

Apps That Aim To Give Parents 'Superpowers'

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LA Johnson/NPR

I'm hanging out with my 4-year-old daughter in the early evening, trying to keep her entertained and pull dinner together, when my phone buzzes.

Normally I'd feel guilty for checking it immediately, and distracted even if I didn't. But this time it's not a Twitter mention or an email from my editor. It's a timely suggestion from an app called Muse.

Here's what it says: "Try playing 'Simon Says' with L, using directional words like: behind, around, between. (ex. 'Simon Says stand between the chairs.')

So we do. It's a ton of fun. I can even call out the commands while chopping vegetables. Win-win.

Muse, and a similar consumer technology called Povi, which are both currently in beta testing, represent the convergence of a couple of trends.

One is the growing awareness of the importance of fostering social and emotional skills, alongside language and math, beginning in early childhood. Another is the encroachment of digital technology into what sometimes feels like every waking moment.

Kids are spending an average [four-plus hours a day with screen media](#); [adults check their phones nearly 50 times a day](#).

But what if, instead of distancing us, technology were instead designed to help families bond and children grow? That's the utopian sales pitch of apps like Povi and Muse: Pay some money, get happier kids.

My question is: Does it check out?

Vivienne Ming, the co-creator of Muse, is both a neuroscientist with a doctorate from Carnegie Mellon University and a technology entrepreneur interested in the application of artificial intelligence to human success.

Along with her wife and co-founder, Norma Ming, a cognitive scientist, she built an AI program to parse student posts in discussion forums. That, in turn, allowed them to predict the grades that the students would earn in an online biology and English course.

As chief scientist of her previous company, Gild, Vivienne Ming says, "I built models that predicted how good people would be at jobs they'd never held." With a database of 122 million professionals, they saw that grades and standardized test scores were less predictive of success than were patterns indicating higher-order factors, like growth mindset.

But Vivienne Ming wasn't satisfied with using AI for evaluation or prediction. She calls this approach a "cursed crystal ball." Sometimes a little foreknowledge can be a dangerous thing: "If you tell someone, 'Hey, your daughter is going to win a Nobel Prize someday,' it makes it *less* likely. If you say, 'Your son is in danger of dropping out in the ninth grade,' it could make it *more* likely."

Instead, she wondered, can we use AI to "optimize life outcomes," by targeting small interventions to kids from birth?

Every day, the Muse app asks one yes-or-no question. That question is designed either to gather information important to a child's life outcomes, or spark reflection in a parent.

An example of the former would be, "Are you (mother) the first in your family to go to college?" and the latter is something like, "Does Jayden like to be a leader?" Ming wants future versions of the app to include the ability to upload short audio clips or pictures, say, of your kid's drawing, to customize feedback even more.

Also each day, the app provides a brief suggested activity or conversation starter. This activity usually combines learning with play.

These are geared not just to your kid's age, but to the answers you've already given about interests and abilities. If you're curious, you can tap the "why" button to learn what the activities are supposed to do.

For example, our "Simon Says" game with extra prepositions apparently "promotes the development of divergent thinking, ingenuity, adaptability, and fluid intelligence."

That's a tall order for a little game.

Still, the idea of nudging better parental behavior through mobile phones does have some evidence behind it. Since 2010, women around the world, beginning when they're pregnant, have had the option of receiving text messages through a service called Text4Baby. The program gives timely information on topics like prenatal health and safe baby sleep, just when mothers need it.

Scientific evaluation of [this and similar "mobile health information"](#) programs has shown improved attitudes and knowledge among parents and [positive impacts on children's health](#).

Brittany Ceres is sold on the concept. She has been trying out the Muse app for the past few months. She lives in the San Francisco Bay Area, works in human resources and has two young children.

"This is something I coach [executives] about," she says. "You're not going to change people overnight. Microadjustments add up."

"It's nice to have that daily reminder," agrees Katie Wilson, another beta tester, who works at a large tech company

in the Bay Area and has a nearly 2-year-old daughter. "Don't get stuck in your routine — a person who is learning by the second is in your house. It's a quick, welcome distraction that reminds me to put my phone down and interact with my kid."

That's exactly as designed, says Vivienne Ming. "I'm not enthusiastic about educational games or apps generally," she says. "The vision here is that the kids are not engaging with the hardware at all, and the parents only for as long as it takes you to read the text."

Engaging With Emotions

Povi is a different take on a very similar idea: technology to build family bonds and social and emotional skills.

Founder Seow Lim used to be a self-described "Tiger Mom" with a laser focus on academics. When her older son was in sixth grade, a school counselor informed her, "Your child is very smart, but he is not happy."

It was a wake-up call. Lim immediately quit her high-powered tech-company executive job and immersed herself in the [latest parenting literature](#).

She learned about the importance of building empathy, perseverance, emotional regulation, resilience and growth mindset. And, in the process, she realized that parents like her were in need of some help.

"People are so busy and academically focused," she explains. "Parents are worried about excessive screen time, but they don't know what to do about it. We're using technology to enhance human interaction."

Lim started working with developmental psychologists and school counselors to help parents explore and build these skills with their children.

They launched a phone app last year that, like Muse, sends parents a daily question. But this one is designed for a parent to discuss with a child. For example: "Did you help anyone today?" or "Why do you think some people cry when they're happy and also cry when they're sad?"

"There's a lot of evidence that talking about emotions, learning about emotions, making emotions not a scary thing, helps children understand that emotions are worthwhile," says Daphna Ram, one of Povi's advisers, who studies attachment. "With Povi, we're really focusing on ways to get parents to engage with children about emotions."

Lim got feedback from her beta testers that parents wanted more context for these conversations. Currently Povi is running a Kickstarter project to bring to market a plush, huggable toy with a speaker inside and expressive LED eyes.

Povi, the character, "talks" directly to kids, telling first-person stories. For example, "Today some kids at recess told me I couldn't play foursquare with them. Can you help me figure out how I feel?"

The point of creating a toy was to make the experience more real and less virtual, Lim explains. "At first we thought of making an animated character on the app, and the psychologists were like, no. We want the kid to be focusing on the parent and [the two] looking each other in the eye, not looking at the screen."

Justine Cassell is associate dean for technology strategy and impact in the School of Computer Science at Carnegie Mellon University. She has a long-standing interest in the creation of technologies that build social and emotional skills. Over the past 20 years, she has built "listener" programs designed to encourage children on the autism spectrum, and English language learners, to tell stories.

"I have nothing bad to say about finding reasons and ways for parents to have conversations with their children," she says. "It's just a really good thing."

At the same time, she says, it gives her a sense of "slight sadness" to think that parents need to be explicitly taught such behaviors, or are too busy to remember them.

Playing a game, or talking about the feelings of a character in a story, do seem pretty obvious. Do we really need an app for that?

Many experts do argue that parents could use more access to evidence-based advice.

Dimitri Christakis, a professor of pediatrics at the University of Washington and the director of the Center for Child Health, Behavior and Development at Children's Hospital in Seattle, says data show that parents in general often fail to follow expert guidelines on topics such as reading to children, screen time and sleep.

Maybe we could all use more timely reminders. Cassell compares these apps to fitness trackers, which also use the ever-present phone as a reminder and incentive for better behavior.

And, another serious question Cassell raises is whether this kind of information is likely to reach the kids who need it most. The apparent target markets for Povi and Muse "are definitely upper-middle-class parents," she says.

Vivienne Ming, for one, is especially concerned that this kind of advice get to parents who may lack formal education and other resources. She is marketing Muse directly to parents in the U.S. for \$25 a year and as an employer benefit to be offered by large corporations. In both cases, it's likely to reach affluent and engaged parents.

But she's also working with nonprofits in India, China and South Africa to produce free versions for poor and rural populations.

Most of the work, she says, will be offering support on the ground. "We've made every effort for Muse to be phenomenally simple. It's pretty self-explanatory. But we need to create a belief in parents that this effort is going to pay off. That's where it's going to take effort."