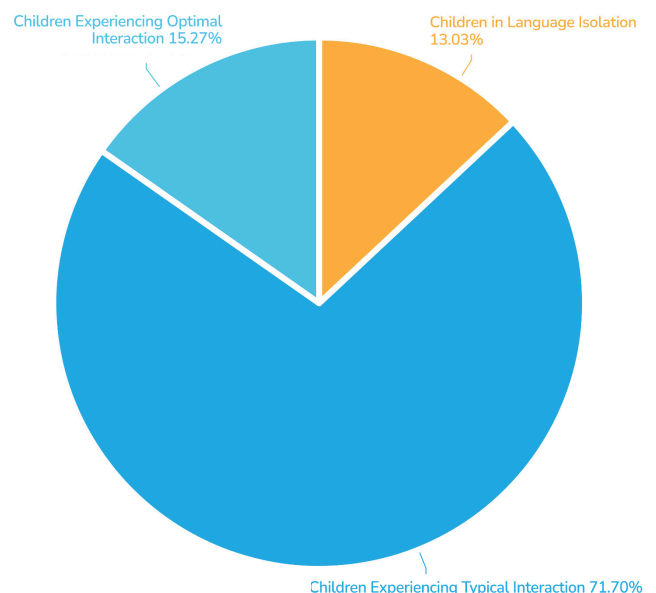
That means they go hours with almost no back-and-forth conversation with their teachers. LENA defines language isolation as having fewer than five conversational turns per hour for all but one hour of the day. A child might talk more at arrival time or during lunch. But otherwise? Near silence.

“Talking with young children, not just to them, may make a big difference in their lives for a long time to come,” said Dr. Jill Gilkerson, LENA’s Chief Research and Evaluation Officer. “It’s important to start early, and it’s important to amplify the critical role interactions play — not just in the home, but also in child care settings.”

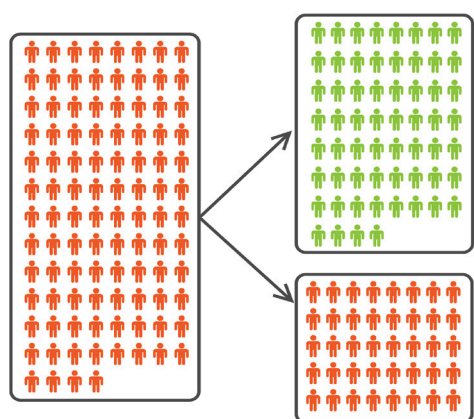
## Data Analysis: Language Isolation Is Prevalent

Daylong conversational turn data from 33,256 children across the country was analyzed. The children attended different types of programs, including center-based classrooms, Head Start, and family child care homes.

4,332 of those children, or 13%, experienced language isolation. Children were just as likely to experience language isolation as they were to experience optimal interaction, previously identified as 40 conversational turns per hour.<sup>1</sup>



## Bringing Children Out of Language Isolation



The same data analysis that revealed the problem also pointed to a solution. LENA Grow — a five-week professional development program for early childhood educators — may help bring children out of language isolation.

- At the start of the LENA Grow program, **4,332 of 33,256 children were in language isolation.**
- After their teachers completed LENA Grow, **59.9% of those children** had moved out of language isolation. That's, **2,597 children who went from having almost no interaction with their teachers to having regular interactions throughout the day.**

"Now more than ever, LENA Grow will help teachers work toward behavioral changes that benefit the children who need it the most," said Liz Pettit, Senior Product Manager for LENA Grow.

## Building a Better Future

Today, about half of all young children spend at least part of their days in child care settings.<sup>2</sup>

At the same time, teachers face unprecedented challenges — low pay, high-stakes assessments, and mounting stress. These pressures make it harder to give every child the attention they need.

As more children enter child care, the stakes get higher. We can't afford to have *any* of our young children sitting in silence. But we know what works. Programs like LENA Grow give educators the tools and support they need to connect with every child in their care.

**LENA Grow** is a data-driven professional development program for early childhood educators. The program focuses on improving language environments and increasing teacher-child conversational turns. Conversational turns, also known as serve-and return interactions, have previously been linked to brain structure<sup>3</sup> and function,<sup>4</sup> healthy social skills,<sup>5</sup> higher IQ scores,<sup>6</sup> literacy skills,<sup>7</sup> and preschool vocabulary.<sup>8</sup>

## What You Can Do:

### 4 Action Steps for Directors and Administrators

**Ask the right questions.** Which children in your program might be experiencing language isolation? Do your teachers have the tools to identify and reach them?

**Create a culture of conversation.** How can you support teachers in making interaction a daily priority? What barriers are getting in the way?

**Invest in your teachers.** Programs like LENA Grow give educators the data and coaching they need to connect with every child, especially those who need it most.

**Measure what's happening.** You can't improve what you don't see. Use LENA technology to understand how much interaction each child in your program experiences throughout the day.

## Citations

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- <sup>3</sup> Romeo, R. R., Segaran, J., Leonard, J. A., Robinson, S. T., West, M. R., Mackey, A. P., Yendiki, A., Rowe, M. L., & Gabrieli, J. D. E. (2018). Language exposure relates to structural neural connectivity in childhood. *The Journal of Neuroscience*, 38(36), 7870-7877. <https://doi.org/10.1523/jneurosci.0484-18.2018>
- <sup>4</sup> Romeo, R. R., Leonard, J. A., Robinson, S. T., West, M. R., Mackey, A. P., Rowe, M. L., & Gabrieli, J. D. (2018). Beyond the 30-million-Word Gap: Children's conversational exposure is associated with language-related brain function. *Psychological Science*, 29(5), 700-710. <https://doi.org/10.1177/0956797617742725>
- <sup>5</sup> Gómez, E., & Strasser, K. (2025). Conversational Turns at Early Childhood Predicts Socioemotional Development at School Age. *Social Development*, 34(4). <https://doi.org/10.1111/desc.13109>
- <sup>6</sup> Gilkerson, J., Richards, J. A., Warren, S. F., Oller, D. K., Russo, R., & Vohr, B. (2018). Language experience in the second year of life and Language Outcomes in late childhood. *Pediatrics*, 142(4). <https://doi.org/10.1542/peds.2017-4276>
- <sup>7</sup> Weiss, Y., Huber, E., Ferjan Ramírez, N., Corrigan, N. M., Yarnykh, V. L., & Kuhl, P. K. (2022). Language input in late infancy scaffolds emergent literacy skills and predicts reading related white matter development. *Frontiers in Human Neuroscience*, 16. <https://doi.org/10.3389/fnhum.2022.922552>
- <sup>8</sup> Duncan, R. J., Anderson, K. L., King, Y. A., Finders, J. K., Schmitt, S. A., & Purpura, D. J. (2022). Predictors of preschool language environments and their relations to children's vocabulary. *Infant and Child Development*, 32(1). <https://doi.org/10.1002/icd.2381>