

# Little Engines that Could...

## An Early Literacy Collaboration

CONSTANCE C. BEECHER AND ZACHARY STIER

**E**ricson Public Library resides in Boone, IA, the county seat of a mostly rural Midwest state. It has a history of railroading and mining and draws visitors to enjoy a scenic and historic train ride, so Little Engines seemed like the perfect name for our library's project, designed to enhance and support early literacy in the community. To increase our impact, we sought to do both a library and community-based project.

The purpose of Little Engines was to implement and evaluate an innovative education approach to support parents and/or caregivers to create literacy-rich environments for their preschool-aged children. Our larger goal was to increase family engagement by partnering with community organizations and preschools to make connections between kindergarten readiness for children and learning opportunities at the library and in the community. The project included an evaluation component, and we approached it through the lens of an ecological developmental framework (e.g., Bronfenbrenner's ecological model).<sup>1</sup>

Bronfenbrenner says children develop within environments where they are influenced by interactions with their closest



caregivers. In turn, community contexts like values, material resources, and access to educational opportunities influence their caregivers.

We know that to support early literacy, children need to be immersed in a reading culture. That is, families need to provide books and reading interactions on a regular basis and not just as an occasional event.<sup>2</sup> We expect to see a positive impact on a child's early learning when we increase opportunities for families to engage in literacy outside of the school and library.

Specifically, we designed Little Engines based on principles of developmentally appropriate practice as the National Association for the Education of Young Children (NAEYC) recommends.<sup>3</sup> Primarily, play and meaningful engagement are the engines that drive young children's development and learning.

According to NAEYC, "Play develops young children's symbolic and imaginative thinking, peer relationships, language."<sup>4</sup> Therefore, our format includes information on engagement for



**Dr. Constance Beecher** is Associate Professor of Literacy and Family Wellbeing State Specialist, Iowa State University. Her research endeavors revolve around the creation, evaluation, and dissemination of innovative language and literacy education programs tailored for parents, teachers, and caregivers in diverse community settings. **Dr. Zachary Stier** has been the director of Children's Services at Ericson Public Library in Boone, IA, since 2011. He was project director for NASA@My Library, is the Project Director for the library's equity project Activating Community Voices, and Co-Project Director for the library's piloted mobilized family engagement program, Little Engines. He recently became an independent consultant for the Space Science Institute. He is also owner of Mr. Z and Company, a consultancy firm for educators and librarians.



parents and caregivers, as well as learning kits on common early childhood topics with quality books and activities.

Our original plan—pre-pandemic—was to create Little Engines as an in-person library program. We planned to have community partners, such as the naturalist from the county conservation board, come to the library to record a video about their view of family engagement, read a book to a preschool group, and lead the group in a learning activity related to the book and their topic. Then each registered family would take home a copy of the book, instructions, and an activity to do at home. This program was supported through our county Extension and Outreach office (connected to the land-grant university). We did one in-person event before nationwide shutdowns took place in 2020.

Consequently our pivot to using technology afforded us more reach and a more innovative program. We turned to the reading tracking app Beanstack. Our partners created their own videos—one discussing family engagement and one demonstrating a book and activity. We created book bags to go with each topic, which were listed as badges on Beanstack, where we created a digital library of nine topics that included learning through

- nature
- social emotional development
- books
- play
- mindfulness
- similarities and differences
- mental health
- STEM
- active learning.

Here is an example a Boone County naturalist created. In the first video, the naturalist discusses the family engagement questions. For the second video, they discussed the life cycle of butterflies. They provided two activities for families—a coffee filter butterfly craft and an activity discussing the life cycle of a butterfly by using food such as gummies, crackers, chocolate chips (these demonstrate the egg), bananas, licorice (for the larva), round crackers (chrysalis), cheese slices, and carrots (for the body). Check out both videos by scanning the QR codes below.



Scan the above QR code to access video 1.



Scan the above QR code to access video 2.

When a parent clicks on a badge, they have access to the videos. They watch the first video about engagement, then the second video with the book and activity. Then they complete the activity(ies) as instructed in the second video.

To recruit families, we partnered with a local preschool that helped families register, distributed the book bags, and collected the evaluations. For the first round, we had nine families. Families had all the resources and materials to complete each activity in their book bags, plus hints on reading interactively. Participants earned badges by completing the three tasks for each topic. Families also earned badges by logging their reading each week. On Beanstack, patrons automatically have access to the data on badges and reading minutes completed.

On average, participants completed five activities (ranging from three to eight). Seven out of nine adults said the activities helped them increase their engagement with their child and that they planned to continue that path. Eight out of nine said the activities helped increase their conversations with their child, and two indicated they sought out additional resources at the library.

Three participants indicated the books and strategies about emotions were helpful for dealing with their child's "big feelings." Four discussed the positive interactions and communication they had with their child by doing the activities together. The total number of reading minutes logged was 8,277.

We keep track of the number of reading minutes participants logged compared to how many activity badges they earned. Although we did not do a statistical analysis due to the number of participants, the graph shows families who completed more activity badges also logged more reading minutes.

As one parent said, “Usually, we just . . . read the book [at home]. Then the book’s done, and we don’t dive into it more. With this program, there’s definitely a purpose through it and what we needed to do, which, as a parent, it’s hard to just come up with things to do sometimes. It was very nice to be like, “Okay, you just have to be able to read this and you kind of figure out. Even with my husband, it also helped him because he doesn’t do the same line of work as I do. I think it helped him a lot to be able to have these specific questions to ask versus having to make it up.”

In a comparable way that a home meal kit can help families eat healthier by giving them all the ingredients and the instructions to prepare dinner, we gave families a reading kit with developmentally appropriate books, activities, and the instructions to

complete them. Recalling our bioecological framework,<sup>5</sup> removing barriers and adding resources for busy families can lead to more positive interactions between caring adults and children.

This was a small “proof of concept” project, and we plan to seek funding for a larger pilot and to share a toolkit for other libraries to create their own Beanstack challenge engagement program.

In the end, we started with a small vision to elevate and expand early learning activities to children and families through a combination of in-person and virtual programming. We have since developed a mobilized literacy program where families have the option to participate at their convenience. &

## References

1. Urie Bronfenbrenner, *The Ecology of Human Development: Experiments by Nature and Design* (Boston: Harvard University Press, 1979).
2. Suzanne E. Mol and Adriana G. Bus, “To Read or Not to Read: A Meta-Analysis of Print Exposure from Infancy to Early Adulthood,” *Psychological Bulletin* 137, no. 2 (2011).
3. Carol Copple et al., eds, *Developmentally Appropriate Practice: Focus on Infants and Toddlers* (Washington, DC: National Association for the Education of Young Children, 2013).
4. Copple et al., *Developmentally Appropriate Practice*.
5. Bronfenbrenner, *The Ecology of Human Development*.