

The iPad and Autism: Learning Tool, Toy – or Both?

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**Family Center
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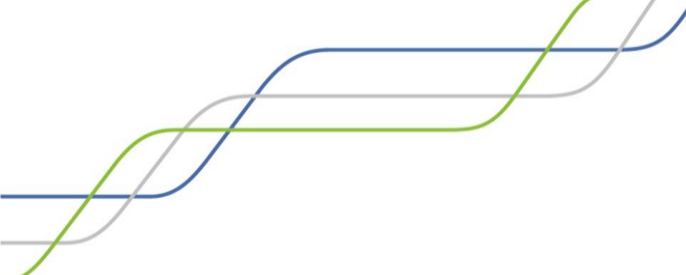
*An Interview with Vina Sargent, MA, CCC-SLP, Speech-Language Pathologist,
Lakeside Center for Autism (LCA), Issaquah, WA.*

Recently, SLP Vina Sargent, who helps administer the iLearn iPad orientation and support program at the Lakeside Center for Autism (LCA) (<http://lakesideautism.com/about-us/ilearn/>), overheard a fellow LCA therapist relate the following anecdote that illustrates one of the benefits of iPad use for children with autism spectrum disorder (ASD): its ability to motivate them to tackle therapeutic tasks in order to earn game time.



"My client really wanted to play the new zombie app I'd loaded (<http://itunes.apple.com/us/app/plants-vs.-zombies-hd/id363282253?mt=8>) so he crawled up the entire wall net and back down just so he could play." Ms. Sargent explains that LCA has a gross motor room with equipment used by kids to support their bodies. "This particular child does not enjoy engaging in physically challenging activities. For him to climb a wall net and then descend so that he could have iPad time was very important. A strong motivation to gain access to an iPad was certainly evident."

That motivation, Ms. Sargent declares, is a significant reason why the iPad is beginning to be used so effectively by children with autism, their therapists and families as a learning and therapeutic device, and as a toy with learning and therapeutic attributes. "Not all kids – but many – respond well to the visual sensory experience that the iPad provides. Their use of the iPad is intuitive." Children who are successful with a device, she adds, are motivated to continue using it. "That's what we're finding with many of our kids at LCA. Because the iPad has so many available apps that are tailored to children's interests, it's very likely that an app can be found that will motivate a child to utilize the iPad not only for play but also for learning."



“The iPad Is a Tool, Not a Silver Bullet”

The iLearn program, she explains, emphasizes to families and therapists that merely possessing an iPad will not provide easy solutions to the needs of children with ASD. “The iPad is a tool, not a silver bullet,” she cautions. To derive the most benefit from the iPad’s technology and applications, she says, children and families must be carefully taught – and supported --during and sometimes long after the device orientation phase. LCA, along with other similar facilities nationwide, offers such necessary support.

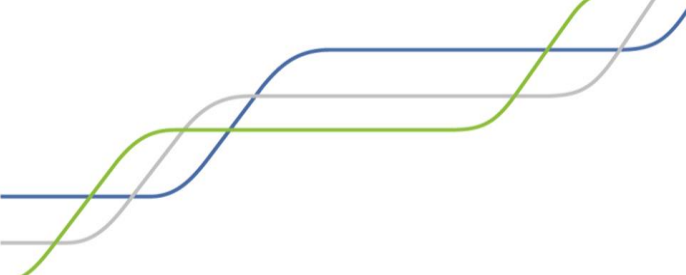
“The support we provide is thorough and ongoing,” says Ms. Sargent. “In the orientation phase, we provide basic information and training on the device to our therapists and families. We point out the iPad’s cool features to kids and families: we teach them to toggle, create categories and access YouTube and Google, for example. We help them with hardware issues, such as how to decide which iPad case is best for them,” which becomes important when the fragile device is used in a classroom environment.

iLearn family support often extends well beyond the initial phase of orientation and training. “We work with the families to provide as much support as [they] feel they need,” Ms. Sargent assures. “For children who use the iPad for communication, it’s part of their therapy here. I see kids who bring their iPhones or iPod touches to their individual therapy sessions. We work on using the vocabulary that’s installed on their iPhones meaningfully, relevantly and independently and then steadily expand that foundation because as the child’s verbal language develops their communication skills are also developing.”

Opportunities for Functional Play and Communication

LCA’s iLearn promotes iPad use by children that encourages functional play, in which children use materials in simple, repetitive and exploratory ways. “Some of our kids prefer only to stack blocks and then knock them over and often don’t expand their concept of play beyond that. Yet there are hundreds, maybe thousands, of iPad apps that support functional play. We teach and interact with children and coach parents on what language to use and how to show and model the various kinds of play available, including play with other peers. The opportunities to expand play via the iPad are so in-your-face that they are almost impossible for us to ignore.”





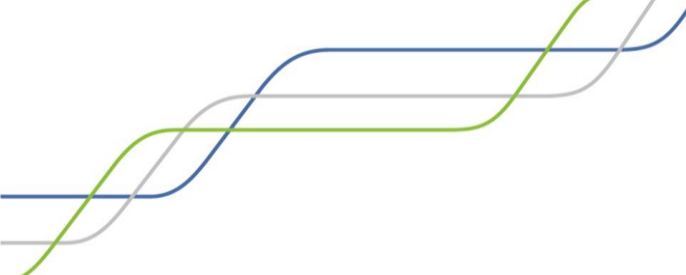
"I can't say enough about Toca Boca (<http://tocaboca.com/>)," a play studio that makes digital toys for children. Toca Boca apps, she remarks, "are simple, visually clean and open-ended so there's a lot of exploring of functional play that can be done." She recommends Scribblenauts (<http://itunes.apple.com/us/app/scribblenauts-remix/id444844790?mt=8>), a problem-solving literacy app, and Art Maker, a build-your-own story app, (<http://itunes.apple.com/us/app/art-maker-by-abcs-play-school/id479763898?mt=8>), "so there's more opportunity to increase the level of challenge in pretend play."

There's an App for That!

There are an increasing number of apps designed to support communication by non-verbal children, Ms. Sargent notes. The apps can turn consumer devices such as iPads and iPhones into augmentative and alternative communication (AAC) devices. She cites **Proloquo2Go** (<http://itunes.apple.com/us/app/proloquo2go/id308368164?mt=8>), TouchChat (<http://www.silver-kite.com/touchChat>), **Sono Flex** (<http://www.tobii.com/assistive-technology/global/products/software/sono-flex/>), and **Scene&Heard** (<http://itunes.apple.com/us/app/scene-heard/id423528276?mt=8>) as communication apps that have proven effective with children at LCA.

"We conduct an evaluation in combination with a speech or communication evaluation," she explains, "to learn whether a child's language would benefit by the use of an iPad communication app. We say to parents, 'Let's create some goals together. Let's determine which app would fit your child best and what size the icon should be and which vocabulary words ought to be selected.'" Communication apps, she points out, often come with a default vocabulary that might not be appropriate for the child in question. "We then customize the vocabulary, individualizing those communication apps for children."

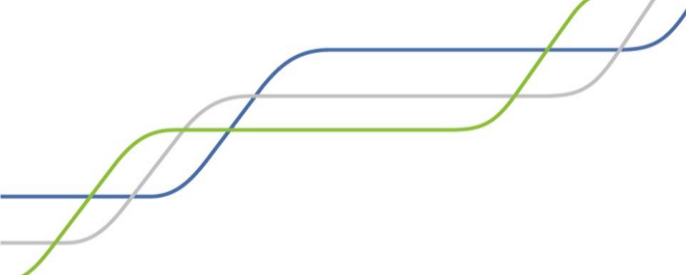
Such customization, she notes, requires programming and collaboration with other therapists and parents. She cites the following scenario as an example: "Say there is a communication app that has 35 words on the page but the child only knows 5-10 words. We delete all the words that don't matter, replace them with words that are pertinent so that the available vocabulary becomes motivating and relevant for the



child. This makes the communication more useful for the child who can then begin to build a more substantial vocabulary."

Another functional area of support is transition. "Parents tell me, 'My child has difficulty transitioning from one activity to the next.'" The iPad, she says, is useful as a transition support if a visual schedule is created by employing a tool such as the First-Then visual schedule application (<http://itunes.apple.com/us/app/first-then-visual-schedule/id355527801?mt=8>). That app, also available for Android devices, enables caregivers to provide behavior support, a crucial ingredient for children with communication needs and developmental delays who require a structured environment. Parents or teachers who are struggling to cope with a child's tantrum "can reach for their iPhone and explain to the child, 'This is a picture of what we're going to do next; it'll be OK. First we're going to do this and then we're going to take a break' or 'Then we will go home.'" Ms. Sargent also recommends taking photos of locations to be visited by the family during a planned trip so that the child has a visual support and a measure of predictability for the trip ahead. A free app, **Kiddie countdown** timer (<http://itunes.apple.com/us/app/kiddie-countdown-activity/id413243984?mt=8>), has also proven to be effective in supporting transitions, she says.

Among her favorite apps for families is Pictello (<http://www.assistiveware.com/product/pictello>), which enables users to create their own stories. "Pictello users insert their own pictures and write their own text. Users can record their own voices or opt for digitized speech. I use Pictello to create social stories for children about what to do in unpredictable situations, such as visiting the dentist. I've used it to teach activities of daily living, such as asking for a drink, and to help children express their feelings." She also employs the app to help children make friends. Pictello, she states, "is excellent for discrete teaching of skills that our kids sometimes don't pick up on naturally and need visual support to help make learning more concrete. Pictello gives them context and is even more salient when teachers can use their iPad to take a photo of a child asking a friend to play, for example. Children will see themselves asking questions and realize that they can make that play request of a friend."



The LCA website (<http://lakesideautism.com/about-us/ilearn/ilearn-app-list/>) features a comprehensive compilation of apps used by Center personnel, including physical, occupational and behavioral therapists.

Free vs Paid Apps: Avoiding the Expenditure of “a Chunk of Change”

While the explosion in applications for consumer mobile devices is good news for families that have been dependent in the past on expensive AT devices developed for narrow markets, it poses the problem of “too much choice.”

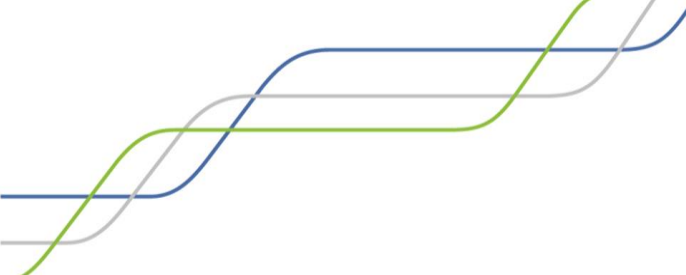


“Some families tell me,” reports Ms. Sargent, “‘We just looked up autism apps; there are hundreds of them and we don’t know which are best for our child so we downloaded all the free ones.’ Parents take their child through those apps one by one and the child just isn’t interested. Then the parents decide that although the apps they selected are free they aren’t useful for them or their child, so they get rid of the apps.”

iLearn program therapists, she explains, “educate families about how to determine what’s individual about their child based on their child’s interests and needs. The choice of apps is based on that determination.” For those apps that are more expensive, her advice to parents is, “Find out if there is a ‘lite’ version of the desired app that can be tried out before committing to a major app investment.” A lite version, she explains, is an app that is free but does not have all of the features and functions of a full version. “The user might not be able to play as many levels, or make as many customizations, but enough features are available for parents to trial the app and see if they like it enough to buy the full version.” She cautions parents to remember “that when purchasing apps a click here and click there can cost a chunk of change.”

On the other hand, she continues, “there are apps like the Kiddiew countdown timer, which is free and while it’s not everything we’d want in a countdown timer it works well and it doesn’t cost a cent.”

She recommends that parents in the market for apps look at Moms with Apps.com (<http://momswithapps.com/>) “a frequently updated blog where apps are reviewed with an emphasis on app features and the skills that are targeted, which is helpful in



determining whether or not an app trial is advisable." This blog, she notes, "is an online community that promotes information sharing in which parents can not only learn from others but also provide information on their own searches." In addition, the site offers many specials for parents. She counsels parents to seek out blogs and app lists, including iLearn's, that describe and categorize apps based on function and features.

Keeping the Device in Perspective

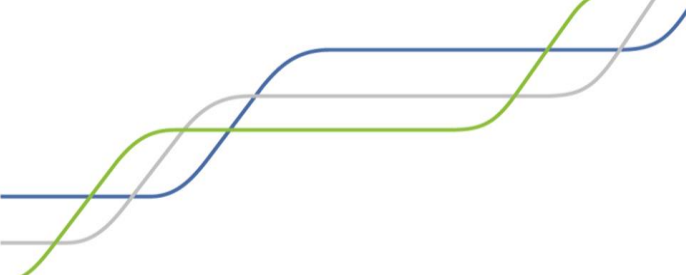
Although iLearn has enjoyed success in providing iPad support to families and employing the device in a therapeutic setting, LCA is not looking to develop a monitoring and data collection strategy focused on device use alone. "We don't want to announce to parents, 'Look how successful your child is using the iPad.' Instead, we say, 'See how successful your child is – and the iPad has helped her/him achieve that success.' That being said, we are embracing the use of mobile technology for our own data collection."

LCA, she explains, is working with developers to create a data collection app which Ms. Sargent hopes will reduce the time and paper cost that have been borne traditionally by clinicians when they write up their notes after therapy sessions. "Hopefully, this will enable us to better gather real-time data and digitally store all the data we collect so that we can more easily gain a better grasp of our kids' successes."

If a child is using a device – including an iPad – "I am going to write a communication goal for that child," Ms. Sargent declares. "Whether the goal is achieved through words, gestures, signing or iPad, all methods are regarded as equally important. My message to a child is: 'Use your iPad or any device to communicate with me. If the iPad is easiest for you, I'll help make it even easier.' That's how we incorporate the use of [the device] in our therapy. For us the iPad is the complement to the therapy; it does not supplant the therapy."



She regards the iPad as an effective companion to more traditional therapy tools. For example, she says, "We use a very high-interest app like Angry Birds (<http://shop.angrybirds.com/>) and play for a little while. Then we'll go to the gross motor room where we'll recreate Angry Birds. We'll use blocks to set up the walls and a small stuffed animal as our pig. Then we'll launch our birds. We use the app as



inspiration at that point – but the children are engaged, playing, finding friends to play with, using language, and attending to others. The iPad has been an effective tool in facilitating those activities.”

Barriers to iPad Use Remain

Despite its value to children with ASD, barriers to iPad use remain. Technological complexity, she insists, is one of the most significant barriers. “Sometimes it’s not easy for a child just to bring his/her iPad to school or to charge the battery. These tasks and others can be complicated for the children. In addition, children are occasionally engaged in activities so physically taxing that it’s not safe for them have their iPads with them.”

Forgetfulness is another problem. “For example, when I’m engaged in an activity outside, I’ll sometimes just hang my iPad from a fence post. I know it’s not safe but thankfully I’ve always remembered where I put it. But many kids in school settings don’t remember where they’ve placed their iPad, whether or not they have autism.”

iPad use in social settings can also be “tricky,” she asserts. “We have a term here — ‘iPad eyes’ – which refers to what occurs when a child is using an iPad and another child walks past and the iPad catches his/her attention.” The issue, she notes, “is one of social appropriateness – when is it time to use an iPad and when is not time? There is a time and a place for everything. For some kids who don’t need the device all the time but want to play with it constantly, a balance regarding iPad use needs to be struck.”

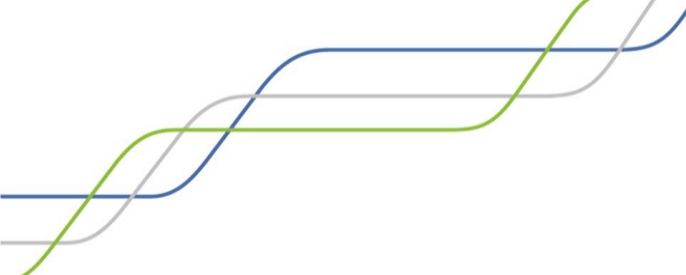
To protect the fragile iPads, she says, cases are provided by LCA and schedules are set for iPad use. “We schedule the children and are very clear with them about their parameters of use. In other words, we establish boundaries, just as we do with all activities. For kids who use the iPad all the time we support them by managing and holding the device, thereby maintaining physical control over it until the device is presented to the children at the appropriate time, or when they can show us they know when to use it independently and appropriately.”

In public schools, Ms. Sargent says, the major concern is that iPads will be lost, stolen or damaged. "Especially for schools, an iPad is yet another item to be responsible for." To deal with that issue, some teachers, she says "are trying to acquire their own iPads for their classrooms, so that iPads are shared rather than used individually." The resulting universal iPad usage, she insists, "lowers the profile of children bringing their iPads to school where the other students want to use the device." Once classrooms acquire their own iPads, she remarks, "my job is to collaborate with those classrooms and advise teachers about the ways iPads have been utilized successfully in therapeutic and/or home environments in the hope that these experiences will apply for a classroom environment." Conversely, "I often ask teachers who are enjoying iPad success in their classrooms to share those experiences with me so that perhaps we at LCA can replicate those experiences in a therapeutic or home setting."



Another way to help lower iPad in-school barriers, she asserts, is to encourage children to carry smaller, more portable and less expensive devices. "Several of my kids use iPod Touches or iPhones that they wear around their neck or carry in their pocket. These devices are accessible and have all the necessary features but are smaller and more mobile." For some children, she adds, "the smaller icons in these devices can be somewhat difficult to manipulate yet other kids experience no problems. I look at some of my children and am amazed that their little fingertips can manipulate the buttons, but they can and do. For many of these kids, their intuitive understanding of the technology's potential is stunning. It almost seems, she notes, that the iPad/iPhone/iTouch technology "matches the way these children like to learn." In fact, she continues, "some of my kids approach their TVs and attempt to pinch and expand the screens, thinking that TVs are multi-touch as well."

In and out of school, she declares, "the fact that iPad technology is becoming a part of our lives, including the lives of teachers and administrators, is encouraging schools to become more accustomed to these devices and more open to the devices' potential educational, recreational and communication value." The result, she adds, is that schools are becoming increasingly adept at problem-solving their own barriers to classroom use. "They're learning how to use this technology and to incorporate the devices into their teaching. I've been in classrooms that have Smart Boards now for



their circle time (<http://dictionary.reference.com/browse/circle+time>) and are fundraising for classroom iPads."

Yet another area in which Ms. Sargent sees great potential for mobile consumer technology is in serving children and families in remote areas via telepractice. It has utility she says, in serving regions that are remote, in situations in which families are on a long waiting list for therapy or when gasoline prices make it prohibitive for parents to drive to a clinic.

"The technology's not perfect and continues to evolve," says Ms. Sargent. "Sometimes the technology is inconvenient, but for the most part life with the iPad is considerably easier for kids with autism than without."