



Fostering school success
through joyful family
reading and conversation

**An Innovative Method for
Preparing Children for School Success
through
Joyful Dialogic Reading**

ReadAskChat was developed with funding from
The National Science Foundation



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At the heart of the ReadAskChat system and method is our bilingual picture-book library app that embeds on-demand guidance in dialogic reading practices for parents, caregivers, and teachers of prereading children from six months to the primary grades. Dialogic reading is generally defined as having back-and-forth communication—*dialogue*—about stories that adults read aloud with children. This simple yet profoundly impactful practice is advocated for by the American Academy of Pediatrics (AAP) and has been shown to develop children’s vocabulary, cognitive and social-emotional capacities, and school readiness (AAP, 2014 and 2016).

Each story and illustration in the ReadAskChat library was created to sustain a meaningful engagement with ideas. With this particular focus on *reading for meaning*, ReadAskChat aims to cultivate habits of thinking that lead to motivated, independent reading.

This paper describes the research-based design of the ReadAskChat method and suite of tools for families and educators. Coupled with our distinctive stories and science features, the system offers children a joyful first experience with finding personal meaning in literature.

We thank the National Science Foundation, whose multiple investments in ReadAskChat made its development possible, and our program director, Dr. Rajesh Mehta. We also thank our colleague, Dr. Lisa J. Walker, for her valuable editorial contributions.

Mission, vision, and guiding principles

The mission of ReadAskChat is to democratize early learning and foster universal reading readiness and school success. Our vision is to empower all families to engage their children in joyful reading and conversations that build on their natural curiosity and validate their perceptions. Our strategy is to put a critical mass of high-quality literature into the hands of families in their homes and guide them in an easy and impactful method of dialogic reading that jumpstarts children’s learning.

The ReadAskChat system and method is based on three guiding principles.

1. **Effective early learning is child-focused and joyful.**

We contend that the richest learning occurs when a child *enjoys* the experience, and the adults in their world *share* in that enjoyment. Ensuring that learning remains joyful is especially critical during the early years when children are so receptive and impressionable. The ReadAskChat app was designed to guide adults in how to lead child-centered inquiry and create a uniquely learner-driven experience that evolves as children develop intellectually and emotionally.

2. **Families play an essential role in children’s education.**

The ReadAskChat approach is based on a profound value for the role families play in children’s education. Moreover, if both families and teachers engage in the ReadAskChat method of dialogic

reading—that is, listen openly and respond to what children say about stories—families see themselves, and are recognized by schools, as respected partners in their children’s educational success. Such bridges between home and school can accelerate children’s academic progress (Price-Mitchell, 2019).

3. Early learning should foster individual thought and self-expression.

The ReadAskChat approach to early learning encourages children to form and express their own thoughts about stories and science concepts. This is why our conversation starters are open-ended; *they will elicit a variety of responses*. When adults give children the space to respond in their own ways, without leading them to “the right answer,” children develop the all-important confidence that their ideas matter.

Why ReadAskChat focuses on reading for meaning from the earliest age

Over the last decade, consensus has grown among policymakers and the general public about the critical role of early childhood experiences in setting children’s lives on an upward trajectory. This is due in large part to the science demonstrating that the first five years of life is a time of tremendous brain development. In 2000, the Institute of Medicine and the National Research Council published a landmark synthesis of research in early childhood development, *From Neurons to Neighborhoods*. In it, experts from multiple disciplines came together to highlight the importance of nurturing the cognitive development of children from infancy. Among the conclusions pertinent to ReadAskChat is:

The astonishing developmental achievements of the earliest years occur naturally when parents and other caregivers talk, read, and play with young children and respond sensitively to their cues. (p. 412)

Moreover, the opportunity to provide young children with what they need to thrive intellectually and emotionally is readily at hand:

[T]he literature on early learning environments **is not about accelerating learning with expensive toys and explicit early instruction**. Instead, it focuses on how adults interact with young children and set up relatively ordinary environments to support and foster early learning. While this sounds like a subtle distinction, it captures the difference between a child who is taught to recite the alphabet **and a child who is read to every night and becomes interested in letters and words because they are associated with the joy of being in her father’s lap, seeing beautiful pictures, and hearing a wonderful story**. (pp. 155-156; emphasis added)

Pediatricians advocate that reading with children can begin in infancy. One study found that when young children underwent brain scans while hearing a story read, activation increased in the areas of the brain associated with creativity, visual imagery, and understanding of language (Hutton, et al., 2015). Reading to children, quite literally, builds brain capacity.

An influential study conducted by cognitive scientists at the McGovern Institute at the Massachusetts Institute of Technology found that family language that includes more back-and-forth conversations—of the kind fostered by ReadAskChat—correlated with significant increases in brain activation and language skills among children who experienced a greater number of such exchanges. Importantly, this finding applied to children regardless of parental income or education. The researchers conclude that parents who engage their children in “conversational turns” are making a vital contribution to their children’s brain development and language skills, including vocabulary, grammar, and verbal reasoning (Romeo et al., 2018).

These studies support the ReadAskChat approach to early learning, which, as we describe throughout this paper, emphasizes that reading for understanding and personal growth is a collaboration that can begin when children are very young. This is what we mean when we say ReadAskChat fosters *foundational learning*; it sets children on the path of acquiring skills that will help them in future endeavors and across disciplines. By guiding families in the practice of joyful dialogic reading, families are further empowered as their child’s first teacher.

Why having developmentally appropriate, content-rich books in the home is so important

According to various studies conducted over the past 30 years, the only behavior measure correlating significantly with reading scores is the number of books in the home.¹ This commonsense correlation was demonstrated in a longitudinal study conducted by Evans and colleagues (2010). They found that having books in the home not only boosted a child’s school achievement, but also created a culture of reading that had lasting effects throughout the years of schooling. Significantly, books in the home had a greater impact on children whose families had comparatively lower adult education attainment.

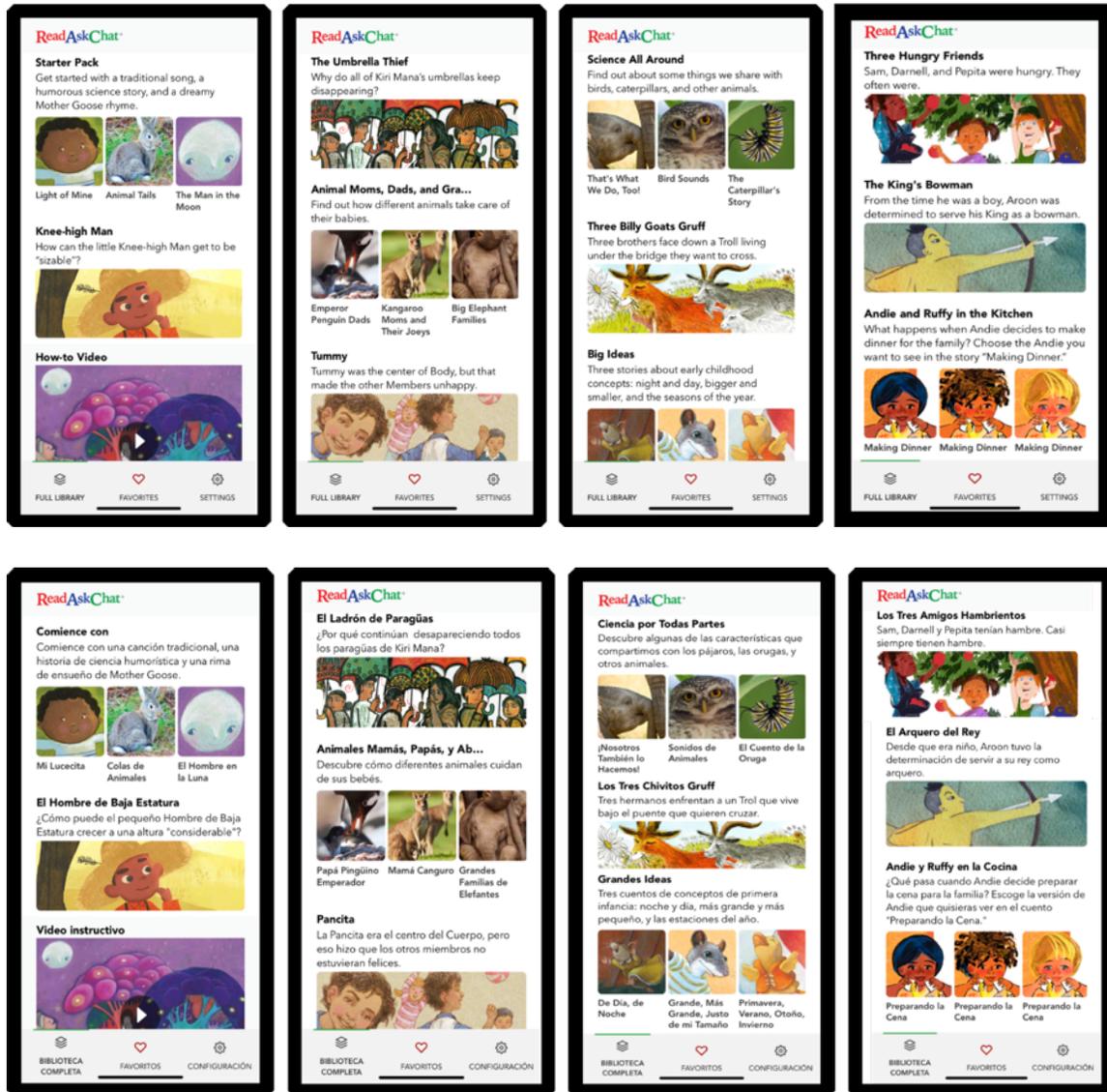
Reading compelling science stories to children, such as those in ReadAskChat, has other school-readiness benefits. One longitudinal study seeking to address science achievement disparities in elementary and middle grades concluded that the solution lay in intensified early educative efforts *before* traditional schooling begins at age 5 (Morgan, Farkas, Hillemeier, & Maczuga, 2016).

Together these findings from brain science and social science informed the design of ReadAskChat. As mobile technology became increasingly accessible to families with young children, we understood

¹ See, for example, McQuillan (1998) and Lindsay (2010).

we could use it to affordably put a content-rich, fully bilingual library of beautifully illustrated STEAM² stories into the hands of those families. We could harness app technology to guide adults in the pediatrician-approved process of dialogic reading. We could begin to democratize early learning.

Figure 1: Sections of the ReadAskChat Main Menu in English and Spanish Modes (phone capture)



² STEAM is the acronym for Science, Technology, Engineering, Arts, and Mathematics. Many early educators call for using these five fields as foci for initiating exploration, dialogue, and critical thinking.

An innovation in dialogic reading with children

To further the impact of the ReadAskChat storybook library, our app guides caregivers through our particular method of joyful dialogic reading:

Read the story all the way through, so children can take it all in.

Read Again, this time pausing to

Ask & Chat about the story’s meaning and the child’s personal responses.

Early exposure to dialogic reading has been shown to foster virtually all school-readiness indicators—from cognitive and social-emotional development, to vocabulary and knowledge attainment, to concepts about print. The American Academy of Pediatrics considers it the responsibility of primary care pediatric professionals to promote dialogic reading as an essential component of their practice (AAP, 2014). As noted earlier, research shows that science learning should be cultivated before kindergarten entry, so children begin formal schooling with age-appropriate content and conceptual knowledge. As a National Science Foundation-funded entity, we introduce an array of fascinating, age-appropriate, and standards-aligned science topics. And through our dialogic reading method, we engage families in building their children’s capacity to observe, hypothesize, collaborate, and problem solve.

Figure 2: ReadAskChat Method Learning Strategies and Outcomes

Repeated readings	•encourage children's critical thinking and reflection
Open-ended questioning	•encourages children to express their thoughts and creativity
Text-specific prompts	•call for personal opinion and interpretation
A focus on science and higher-order thinking	•cultivates close observation, wonder, respect for nature, questioning strategies, and knowledge attainment
Conversation starters	•guide adults in sustaining conversation chains that boost everyone's intellectual confidence
MORE! extention activities	•support ongoing learning through hands-on activities and exploration, storytelling, playacting, and art projects

ReadAskChat’s enjoyable and easy-to-use dialogic reading method is embedded in the library app through on-demand conversation starters on each page of each story. Parents initiate and facilitate conversations with their children through these text-specific prompts, which are carefully crafted for three developmental levels—baby, toddler, and prereaders. All stories are relatively short, but because they are all content-rich, meaningful knowledge building can occur even when families are “on the go,” for instance, riding the bus or in sitting in a waiting room.

Figure 3: Text and dialogic prompts from “Bird Sounds”

After taking turns imitating the parrots’ call, adults are offered prompts to stimulate back-and-forth conversation that builds on the child’s interests. This story includes audio of the six kinds of birds depicted.



Meeting evidence-based criteria for educationally effective early-learning apps

Unlike most other education products for the home, ReadAskChat is adult-mediated, not passive entertainment, and places attainment of language and early literacy skills on equal footing with creative and analytical thinking and social-emotional development.

A synthesis of decades of research conducted by developmental psychologist Kathy Hirsh-Pasek and colleagues in the science-of-learning field heralds the second wave of early-learning apps. They conclude that while the majority of apps in today’s marketplace are simply digital versions of worksheets, games, and puzzles—displaying the pitfalls of “empty calories” and “attention deficit design”—apps could offer significant opportunity for informal learning when designed with an understanding of how children learn best, as well as of the unique capabilities of electronic media. For

an education app to be effective, it must foster digital experiences that are “**cognitively active, deeply engaging, meaningful, and socially interactive**” (Hirsh-Pasek, et al., 2015; emphasis added).

ReadAskChat meets all these criteria. ReadAskChat assumes that children are naturally curious and builds on that capacity. Our on-demand conversation starters—a range of open-ended, text- and illustration-specific questions—enable adults and children to focus on constructing meaning together. Suggestions for creative play, making art, storytelling, and real-world exploration extend children’s learning beyond the reading experience. Common Sense Media, the most recognized independent source for information and reviews of appropriate media and technology for children, praised ReadAskChat for its educational value and highlighted it as one of the best apps for bringing families together (2017).

The adult-mediated design of ReadAskChat is also important because young children only learn language and social-emotional behaviors from their caregivers—not from digital sources. ReadAskChat is uniquely focused on learning through human interaction and maximizes this potential because our stories are chosen to *appeal to both adult and child*. The resulting conversations are therefore inherently more meaningful and lay a strong foundation for open communication about what matters most throughout childhood and youth.

ReadAskChat is a learning tool for adults as well as for children. Its embedded conversation starters guide parents and caregivers in reading interactively with their very young children and empower them to engage in back-and-forth exchanges—what some researchers call “serve-and-return” chats or “conversational turns.” ReadAskChat’s simple yet thoughtful suggestions are delivered unobtrusively, on-demand. We think of them as a personal coach for caregivers—there by their side, to be used when needed. This elegant and efficient scaffolding for adults is delivered through ReadAskChat’s mobile technology, which is impossible through a traditional print picture-book medium. (For a recent study confirming the efficacy of parent coaching to increase conversational turns, see Ramirez, et al., 2020.) The expectation is that over time, parents and children will naturally internalize the dialogic reading process and apply this active learning approach in other educational settings. Our own experiences with parents of preschoolers confirm that they do.

An intriguing exploratory study conducted by Dutch researchers (Teepe, Molenaar, & Verhoeven, 2016) supports ReadAskChat’s approach to literacy and use of technology to coach adults in several explicit ways. Acknowledging the challenges of promoting both quantity and quality of parent-child interactions, they measured the effects of parent-child interactions when using a technology-enhanced e-book. The researchers found increased active child participation and consequent vocabulary growth as a result of a shared storytelling activity. Among their conclusions were:

- Real-time storytelling prompts and story structure generate high interaction quality.
- Technology-enhanced storytelling positively affects children's vocabulary.

Notably, the study was conducted with children from varying socioeconomic backgrounds, including families who, according to research cited in the study, do not generally encourage their children to ask questions, and tend to have fewer picture books and games at home to stimulate parent-child interaction. In short, shared talk about stories between children and adults promotes learning, and storybooks enhanced with prompts for adults inspire creative exchanges that yield strong child outcomes in a remarkably short time—in this case, four weeks.

The ReadAskChat developmental continuum

ReadAskChat’s sequenced conversation starters for each story form a developmental continuum from baby to toddler to prereader. They provide multiple entry points for exploration and encourage the repeated readings children love. These graduated prompts enable caregivers to provide a uniquely personalized learning experience for their child during the period of rapid cognitive and emotional growth.

Our developmental continuum reflects the insights of Lev Vygotsky, who stressed the critical role of social interaction in early development of thought and language, and the necessity for parents and teachers to be expert observers of their children and to understand each child’s level of learning (Vygotsky, 1978). By attending to their child’s “zone of proximal development,” adults can support their child in performing skills at a higher level than the child could independently. ReadAskChat enables adults to gently extend a child’s level of learning. Through talk with a caring adult, the child gradually internalizes language and meaning, and more mature thinking develops.

Figure 4: The ReadAskChat Developmental Continuum

*Text-specific conversation starters are provided at three developmental levels.
Adult readers can easily change dialogic prompt levels without leaving the library.*

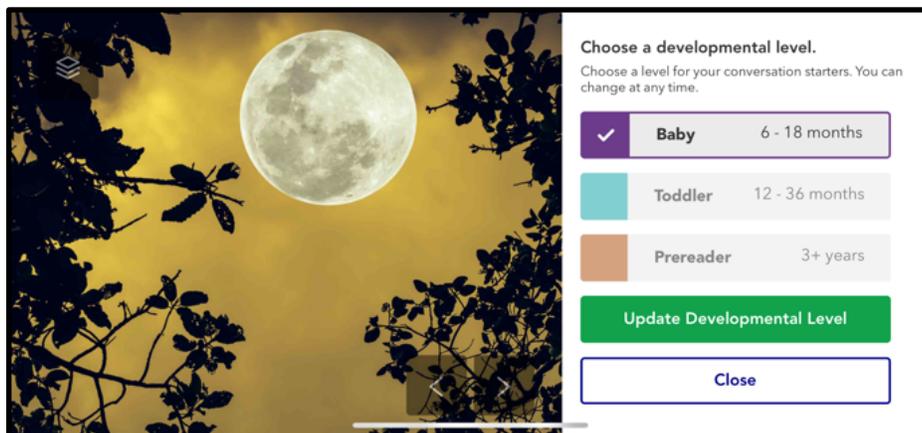


Figure 5: The ReadAskChat Developmental Continuum

This example from the Mother Goose rhyme, “Girls and Boys Come Out to Play,” illustrates how prompts for the same rhyme change as the child grows, thereby gently and naturally guiding children toward higher levels of thinking.

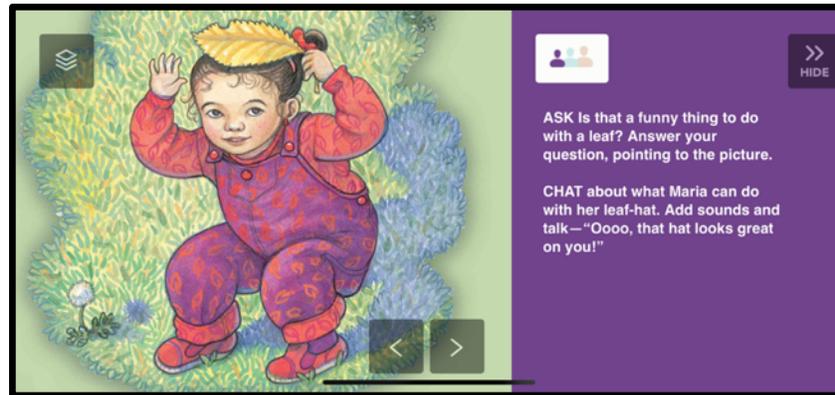


BABY (6-18 mos.) Adults MODEL	TODDLER (12-36 mos.) Child & Adult NAME	PREREADER (3+ years) Back-&-Forth CONVERSATIONS
Here is the girl who is whooping and calling. Listen to me whoop: Whoop! Whoop! Whoop!	Who is whooping and calling? Can you say “Whoop!” with me?	Can you whoop and call like the girl in the picture?
Come out to play, Little Girl! Why do you think she’s so excited? Maybe it’s her first time playing outside in the moonlight!	Let’s take turns calling, “Come out to play!” Would you like to play with the little girl?	What do you think the girl is feeling? What makes you think that? Would <i>you</i> like to play in the moonlight?
Look! She has a pretty flower in her hair! She looks so happy! Let’s give her a two thumbs up back at her!	Can you find the flower in the little girl’s hair? Would you like to put flowers in your hair?	Why do you think only kids who laugh are invited to play outside in the moonlight?

The caregiver of a baby, for example, is prompted to point out details in the artwork. We often suggest that the adult raise a question and then answer it herself, which models a back-and-forth exchange. Prompts also encourage parents to sing and engage the baby in physical movement, such as clapping the child’s hands or touching the child’s toes or hair or whatever is inspired by the story. In the case of “Girls and Boys Come Out to Play,” the rhyme invites the adult—and later the child—to whoop and call with joy!

Figure 6: Baby prompts for “Maria’s Special Leaf”

*Dialogic prompts at the baby level encourage adults to **model** responding to stories.*

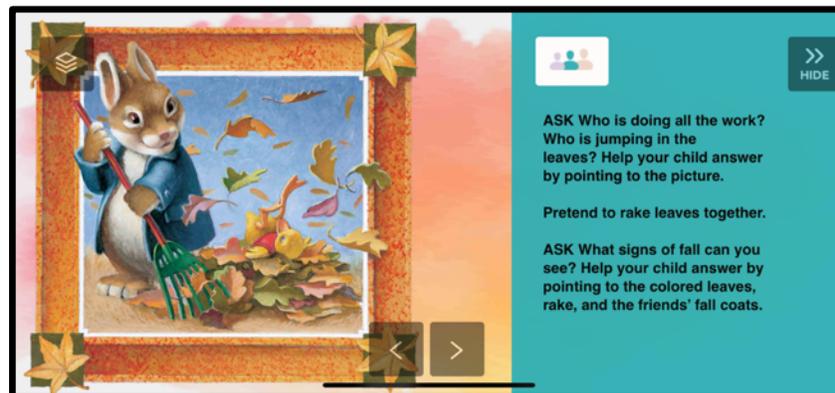


Artwork by Karen Dugan

At the toddler level, the parent invites the child to take a more active role, observing and pointing out details, repeating rhymes or special words, answering questions, and perhaps acting out or adding to something the adult has said about the story.

Figure 7: Toddler prompts from “Spring, Summer, Fall, and Winter”

*Dialogic prompts at the toddler level encourage the child to **name** what is happening in a story.*



Artwork by Jon Goodell

At the prereading level—about 3 years and up—the child takes on an increasing role in the dialogue. The adult may have the child chorus a rhyme, point out a repeating thematic word, or in a science feature, compare the differences in the various creatures depicted.

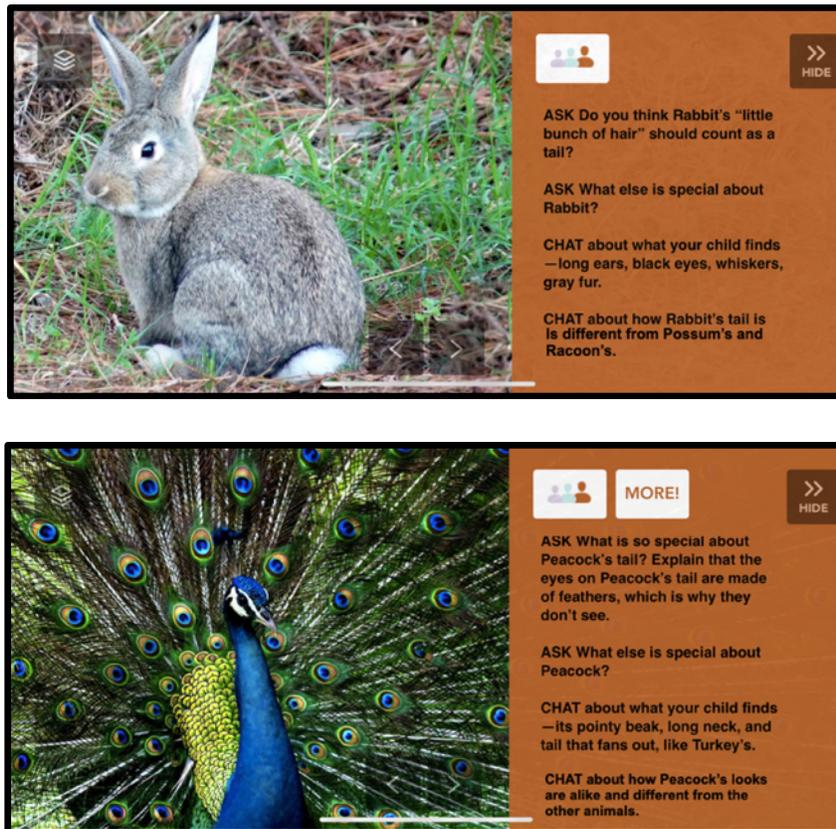
For instance, in the delightful African American folk rhyme, “Animal Tails,” offered in ReadAskChat’s Starter Pack, children are invited to offer opinions on such things as whether Rabbit’s “bunch of hair” should even count as a tail, and why Peacock should have such a spectacular tail in comparison with the

other birds. Below is the full text for “Animal Tails.” Figure 8 below shows the dialogic prompts at the prereader level for the third page (*Rabbit*) and final page (*Peacock*).

Raccoon’s got a ringed, bushy tail.
Possum’s tail is bare.
Rabbit’s got no tail at all, ‘cept a little bunch of hair.
Turkey’s got a big fan tail.
Partridge’s tail is small.
Peacock’s tail has great big eyes, but they don’t see at all.

Figure 8: Prereader Prompts from “Animal Tails”

Dialogic prompts at the prereader level encourage increased child participation and critical thinking.



In summary, the flexible ReadAskChat method is designed to develop habits of purposeful attention, elaboration, and sustained focus on reading for meaning. As opposed to skills drills and rote learning common in educational media for children, with ReadAskChat, adults and children enjoy the stories, poems, songs, and wonders of science together, while engaging in discovery and deeper conceptual understanding.

Shared storytelling

Taking turns telling and acting out favorite stories—and adding dialogue, sounds, or even new characters—deepens children’s understanding and language acquisition. Moreover, after hearing a story read to them, when children retell the story with their own words or actions, they are improving both literal and inferential comprehension (Isbell et al., 2004). All of these outcomes directly impact a child’s reading readiness, which is why so many of the ReadAskChat dialogic prompts suggest various ways to engage young learners in creative playacting and storytelling—quintessentially childhood pursuits.

Storytelling brings people together. When listening to a story, all human brains—and most particularly children’s—react as though they are living and experiencing it firsthand (Bruner, 1987). Our lives are enriched through the stories of others. The very act of sharing stories fosters trust, understanding, and empathy. Brain scans have shown that storytellers and their listeners’ brains actually start to synchronize during storytelling (Stephens, et al. 2010). When children retell stories through playacting, they can take in new ideas, including new science concepts, and make them their own. Anyone who has observed children during unstructured playtime can see that they are born actors and directors, and experts at making up situations and dramas. Using their bodies and senses, as well as their minds, playacting enables children to learn about the world and grow socially and emotionally. As the pioneering early-childhood educator Vivian Paley put it, fantasy play is “a child’s work” (Paley, 2004; see also Bulunuz, 2013, on integrating play into kindergarten science instruction).

For all of these reasons, we want to engage all the adults concerned with young children’s education—parents, caregivers, and teachers—in nurturing their creativity, originality, and capacity for storytelling. We do this through our richly illustrated and meaningful texts, open-ended questions, and MORE! extension projects—many of which call for children to act out stories.

Figures 9–11 on the next page offer three examples of how storytelling is fostered through ReadAskChat, and how our rich illustrations scaffold opportunities for meaningful conversation. For instance, when children act out the story *Three Billy Goats Gruff*, they begin to internalize the powerful family dynamics of the three goat brothers. After reading and chatting about our version of Aesop’s *Grasshopper and the Ant*, children can approach the profound question of how to live life—in the moment, like Grasshopper, or single-mindedly focused on the future, like Ant.

Our extension activity probes the idea further by asking children to think about the Ant and the Grasshopper as types of people they know. Finally, one of our STEAM science features, *Beaver, Expert Builder*, encourages young children to use what they have learned about beavers to tell their own stories, such as those told by Native Americans—who sometimes portrayed beavers as stubborn and selfish, while at other times, hardworking, determined, wise, and heroic. By incorporating their ReadAskChat skills of close observation and open-ended inquiry, many different stories are possible!

Figure 9

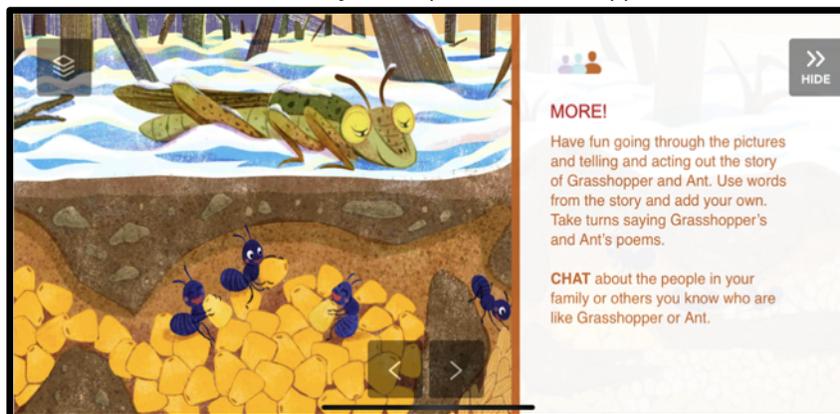
Toddler MORE! Activities for the Norwegian Folktale “Three Billy Goats Gruff.”



Artwork by Paul Galdone

Figure 10

Prereader MORE! Activities for Aesop’s “The Grasshopper and the Ant.”



Artwork by Jia Liu

Figure 11

Final page of text from the nonfiction science feature “Beaver, Expert Builder.”



A range of content types

Exposure to intellectually rewarding texts sets the stage for lifelong learning. The ReadAskChat library offers a range of genres with a broad multicultural focus to spark curiosity and imagination and introduce new concepts to young minds. Figure 12 below provides a summary of the different genres represented in ReadAskChat and the rationale for their inclusion. In keeping with our first guiding principle, we take care only to include stories that appeal to both children and adults. As we emphasize in our introductory “how-to” video embedded in the app:

And the most important thing? Do what comes naturally and enjoy yourself! Because when you're having fun reading, asking, and chatting, your child will, too!

Figure 12: ReadAskChat content types and rationale

All ReadAskChat stories and dialogic conversation starters are in Spanish and English

	CONTENT TYPE	RATIONALE
	<p>Songs, verse, classic and modern children’s poetry, and action rhymes with hand gestures</p>	<p>Rhythms and verbal play have delighted young children and their parents for generations. Studies have shown that the melodies and cadences of traditional children’s songs and verse, such as Mother Goose, prepare babies’ brains for language acquisition.</p>
	<p>Family stories, both imaginative and realistic</p> <p>Our signature Andie and Ruffy Stories</p>	<p>ReadAskChat stories, told with humor and verve, highlight age-appropriate topics such as empathy, relationships, fortitude, forgiveness, imaginative play, and family activities. They enable children to identify with others, anticipate developmental milestones, and “see” themselves in a story.</p>
	<p>Folktales from around the world</p>	<p>When shared with caregivers, ReadAskChat stories broaden horizons, offer reassurance, and instill in young children a beginning sense of story.</p>
	<p>Stories about “Big Ideas” and concepts</p>	<p>Features highlighting concepts (e.g., day and night, big and small), early STEM topics (e.g., <i>Before There Were Wheels</i>) and remarkable animals invite children to explore wonders of nature and the world around them. They also provide opportunities for additional hands-on learning and play.</p>
	<p>Science features</p>	<p>Science features are generally illustrated with photographs and frequently enhanced with sounds, such as bird calls and brief videos. They guide children and adults to engage in playful scientific thinking, such as noticing details and patterns, identifying similarities and differences, and recognizing rudimentary groupings.</p>

Artwork by Christopher Lyles, Karen Dugan, Ying-Fang Shen, and Mark Hicks

Advancing equity and diversity through our “Andie” stories

A body of research—long reinforced by teachers’ and parents’ practical experience—demonstrates that children’s interest in reading increases when pictures and storylines enable young learners to personally identify with characters and situations.³ The multicultural content of the ReadAskChat library goes a long way toward meeting this criterion for fostering engagement with reading, but we aim to do more.

With funding from the National Science Foundation to advance equity and diversity, ReadAskChat developed our signature character, Andie, who whimsically strives to meet a variety of universal early childhood milestones, such as getting dressed independently, overcoming nighttime fears, and venturing out into the world. Helping Andie navigate these challenges is Ruffy, a stuffed-animal companion, who in Andie’s imagination responds to and cheers Andie on. We chose the name Andie because it spans gender, ethnic identification, and language. Our digital medium enables us to maximize children’s identification with Andie by offering six depictions of the character for each of the seven Andie stories, thus enabling children to **choose the version they want to see and read about**.

Figure 13: Six Depictions of “Andie”



Artwork by Susan Gal

³ The cognitive step of “seeing” oneself in a story has been shown to particularly increase motivation for reading and learning among historically marginalized populations (cf. Teepee, 2016; Bishop 1990).

For individual families, choosing the appearance of Andie is absorbing and fun. But the potential for educators to meet antibias and inclusion education goals by incorporating the Andie stories into their curriculum is far-reaching.

According to experts cited by the National Association for the Education of Young Children (NAEYC), the goals of antibias and inclusion education should be to develop children's sense of identity within a diverse society and help them learn to be proud of themselves and their families (Derman-Sparks, Edwards, & Goins, 2020; Hansel, 2019, Kuh et al., 2016). This is particularly important for English Learners and children from traditionally underrepresented groups. Importantly, antibias teaching topics often originate from children's families and their conversations and play. We designed the Andie stories in part to facilitate such conversations.

While the Andie stories are set in a specific home environment, the questions and thoughts that drive Andie's experiences are universal in terms of child development across cultures, place, and time. They emphasize *play* as a universal language and the *work* of children (cf. Paley, 2004), with imagination and curiosity as children's natural mindsets. Andie's adventures and explorations center on these forms of activities, as in the example from "Way to Go, Ant!" below.

Figure 14: "Way to Go, Ant!"

After observing an ant carrying away a cookie crumb, Andie imitates the ant by crawling around.



Artwork by Susan Gal

In every story, Ruffy is Andie's constant companion—the special, comforting “transitional object” that helps children make the emotional transition to independence. In American settings, transitional objects are frequently stuffed animals, like Ruffy, but in other contexts they could be a blanket, a handmade doll or toy, a shell, or any token or thing to which a child bestows meaning. The object reassures and helps the child advance developmentally, and frequently becomes an actor in the child's imaginative play. So as families talk about the Andie stories, some of the most personal and fruitful conversations might naturally lead to “Who is your Ruffy? What do you and your Ruffy do together?”

Figure 15: Ruffy, Andie's Stuffed Animal Companion

Ruffy expresses a range of emotions in Andie's imagination across the seven stories in ReadAskChat.



Artwork by Susan Gal

Our academic and practitioner partners recognize that ReadAskChat represents exemplary equity pedagogy because it is child-focused and learner-driven. They understand that the full ReadAskChat system—our method, library app, and parent and professional learning resources—guides adults in how to elicit and value a child's thoughts as the starting point for inquiry and learning. Andie stories build on this strong base by offering opportunities to celebrate the identity of every child in a classroom. Like all ReadAskChat stories, the Andie series prompt family conversation and storytelling. But with Andie, conversations will particularly draw on each family's lived experience—the heart of inclusive and antibias education.

Folktales and the antibias classroom curriculum

Literature in classrooms that support an antibias curriculum include stories reflecting a wide range of cultures, ethnicities, social identities, and economic status. This is because the messages young children absorb from the words and pictures in books can shape how they perceive the world, their agency, and relationships. We want all those messages to be broad and welcoming. Contemporary stories, like the Andie series and others in ReadAskChat, enable children to read about someone like them, who is figuring out things in their world. They can form the core of a diverse and inclusive classroom library.

But folktales from around the world can also play an important role. On one level, folktales reveal fascinating aspects of a culture’s history and traditions, and at the same time can speak to shared human values such as courage, persistence, loyalty, empathy, and love, even when the characters—as many cultures favor—are animals or animal spirits.

Figure 16: Traditional Tales from the Ancient Indian and Ojibwe Cultures

In “Burley and Maus,” a tiny Mouse King leads his subjects to rescue his friend Burley, a powerful Elephant King and his herd.

“How Loon Outsmarted Winter” is about friendship, endurance, cleverness, and overcoming great hardship.



Artwork by Ying-Fang Shen



Artwork by The Brave Union

Invariably, in folktales, the Good prevail and the Wicked are defeated. This worldview provides profound reassurance to young children.

Figure 17: “How Tepo Saved His People”

In this retelling of a Mexican folktale, when Tepo—half god, half human—turns seven, he finds out he isn’t an ordinary boy. Recognizing his powers, he sets out to save his people from a dangerous Giant.

Cómo Salvó Tepo a su Gente

Cuando Tepo tenía siete años, todo el mundo descubrió que no era una persona común.



Nace Tepo



Tepo Aprende de sus Poderes



Tepo Derrota al Gigante

Artwork by Heidi Younger

Folktales are often a journey, in which someone must leave home to conquer a foe, regain something lost, or discover wisdom (Bettelheim, 1977). But sometimes the journey is symbolic, a spiritual quest. The child intuitively understands that this kind of tale is like their own journey of growing up. Children are the stars in their own dramas; they, too, are on a quest.

Figure 18: Traditional Tales from the Chinese and African American Cultures

“Ji Lan Catches a Ghost” (but eventually sets it free)!

“Knee-high Man” seeks ways to become “sizable.”



Artwork by Jia Liu



Artwork by The Brave Union

Interwoven with contemporary stories and science features, ReadAskChat includes authentic folktales from every corner of the globe, carefully curated to enrich the libraries of diverse classrooms and contribute to an antibias curriculum. Through open-ended conversation, students can explore the range of enduring questions that folktales have distilled to their essence over time.

Figure 19: Sample Topics and Themes Inspired by Folktales

	<p>CHILD-CENTRIC TOPICS</p>	<p>friendship and kindness separation and reunion family and community getting along with others</p>
	<p>MORAL TOPICS</p>	<p>pride and humility wealth and poverty honesty and betrayal forgiveness</p>
	<p>ANTIBIAS TOPICS</p>	<p>power relationships justice equality fairness</p>

Artwork for “Gossiping Clams” by John Sandford; Artwork for “The King’s Bowman” by Ying-Fang Shen; Artwork for “A King for the Frogs” by Jia Liu.

ReadAskChat and school readiness

ReadAskChat meets a broad range of widely accepted school-readiness benchmarks in the cognitive and social-emotional realms. Figure 20 below summarizes the most salient of the realms and indicators fostered by ReadAskChat. This foundational scope of learning indicators makes the ReadAskChat method and tool a valuable resource for all families, irrespective of their professional roles or education backgrounds. Our research with parents—which included teachers, pediatricians, and parents with children attending Head Start programs—consistently elicited high praise. Figure 21 on the following page is a selection of comments from several groups of ReadAskChat users.

Figure 20: School Readiness Realms and Indicators

REALM	INDICATOR/MEASURE
Ready to learn	Curiosity and initiative in learning Engagement Persistence
Social-emotional development	Identity of self in relation to others Social and emotional understanding Relationships and social interactions with familiar adults
Language and literacy development	Reciprocal communication through storytelling and conversation Understanding of and responsiveness to language Communication through expressive language Interest in literacy Concepts about print Symbol-letter-print knowledge Comprehension of age-appropriate text Rhyming and phonological awareness Letter and word knowledge
Science cognition	Knowledge of the natural world Cause and effect Inquiry through observation
Developmental concepts	Day/night; seasons; colors Relational concepts (e.g., big, little)
Arts	Singing; playacting; dancing; creative movement Expression through drawing

Figure 21: Sample Comments from Parents

"I like that the app gives a little help to parents.
"I don't get apps often, but I really like ReadAskChat. I very much enjoy doing it with my child."
"I love that there are prompts for adults. 'Tell me about this. Tell me what you think is going on.' I'm always amazed what little things my son picks up on."
"It's nice that prompts are there real-time. In other picture books, if they ask questions, they're at the end. And at the end of the story, it's a little harder to use them."
"I could definitely tell ReadAskChat was created by educators."
This app a healthy thing for child-parent relationships."
"I think I can use the ReadAskChat technique with other picture books, too. That will make our reading time even better."
"Thank goodness you're here! I was doing phonics with my 2-year old, and she hated it, and I hated it and now we can do ReadAskChat, and we are both so happy now!"

Professional development and resources for educators

Since our inception, we envisioned ReadAskChat as an early learning system, not merely a picture-book library app. For this reason, we created professional development for educators and video tutorials for families to advance understanding of dialogic reading as a simple and intellectually meaningful method that takes only minutes per day to be impactful. These initiatives follow the thematic framework depicted in Figure 22 on the next page. We piloted our five professional development modules in two phases across 2020–2021. More than thirty early childhood educators participated in these pilots, funded by two special NSF grants. Each module explores essential aspects of the ReadAskChat approach to early literacy, all of which are grounded in our research-based method. They are designed as a progression, and so build on each other. Evaluation data from the first pilot yielded a uniformly enthusiastic response. When asked about the program's content,

- 100% said content was **informative or very informative**.
- 100% said **content was applicable or very applicable** to their early childhood practice.
- When asked: On a scale of 1-10, **How likely are you to recommend ReadAskChat to others?** the response averaged **9.3 with zero detractors** (i.e., a rating of 6 or below).

Each professional-learning session involves guided practice in interacting with ReadAskChat stories. We offer opportunities for adults to look closely at our meaning-rich artwork, and participate in open-ended, back-and-forth conversation with their peers. In this way, they experience a range of responses and see how new ideas can develop. When educators have fun thinking about characters and concepts, they embrace the power of collaborative meaning-making and can envision how much children and families will enjoy it.

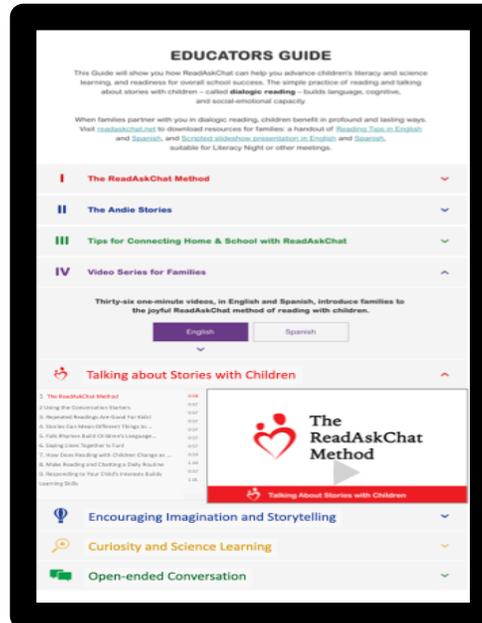
Figure 23: “Joyful Reading with Children” Adult-Learning Thematic Framework

	Talking about Stories with Children
The ReadAskChat method invites children into the reading process and develops virtually every school readiness skill. When adults make reading joyful and participatory, they lay the groundwork for meaningful communication throughout childhood and youth.	
	Encouraging Imagination and Storytelling
Stories that spark the imagination help children learn new vocabulary and concepts and become eager to talk about stories and read independently. We encourage families to express their understanding of a story’s meaning through expressive retellings and elaboration.	
	Curiosity and Science Learning
A young child’s entire world is a study of science. Reading science-themed stories, and talking about what the child observes, nurtures their curiosity—the beginning point for science learning and discovery.	
	Open-ended Conversation
The most interesting stories suggest different things to different people, and open-ended questioning brings these differences out. When you ask about characters’ actions and feelings, you teach children to <i>read for meaning</i> —a critical skill for long-term school success.	
	Advancing Equity and Inclusion through Family Reading and Conversation
The child-focused, learner-driven ReadAskChat method represents exemplary pedagogy for the equity classroom. By incorporating the ReadAskChat library—especially the signature Andie Stories—into their curriculum, teachers can engage families in joyful dialogic reading and advance literacy learning within the context of sharing and celebrating children’s diverse cultural backgrounds and experiences.	

A digital *Educators Guide*, available to schools and organizations purchasing ReadAskChat for their families, provides a series of brief videos for staff to view at their convenience. Also included in the guide are specific suggestions for connecting family conversations to early literacy and STEAM

activities in the classroom. We particularly emphasize how using the Andie stories can support teachers' efforts to enact equity teaching and antibias curriculum in their classrooms and create bridges between home and school that can accelerate children's literacy learning.

Figure 24: Digital Educators Guide Tablet View



Engaging children's parents, families, and caregivers

For parents, we produced a series of video tutorials on the theme of “Joyful Reading with Children.” These videos are housed in the *Educators Guide* to encourage teachers to embed a video regularly in their communications with families. Videos run about 60 seconds each, and focus on a single aspect of natural, interactive reading with children. The series comprises 36 topics organized around the themes that are core to the ReadAskChat method. All parent videos are available in both English and Spanish.

For instance, to demonstrate a central concept in ReadAskChat—that stories can mean different things to different people—one video highlights “Itsy Bitsy Spider,” from the library’s Action Rhymes story pack. The narration says

We’ve asked many children and adults Why won’t Itsy Bitsy Spider give up going up the waterspout? Some people say she’s hungry and that’s where her food is. Others conclude she’s just a really determined spider. Some people think Itsy is curious, and wants to explore, others say she just wants to go home. Coming up with different ideas is fun! It also encourages creativity and the willingness to “think outside the box.”

Figure 24: Why won't Itsy Bitsy Spider give up going up the waterspout?

This simple but profound question elicits a wide variety of answers.



Artwork by John Sandford

Each video concludes with an invitation to “Try it!” with a child, using the ReadAskChat app and applying the concept just learned. Our essential message is one that all parents can embrace and master:

- Be present.
- Watch your child’s reactions.
- Listen and respond to what your child says or seems curious about.

Figure 25: “Itsy Bitsy Spider” in Action



Read, Read Again

Ask & Chat

Tell and act out stories

We created the video series in keeping with our guiding principle that families make a significant contribution to their young child’s education. Every time we introduce “Itsy” to families in person, we not only hear a wide variety of answers, but also witness a great deal of delight when those in the

group hear them, too. This is our aim: to encourage learning that is personal, organic, natural, and especially, in accordance with our first principle, *joyful*.

After reading or singing together and chatting about thematically rich stories like “Itsy Bitsy Spider,” families will be primed to have meaningful conversations about many other life events, for example, times when they or their child felt like the tiny spider—who needed to “try, try again.” Such conversations open up channels of communication that can continue throughout childhood and youth.

Figure 26: Selected Titles from the “Joyful Reading with Children” Video Series for Families



To help schools launch their programs successfully, we provide them with a scripted slideshow presentation that communicates ReadAskChat these practices, values, and goals. The slideshow is especially appropriate for Family Literacy Night or other parent meetings. The slideshow is free and available for download at our website in both Spanish and English.

Figure 27: Slideshow Introduction to ReadAskChat for Families



Personalized goals and notifications

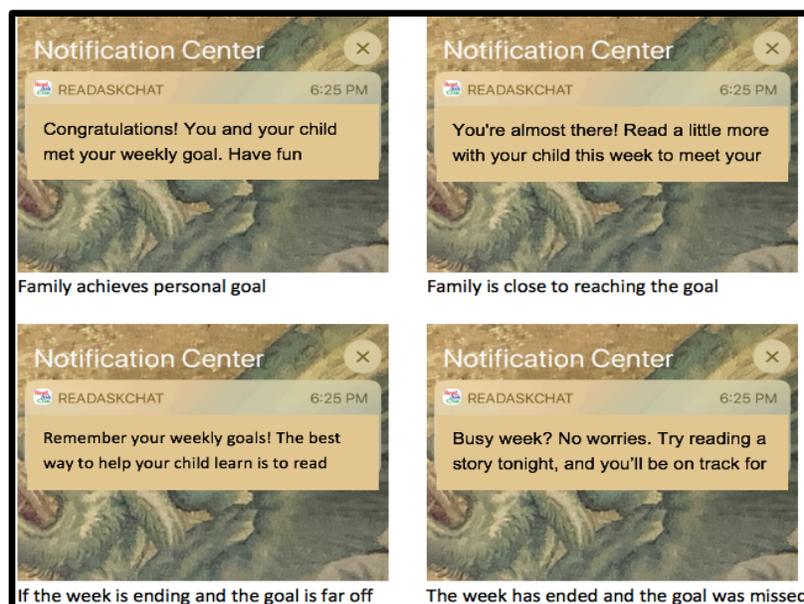
Research evidence suggests that goal setting and regular “nudges” can increase parent participation in various home-based learning initiatives (Mayer, Kalil, Oreopoulos & Gallegos, 2018). Even simple reminders can have an outsized impact. The business community, spurred by behavioral-science research, has long applied this concept to increase participation in activities as varied as exercise, personal savings, and making entertainment or lifestyle choices. To help develop a routine of at-home reading, parents/caregivers set their own family reading goals, which can easily be changed in the settings as their child grows older.

Figure 28: Families set their own reading goals

The figure shows two identical-looking interface panels for setting reading goals. Each panel has the title "Set your weekly reading goals" and a sub-header "Try increasing your daily or weekly reading times as your child grows!". Below this, there are two rows of goal settings. The first row shows "10 minutes per day" and "5 times per week" with minus and plus buttons. The second row shows "15 minutes per day" and "6 times per week" with minus and plus buttons. At the bottom of each panel is a green "Update Goals" button.

Once goals are set, each week, families receive a progress report in the form of a notification. Messages are based on the progress or completion of the goals each family sets for itself. See Figure 28 below.

Figure 29: ReadAskChat notifications based on family goals

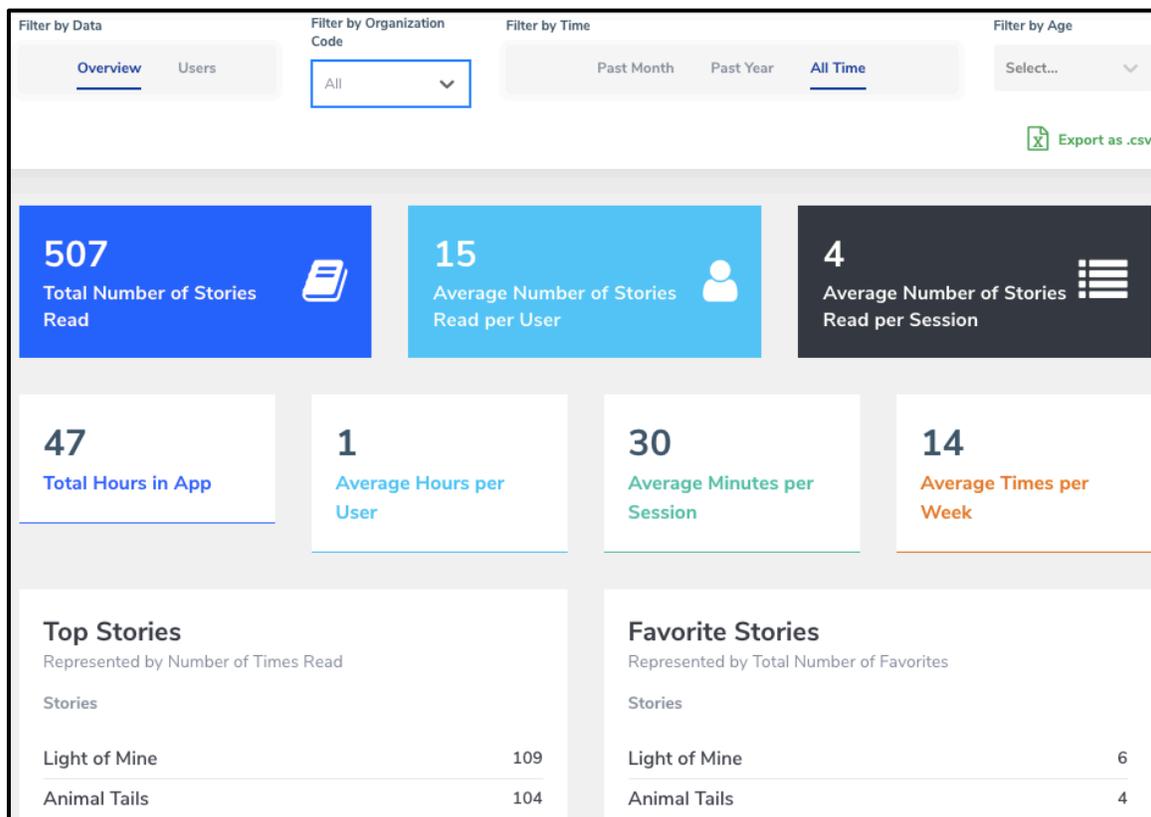


Engagement data for organizations

Our digital platform enables organizations to track engagement data and provide customized follow-up guidance for families. These data are also useful in reporting to funders about the efficacy of the ReadAskChat enactment and correlating child and adult learning. Family engagement data may be accessed on the individual level and in aggregate, using multiple metrics, including:

- Number of stories read
- Time spent reading
- Favorite stories
- Reading goals met
- Conversation starters read

Figure 30: Family Engagement Data Dashboard



- *Top Stories* enables administrators to see which stories are the most read by families, whereas *Favorite Stories* indicates ones that families intentionally flag on the main menu with a ❤️. Favorited stories are a good proxy for assessing strong personal engagement with ReadAskChat.

- *Prompts Read* is an indication of the degree to which families are engaging in the critical in back-and-forth conversations that build vocabulary, reading readiness, and adult-child bonding.
- *Goals* as a metric encourage a major objective of ReadAskChat: to support families in developing the habit of regularly reading together.
- Data may be filtered by code, time period, or developmental age group, which helps administrators gain a rich understanding of their ReadAskChat enactments.

Democratizing early learning

The American Academy of Pediatrics has joined educators in advocating for dialogic reading as a means of foundational learning for all children, and adds that the practice goes far beyond teaching early literacy: it is a matter of public health. By demystifying the practice of dialogic reading, and by providing content of the highest quality, ReadAskChat helps realize the goal of extending this most impactful early learning experience to all children, not to just the privileged few.

Disseminating and enacting an accessible, affordable, bilingual, early-learning tool like ReadAskChat could not be more timely. We are still in the early stages of understanding how young children will be affected academically and emotionally by the disruptions of the pandemic years. But it does appear that the children who are most likely to need the greatest attention are those who already face inequities in early schooling. Schools and districts serving these young children must now, more than ever, provide personalized learning and at the same time support *families* so they, too, can provide the “rich language exposure, positive social interactions, and early literacy experiences” that enable children to thrive. We must seize the opportunity to close “the gap between what we know and what we do,” as urged by the collective expert voices in *From Neurons to Neighborhoods*. In ReadAskChat, we offer a learning system that strives to do that.

Language and literacy scholars Maisha Winn and Nadia Behizadeh use the phrase “pedagogy of possibility” to describe the kind of teaching and learning that should be the birthright of all children. Indeed, they and other scholars contend that the teaching of “higher literacies” should be treated as a “new civil rights frontier.” Too often, students of color are subjected to what they consider low-quality literacy education, focusing on rote learning, skills-drills, test preparation, and a curriculum perceived as irrelevant. Literacy conceived as a *right* would instead engage students in higher-level thinking and critical reading and writing, which are essential for participation in the knowledge economy, as well as civic life (Winn & Behizadeh, 2011).

As we describe throughout this paper, ReadAskChat explicitly focuses on developing such foundational higher literacies. We do so by supporting adults in guiding children from the earliest age

to observe, question, respond, and voice original ideas. When a child and adult read and talk about stories in a one-to-one setting (and especially if that practice is reinforced in school), the child will develop intellectual agency, and perhaps most importantly, joy in learning.

In our many conversations with early childhood educators and preschool directors, we hear a common refrain: ReadAskChat is a powerful professional-development tool for classroom teachers and assistant teachers, paraprofessionals, tutors, and classroom volunteers and aides. As policymakers come to better understand the importance of quality in early childhood teaching and learning for universal preschool, and as thresholds of quality are developed and enacted, we believe the ReadAskChat system, including its professional development in Joyful Dialogic Reading, will have a contribution to make.

The hunger for an inexpensive, rigorously developed, bilingual early-learning tool that teaches reading for meaning—not simply decoding—is high. In the coming years, we will be supporting practitioners' action research in these and other settings to learn more about the potential of ReadAskChat to augment their educational objectives and early learning outcomes.

We invite researchers, practitioners, and social entrepreneurs to engage with us, share ideas, and offer insights from your work. ReadAskChat is a learning organization, and we believe that working toward achieving positive educational trajectories for children around the world must be a communal endeavor.

References

- American Academy of Pediatrics. Policy statement: Literacy promotion: An essential component of primary care pediatric practice. 2014.
- American Academy of Pediatrics, Council on Communications and the Media. Policy statement: Media and young minds. *Pediatrics*, October 2016.
- Bettelheim, Bruno. *The Uses of Enchantment: The Meaning and Importance of Fairy Tales*. Knopf Doubleday, 1977.
- Bishop, Rudine Sims. "Mirrors, Windows, and Sliding Doors." *Perspectives: Choosing and Using Books for the Classroom*. Vol 6., no.3. Summer 1990.
- Bruner, Jerome. *Actual Minds, Possible Worlds*. Harvard University Press, 1987.
- Bulunuz, Mizrap. (2013). "Teaching science through play in kindergarten: does integrated play and science instruction build understanding?" *European Early Childhood Education Research Journal*, 21:2, 226-249. <http://dx.doi.org/10.1080/1350293X.2013.789195>
- Common Sense Media. <https://www.commonsensemedia.org/lists/apps-that-can-bring-families-together>
- Derman-Sparks, L., & J.O. Edwards. With C.M. Goins. 2020. *Anti-Bias Education for Young Children and Ourselves*. 2nd ed. Washington, DC: NAEYC.
- Evans, M.D.R.; Kelley, Jonathan; Sikora, Joanna; & Treiman, Donald J. Family scholarly culture and educational success: Books and schooling in 27 nations. *Research in Social Stratification and Mobility*, 2010.
- Hansel, Lisa. "Embracing Anti-Bias Education." *Young Children*. NAEYC. November 2019.
- Hirsh-Pasek, Kathy; Zosh, Jennifer M.; Michnick Golinkoff, Roberta; Gray, James H.; Robb, Michael B.; & Kaufman, Jordy. Putting education in "educational" apps": Lessons from the science of learning." *Psychological Science in the Public Interest* May 2015. Vol. 16, No.1, pp. 3-34.
- Hutton, John S.; Horowitz-Kraus, Tzipi; Mendelsohn, Alan L.; DeWitt, Tom; & Holland, Scott K. Home reading environment and brain activation in preschool children listening to stories. *Pediatrics*. V. 136.3 September 2015.

- Institute of Medicine and National Research Council. 2000. *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Shonkoff, J.P., & Phillips, D.A. (Eds.). Washington, DC: The National Academies Press .<https://doi.org/10.17226/9824>.
- Isbell, Rebecca; Joseph Sobol; Liane Lindauer; & April Lowrance. The effects of storytelling and story reading on the oral language complexity and story comprehension of young children. *Early Childhood Education Journal*, December 2004, Vol 32, No 3.
- Kim, YaeBin & Dave Riley. Accelerating early language and literacy skills through a preschool-home partnership using dialogic reading: A randomized trial. Springer Child & Youth Care Forum <https://doi.org/10.1007/s10566-021-09598-1>. January 2021.
- Kuh, Lisa P.; Leekeenan, Debbie; Given Heidi; Beneke, Margaret R. “Moving Beyond Anti-Bias Activities: Supporting the Development of Anti-Bias Practices.” *Young Children*. NAEYC. March, 2016. <https://www.naeyc.org/resources/pubs/yc/mar2016/moving-beyond-anti-bias-activities>
- Lindsay, Jim. *Children’s Access to Print Material and Education-Related Outcomes: Findings From a Meta-Analytic Review*. Learning Point Associates, 2010.
- Mayer, Susan E.; Ariel Kalil; Philip Oreopoulos & Sebastian Gallegos. Using behavioral insights to increase parental engagement: The parents and children together intervention. Published online before print April 5, 2018, doi: 10.3368/jhr.54.4.0617.8835RJ. *Human Resources*, Fall 2019, vol. 54 no. 4 900-925.
- McQuillan, Jim. *The Literacy Crisis*. Heinemann, 1998.
- Morgan, Paul L.; Farkas George; Hillemeier, Marianne M.; & Maczuga, Steve. Science achievement gaps begin very early, persist, and are largely explained by modifiable factors. *Educational Researcher*. Published online before print February 23, 2016, doi:10.3102/0013189X16633182. January/February 2016 vol. 45 no. 118-35.
- Neuman, Susan B.; & Celano, Donna. Access to print in low-income and middle-income communities: An ecological study of four neighborhoods. *Reading Research Quarterly*, Vol. 36, No. 1. (Jan./Feb. – Mar., 2001), pp. 8-26.
- Paley, Vivian Gussin. *A Child’s Work: The Importance of Fantasy Play*. University of Chicago Press, 2004.

- Price-Mitchell, Marilyn. "Boundary Dynamics: Implications for Building Parent-School Partnerships." *The School Community Journal*, Vol. 19, no.2. 2019.
- Ramírez, Naja Ferjan, Sarah Roseberry Lytle, & Patricia K. Kuhl. Parent coaching increases conversational turns and advances infant language development. *PNAS* February 18, 2020.
- Romeo, Rachel R.; Julia A. Leonard; Sydney T. Robinson; Martin R. West; Allyson P. Mackey; Meredith L. Rowe; & John D. E. Gabrieli. Beyond the 30-million-word gap: Children's conversational exposure is associated with language-related brain function. *Psychological Science*. Vol. 29.5, pp. 700-710. Article first published online: February 14, 2018. Issue published: May 1, 2018. Available at <https://doi.org/10.1177/0956797617742725>.
- Stephens, G., Silbert, L. and Hasson, U. Speaker-listener neural coupling underlies successful communication. *Proceedings of the National Academy of Sciences* 107, 14425-14430 (2010).
- Teepe, R. C.; I. Molenaar; & L. Verhoeven. Technology-enhanced storytelling stimulating parent-child interaction and preschool children's vocabulary knowledge. First published December 22, 2016. <https://doi.org/10.1111/jcal.12169>
- Vygotsky, L. S. *Mind in Society: The Development of Higher Psychological Processes*. Harvard University Press, 1978. (Original work published in 1934.)
- Winn, Maisha T.; Behizadeh, Nadia. "The Right to Be Literate: Literacy, Education, and the School-to-Prison Pipeline." *Review of Research in Education*, v35 n1 p147-173 March 2011.