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Learning to Read in Brazil: Why Change Is Urgent and What the Kalulu Project in Cambé Shows Is Possible

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Brazil faces a deep literacy crisis. For years, national and international assessments have revealed the same troubling reality: vast numbers of children complete early elementary school without learning to read. In 2021, 40.8% of children aged 6 to 7 could not read or write by the end of 2nd grade—a figure that rises to 51% among the poorest quartile (IBGE 2021). The consequences are severe across all regions, particularly for vulnerable communities. Because reading is the foundation of all subsequent learning, early failure creates a widening gap that makes later learning increasingly difficult and often leads to disengagement and dropout.

This crisis does not stem from lack of teacher commitment. Brazilian educators work with dedication under challenging conditions. The problem lies in decades of unresolved methodological debates that have left teachers without clear, evidence-based tools. The science is unequivocal: children learn to read through explicit, systematic instruction in letter-sound relationships, combined with frequent opportunities to practice reading aloud and receive feedback (Olalla et al., 2025). Without this foundation, many children never become readers.

Cambé, a municipality in Paraná, chose to act. Under the leadership of Municipal Secretary of Education Estela Camata, and in collaboration with researchers from the Collège de France, Universidade Federal do ABC (UFABC), and Universidade Estadual de Londrina (UEL), Cambé implemented a rigorous randomized control trial of Kalulu, a phonics-based reading program, across all its schools. The project received support from Excello through the Agir pour l'Éducation initiative of the Fondation du Collège de France, and also with the support of the State Secretariat for Innovation and Artificial Intelligence, with direct coordination from Secretary Alex Canziani.

Kalulu: An Evidence-Based Method for Early Reading Education

Kalulu is a comprehensive, open-access literacy program comprising student booklets, a teaching guide, and interactive games. Each lesson introduces a new grapheme-phoneme combination that children practice progressively through syllables, words, sentences, and texts. Writing instruction follows the same systematic progression, reinforcing learning through multiple modalities. All materials are freely available at https://kalulu.excellolab.org/langue/bresil/.

The Cambé Project

The Cambé project is remarkable for its scale and rigor. All seventeen municipal schools (1120 1st grade students) participated in a randomized controlled trial. Some used Kalulu; others continued standard practices. Critically, teachers in both groups received training on the science of reading and the role of phonics in early literacy. The design tested whether structured materials provided added value beyond teacher knowledge alone.

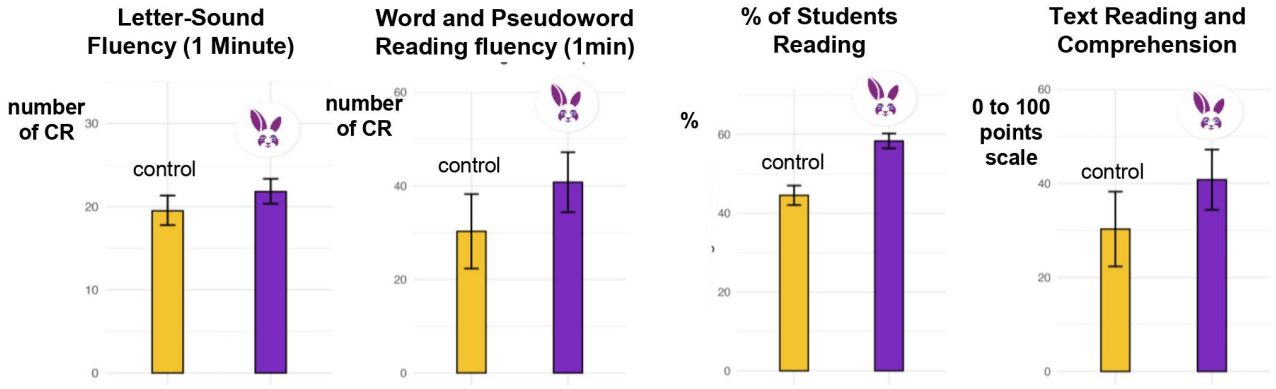
Over one thousand children were assessed at the beginning and end of the school year on language, letter-sound knowledge, reading fluency, and text comprehension. Progress was also monitored every seven weeks, allowing real-time tracking of skill development.

Teachers received a guide for introducing two grapheme-phoneme combinations weekly, followed by whole-class reading practice and writing using student booklets (Figure 1). Kalulu includes games designed to build reading confidence through small-group practice. University students from UEL conducted all assessments. Both treatment and control schools received ongoing support from the municipal education team. This project succeeded through the committed partnership of Cambé's teachers and educational leadership.

Figure 1 : Photos taken from learning sessions during the Kalulu instruction, and a testing session.

The Kalulu difference

At the start of the school year, children in Kalulu schools and comparison schools showed no significant differences in their language abilities, letter-sound knowledge, or reading skills. They began at the same starting point. By the end of the year, however, clear and consistent differences had emerged. Children who used Kalulu demonstrated stronger progress across multiple reading measures. They produced more letter sounds, read more words per minute, and showed greater ability in reading and comprehending a simple children's story. These results demonstrate that Kalulu did not simply accelerate children who were already strong readers; rather, it enabled many more children to cross the threshold into literacy itself.



Letter knowledge skill

Letter–sound knowledge is one of the earliest foundations of reading. By the end of the year, children in Kalulu classrooms were able to correctly produce, on average, about three more letter sounds than children in classrooms using regular instruction. This difference remained even after taking into account children's starting knowledge level. This skill creates the conditions for children to start decoding words independently.

Reading fluency

Reading fluency, measured as how many items a child can read correctly in one minute. This measure is the average of two 1 minute reading tests: real words and invented (pseudoword) items. These two measures allow us to assess not only whether children can recognize familiar words, but also whether they can decode new words they have never seen before. This is crucial, because every new word a child encounters is, at first, like a pseudoword and must be decoded using knowledge of letter–sound relationships. On average, children in Kalulu classrooms read around 12 words per minute, compared to about 8 words per minute in other classrooms. This large difference reflects not only greater speed, but greater ease and confidence in decoding. Fluency matters because when decoding becomes automatic, children can devote their attention to understanding what they read rather than struggling to identify individual words.

Crucially, Kalulu classrooms included a much larger proportion of children who had started reading at all. By the end of the year, 58% of children in Kalulu classrooms were able to read more than five words per minute, compared to 45% of children in classrooms using regular instruction. This difference shows that Kalulu did not only improve performance among the strongest students, but helped many more children cross the threshold into meaningful reading.

Text fluency and comprehension

The most important outcome concerns children's ability to read and understand connected text. To assess this, children were given a short text and two minutes to read as far as they could. They were then asked up to five comprehension questions, but only about the part of the text they had actually reached. This ensured that children were not asked to answer questions about content they had not read.

Reading progress and comprehension were combined into a single measure of text reading readiness, capturing not only how far a child can read, but also how well they understand what they read. Using this measure, children in Kalulu classrooms scored on average 10.5 points higher on a 100-point scale than children in control classrooms, even after accounting for where they started at the beginning of the year. This substantial gain shows that Kalulu did not simply improve isolated decoding skills, but supported children in moving into meaningful text reading with understanding.

From Cambé to the Nation: The Kalulu Path Forward

These results matter because they demonstrate what is possible. They show that children can learn to read in first grade when given the right tools and support. In Cambé, the use of Kalulu enabled a substantially larger proportion of students to cross the threshold into literacy. Importantly, this project represents the first research study of a phonics-based reading program conducted across all public schools in an entire Brazilian municipality. It demonstrates that evidence-based reading instruction can be implemented at scale—in real classrooms, with real teachers—and achieve meaningful outcomes for children.

At the same time, the results remind us that considerable work remains. Even with Kalulu, a significant number of children were not yet reading by the end of the year. This underscores an essential lesson: phonics instruction is necessary but not sufficient. It must be accompanied by regular opportunities for children to read aloud and dedicated time for teachers to listen, identify difficulties, and intervene early. Short, one-minute reading assessments play a crucial role in enabling this responsive instruction. It is also worth noting that this was the first year Cambé teachers used the method, following only a brief two-day training. As with any new pedagogical approach, mastery develops over time. We are confident that as teachers gain experience and fluency with Kalulu, their effectiveness with the method will continue to grow.

The Cambé experience sends a powerful message. It demonstrates that large-scale, evidence-based reading reform is possible in Brazilian public schools when teachers, researchers, and local governments collaborate. It shows that teachers, when equipped with clear tools and appropriate training, can dramatically alter children's reading trajectories. Most importantly, it affirms that improving literacy is not a matter of ideology but of ensuring every child has access to effective instruction in one of life's most fundamental skills.

Cambé has shown that change is possible. The challenge now is to ensure that more municipalities have the support they need to follow this path!

Learn more about Kalulu at
https://kalulu.excellolab.org/langue/bresil/

Contact us at contact@excellolab.org for more information!