

## Six apps to help autistic children learn

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With reports of autism among children continuing to rise at a meteoric rate throughout the United States, it's hardly surprising that scores of apps have been developed to help these kids cope, academically and socially.

Many of the apps, used primarily on iPads and other tablets, help children process information as well as <u>social cues</u> through games and instant audio rewards, such as clanging bells and applause. Others are designed to give <u>parents and teachers</u> tools to recognize <u>behavioral</u> <u>patterns</u> and schedule and coordinate care.

"I'm a big fan of these tablets," noted autistic activist Temple Grandin told the San Jose Mercury News. "Especially with nonverbal individuals, kids can type and the print appears right there on the screen, versus a computer where the keyboard and printed words are further apart. That's a huge advantage."

Debbie Drennan, an assistive technology specialist with Parents Helping Parents in San Jose, Calif., demonstrated some of her favorite apps, for both <u>autistic kids</u> and their parents:

BITSBOARD: Bitsboard helps kids with both literacy and emotional enrichment, using brightly colored flashcards and pop quizzes to teach them vocabulary as well as how to recognize <u>visual cues</u> in photos of people.

The app is "great for anyone on the autism spectrum, because it helps



kids learn vocabulary using real objects in a consistent and repetitive way," Drennan said. "So they can touch that picture 100 times and nobody cares."

For social cues, kids can call up "Emotions," then click on people whose faces show anger, disgust or boredom. By familiarizing children with these common expressions, the kids will be more comfortable when they see them in real life and perhaps not look away, as autistic kids often do when confused by social stimuli.

MODEL ME GOING PLACES: This app uses "video modeling," in which a parent-created clip can virtually take an autistic child to a place before they actually go there. "Having someone on the (autism) spectrum do a new task or go to a new place, like the dentist office, can be very scary for the child," Drennan said. "This app uses video-modeling or what we call 'front-loading' to show them the place before they go and teach them how they should react once they get there."

On a visit to the "Hairdresser," slides show a young boy and his mom walking into a barbershop, while the audio and on-screen text say things like "I'm getting a haircut." One slide has the boy saying, "This feels good," a nice warm-up for the first real-time visit to get a haircut.

AURASMA: Using an augmented-reality platform, Aurasma's imagerecognition technology allows users to create their own augmentedreality interactions. Drennan says the software's perfect for helping older autistic children master increased independence from their parents.

She uses the office speaker phone for a demo: Point the iPad at the phone. Record a short video explaining how the device is used. Name the demo. Then snap a photo of the phone for the image-recognition software to recognize. Now for the fun part: As the child walks around the house, pointing the tablet briefly at an item, the corresponding video



tutorial magically pops up.

AUTISM TRACKER LITE: Drennan said one of the greatest challenges for parents of an <u>autistic child</u> with flawed communication skills is knowing what's bugging the child when he or she's having a bad day. "They can't tell you why they're upset," she said, "but this app helps monitor their behavior and with its feedback can help identify what could be the cause of the stress they're feeling."

Using several tools in the app to describe the child's "Happiness" - "Not at all," "Just a little," or "Somewhat," for example - as well as his activity level and even the weather outside, the Tracker lets a parent chart a kid's behavior across a period of time. Often, Drennan said, a pattern will emerge to indicate what might be causing a child to act out. For example, a child may show signs of stress at the beginning of each week, or after a change in diet, or even during certain types of weather.

VISUAL SCHEDULE PLANNER: A fully customizable, cleanly designed audiovisual scheduler and calendar, this app helps the parents of autistic kids who need a clearly defined path through their days. "This app," Drennan said, "makes everyone's lives easier. It helps both you and the child, because you can add photos to calendars so scheduled activity that day is easy to understand. A photo of an ATM on Monday morning, for example, tells the child that that's when they'll go visit the bank."

The parent shows the child the day's events or what's coming later that week, so the ATM image might be followed by a lunch or shopping icon of some kid. This way, she said, "the kids can see clearly what's going to happen to them each day, removing a lot of the stress that comes from any sort of confusion."

CARE CIRCLES: This app can be a godsend for those watching after autistic children. They create an account, then regularly update it by



entering notes on medications, doctor-visit reports, even behavioral observations, sharing it all with their team of care providers.

"This way, everyone can share, in real-time, what's going on with the child," Drennan said. "So you know, for example, that he didn't have a snack at school or didn't go to the library that day like you thought he would. Everyone knows everything and there are no surprises, which decreases confusion and anxiety among everyone."

## A BRIEF LOOK AT SIX TABLET APPS:

-Bitsboard by Grasshopper Apps; free; iOS: Helps autistic kids learn vocabulary and teaches them to read social cues, such as facial expressions.

-Model Me Going Places by Model Me Kids; free; iOS: Offers slideshows that children can view before visiting a place they've never been before, such as a barbershop, and that shows them how to act once they get there.

-Aurasma by Aurasma; free; iOS and Android: Uses augmented-reality to turn an iPad or other tablet into a hands-on guide that allows a child to walk around a house or other environment, point the iPad at an object and instantly view a tutorial video about how to use it.

-Autism Tracker Lite by Track & Share Apps; free; iOS: Uses four screening tools to monitor a child's activity level, diet and mood, as well as the weather and other factors, then gives feedback that may indicate causes behind a child's behavior.

-Visual Schedule Planner by Good Karma Applications; \$14.99 (there's a



free version, too); iOS and Android: Gives parents of autistic kids a cleverly designed scheduling tool to help set up a clearly defined path for the child throughout the day, week and month.

-Care Circles by SAP AG; free; iOS and Android: Lets parents and teachers collaborate on an action plan for a <u>child</u>, which they can update in real-time by entering notes on medications, changes in doses, doctor-visit reports, even behavioral observations.

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