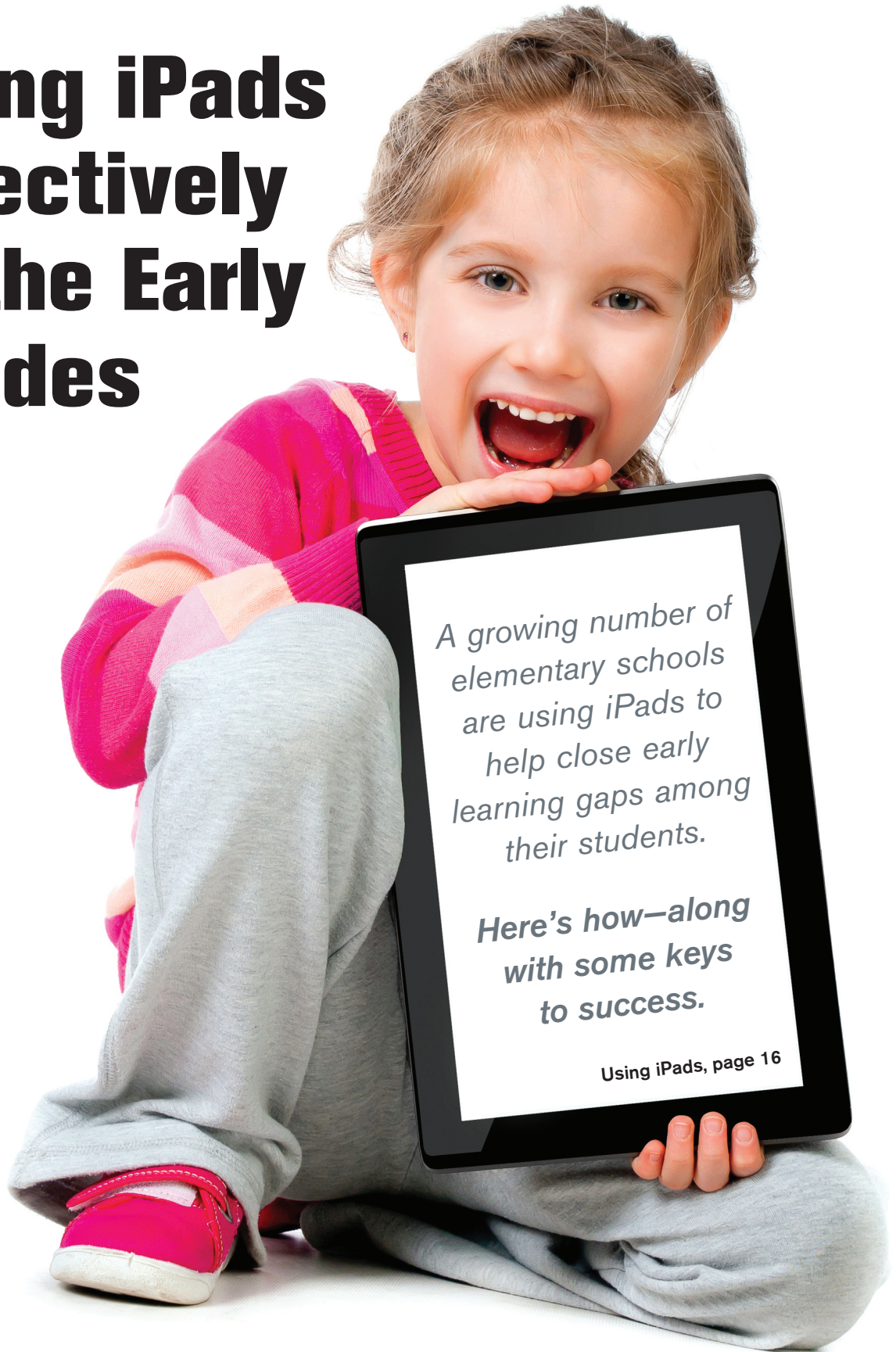


# Using iPads Effectively in the Early Grades



*A growing number of elementary schools are using iPads to help close early learning gaps among their students.*

***Here's how—along with some keys to success.***

**Using iPads, page 16**

## Using iPads

continued from page 15

This past spring, elementary school teachers in North Carolina's Lenoir County Schools added a new twist to their students' field trips with the help of new iPads: video-based scavenger hunts.

"Students would have to take pictures or video of items they were asked to find—say, at a museum—and then come back to school and put together an iMovie that highlighted all the things they were supposed to see and learn," said Digital Learning Instructional Coordinator Stacy Cauley.

Not only did student engagement "skyrocket," Cauley said, but the students are now much more likely to remember what they learned from their experience.

Lenoir County, which just distributed iPads to every student in its nine elementary schools in December, is among a growing number of U.S. school districts that are using the devices with students in the early grades.

According to education research firm MDR and its "State of the K-12 Market 2014" report, 97 percent of K-12 leaders say they are using at least some tablets within their district—and of these, 91 percent are using Apple devices.

While MDR does not have figures to distinguish between tablet use at various grade levels, many educators say they are using iPads more often in the early grades, for a number of reasons.

For one thing, very young students aren't doing as much writing, so having a keyboard isn't as important for them as it is in the later grades. Also, younger children are very tactile learners, and the iPad's touch interface is a natural fit for these students.

"iPads are just more intuitive for young children," said Benjamin Heuston, president of the nonprofit Waterford Institute, which develops early learning software for preschool through second-grade students. "Children are hands-on learners, and they want to experience and grab things."

A mouse isn't as intuitive for young

children to use, he said.

In its computer-based software, Waterford has included an activity that helps young children learn how to use a mouse and interact with the program appropriately. This year, Waterford has introduced a new iPad version of its software, and Heuston said, such a tutorial will not be necessary for the iPad version. "Children will just naturally be able to pick it up and work with it effectively," he said.

He added: "Anything you can do to reduce barriers to technology use is a good thing. You don't want technology to get in the way of instruction; you want it to be so transparent that children are focused on the learning, and not on how it is happening. I think iPads have done a very nice job of that."

### Personalizing instruction

Adaptive curriculum for iPads has been very effective in helping teachers personalize the learning for every child, said Leslie Wilson, founder and CEO of the nonprofit One-to-One Institute, which advises schools on the use of



iPads are used in the classroom individually or in small groups to enrich the learning experience.





Early Learning is here.

“In the early grades, iPads can help harness and nurture students’ inherent creativity and curiosity, providing immersive, kinesthetic, and differentiated learning environments that build critical thinking skills,” said Tom Daccord, director of EdTechTeacher, which helps educators use technology effectively.

technology to transform instruction.

“If every student has an iPad and you’re using digital resources aimed at taking kids from where they are to the next level and moving them forward at their own pace, those kinds of activities are really very helpful,” Wilson said. “Not every child needs to be learning the same lesson; they can be at different starting points and get feedback on their progress and move forward either individually or in a small group.”

Personalizing instruction can help schools address the gaps in young children’s math and reading skills, before these become bigger problems later on. (See “*Why closing gaps early is critical for achievement.*”) That’s a key reason why Lenoir County Schools adopted iPads last year—and it’s an important goal for Prince George’s County Public Schools in Maryland as well.

As part of a project called

Transforming Education through Digital Learning (TEDL), Prince George’s County has given classroom sets of iPads to 20 teachers to help close achievement gaps in its Title 1 elementary schools, and three of these schools have gone fully one-to-one with iPads.

Many of the instructional programs Prince George’s County is using offer iPad versions. That now includes Waterford Early Learning, which is used by teachers to enhance the literacy skills of first and second graders in 41 of the district’s Title I schools.

“The technology has enabled teachers to differentiate their instruction to meet the students’ individual needs,” said Title I Supervisor of Digital Learning Meri Robinson.

For instance, teachers can use Waterford’s personalized curriculum and reporting tools to quickly assess

**Using iPads, page 19**



## Why closing gaps early is critical for achievement

When used effectively, iPads and other technology tools can help preK-3 teachers quickly identify gaps in their students' skills and deliver highly targeted instruction to fill these gaps. That's an essential goal for educators, as research suggests that a growing number of students are starting school already behind their peers—and that closing these gaps early is critical to a child's success.

The Great Recession that began in 2008 has led to a dramatic rise in the number of U.S. children living in poverty, according to figures from Kids Count, a project of the Anne E. Casey Foundation: from 13.2 million children in 2008 to 16.4 million in 2012.

Nationally, about 23 percent of children lived in poverty as of 2012, the latest year for which the foundation had figures. That's up from 19 percent in 2005. Mississippi had the highest percentage, at 35 percent, followed by New Mexico and California.

"Too many of our kids get an unequal start in life, because their

families struggle just to make ends meet," Kids Count said.

Why is this significant? Successful readers have had about 3,000 hours of pre-literacy training by the time they reach first grade, wrote Marilyn Jager Adams in her 1990 book "Beginning to Read." But children who come from poorer, less-educated families have had between 20 and 200 hours, on average, because they have not been read to as often—and their homes aren't as rich in verbal communication. At best, that's only about 7 percent of what they need, Adams warned.

The challenge is compounded by the growing population of U.S. students from households where English is not the first language. Across the nation, an estimated 4.6 million students are considered English language learners, making them "the fastest-growing student population in our schools," said Education Secretary Arne Duncan in a recent blog post.

If these gaps in literacy and other academic skills are not closed early

on in a child's education, they will only get worse.

Closing gaps early is critical to a child's development, said Benjamin Heuston, president of the Waterford Institute, because "children who can't read fail publicly in front of their peers and their teacher ... 180 days of the year." They start to believe that reading is something they can't do. But it doesn't mean they can't read, he said; it simply means they haven't had the support they need to be successful.

The psychologist Keith Stanovich has argued that children often follow a self-reinforcing path when they're learning to read, Heuston said. Those who experience success early on develop confidence, which motivates them to work even harder—while those who struggle tend to shy away from reading, which further exacerbates the problem.

Stanovich called this the "Matthew effect," and if it's true, then "getting started on the right path becomes a determinant to a child's success," Heuston said.

eSN



## Using iPads

continued from page 17

whether their students understood a lesson, and then break the students into smaller groups to work with those children who need additional help—while the more advanced students can begin learning the next concept on their own.

While initial achievement results were not yet available as of press time, student engagement is on the rise—and disciplinary problems have declined.

“There’s an energy and excitement that didn’t exist before. Kids now look forward to coming to school,” said Christina Jerome, an instructional technology specialist for the district.

### Fostering creativity

iPads also tap into the imagination that students possess at an early age, allowing them to express their creativity in pedagogically sound ways.

“In the early grades, iPads can help harness and nurture students’ inherent creativity and curiosity, providing immersive, kinesthetic, and differentiated learning environments that build critical thinking skills,” said Tom Daccord, director of EdTechTeacher, which helps educators use technology effectively.

iPads allow students to express their learning using different modalities. For instance, instead of asking students who

are learning English as a second language to write a paragraph about an experience they had, “we’ve had them create videos where they can verbally express to their teacher what they have learned and use images or voiceovers,” said Jerome. “This gives them extra confidence and creativity as they demonstrate that they’ve actually mastered the content.”

As Lenoir County’s use of iPads on school field trips suggests, students become much more invested in their work when they are producing a multi-modal artifact to reflect their understanding.

“Instead of having students write a paper, now they can create an iMovie to show the ideas they’ve learned, or they can create a newsletter in Pages,” Cauley said. “The iPad apps really do allow for a lot of creativity in product development.”

iPads don’t just unleash student creativity; they also enable teachers to be more creative as well, Cauley noted.

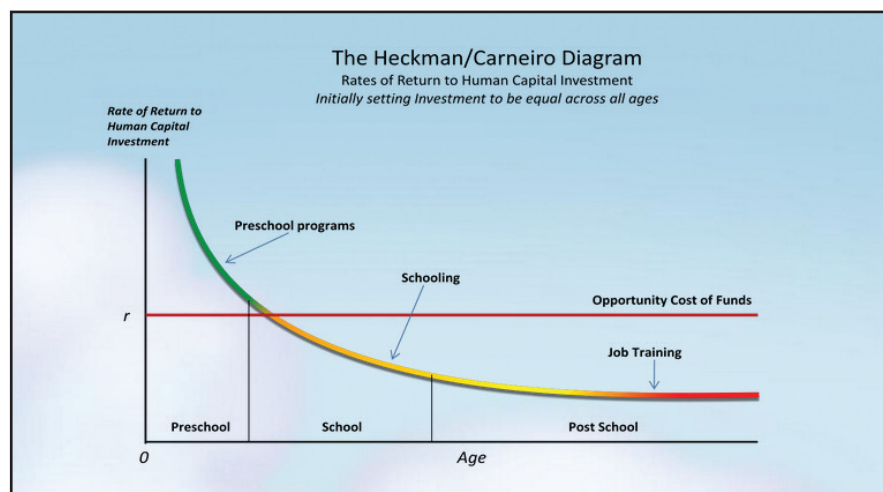
Beth Holland, an EdTechTeacher instructor who oversees communications for the company, wrote a recent blog post with ideas for using iPads to teach early literacy skills in creative ways.

“Spread around the room and place iPads next to books,” she wrote as one of several suggestions. “Have students use Educreations to take a picture of the

**Using iPads, page 20**



And here.



Source: Heckman (2008), "Returns to a Unit Dollar Invested," illustrates that the greatest impact for learning investments is at preschool age and earlier.

## Using iPads

continued from page 19

page in the book that they are reading, and then record themselves reading it. You could even have multiple students read multiple pages.”

With students all logged in to the same class account, they could collaborate to screencast a book for their peers. “With one app or website,” Holland wrote, “you now have a way to assess students for fluency and decoding.”

### Choosing apps for learning

Another reason for the iPad’s popularity in the early grades is the abundance of educational apps developed for the iOS platform. Apple’s App Store includes more than 80,000 educational apps that cover a wide range of subjects for every grade level and learning style.

But having that much choice also can be a challenge for educators.

At Prince George’s County, each school has its own account to purchase apps, and school-based teams choose their apps by grade level and content area. “We do not regulate the apps they purchase,” said Instructional Technology Specialist Terri Jefferson. “However, we do provide a rubric for selecting appropriate apps.”

The rubric helps educators evaluate apps according to several factors, such as age-appropriateness, how closely it aligns with learning goals, how easy it is for students to use, how engaging or interactive it is, and whether it is collaborative in nature.

Jefferson said she likes that many of the vetted instructional programs Prince George’s County is using, like Waterford, offer iPad versions as well.

“With the increasing number of mobile devices available in our elementary schools, we are looking forward to using the Waterford iPad app this fall with students,” she said.

The Waterford School in Utah, a nationally-ranked private preK-12 school founded by the Waterford Institute, piloted the institute’s new iPad app during the 2014-’15 school year. “The biggest benefit was how much more interactive it was,” said Teri Andrach, a computer lab manager for the Waterford School.

While the traditional version of the software would ask students to trace letters on the screen as they were learning the alphabet, it wasn’t always easy for students to do this with a mouse, Andrach explained. With the touch-enabled iPad app, however, this activity was much easier for students—and the software was able to provide more precise, immediate feedback.

“The kids loved it,” she said. “They were excited about using the iPads. They took to the platform in a more engaging way.”

Mikkel Storm, vice president of prod-

## Five recommendations for iPad success

How can educators ensure the success of their iPad initiatives in the early grades? Here is some advice from the field.

### Identify your learning goals.

The key to successfully integrating iPads into instruction is the same as with any classroom technology: “Start with your learning goals in mind, and then choose high-quality curriculum with apps and activities that support these goals,” said Tom Daccord, director of EdTechTeacher.

### Don’t neglect security.

One reason the Los Angeles Unified School District’s high-profile iPad initiative recently failed was because the district did not have a secure mobile device management system to control students’ online activity. But with a solid MDM system in place, “we can control what is on the device and what kids can do with it,” said Terri Jefferson, an instructional technology specialist for Prince George’s County Public Schools in Maryland.

### Learn from other educators.

“Connect with a community of educators who have been using these devices for a fair amount of time, because they’re obviously going to have a wealth of experience

and resources,” said Leslie Wilson, founder and CEO of the nonprofit One-to-One Institute. “There are plenty of communities like that out there; you can find them on Twitter or in online chats and discussion groups.”

### Take advantage of curated resources.

As the number of educational iPad apps continues to grow exponentially, “it’s like drinking from a fire hose,” Wilson said: “It can be overwhelming to keep up.” Curated websites, which collect resources that have been reviewed by educators, can help you choose the right apps to meet your goals. PowerMyLearning and Common Sense Media’s Graphite are two such free online platforms; within these sites, “you can plug in the standards and grade levels, and you can find a lot of vetted resources that are applicable to the iPad.”

### Think deeper.

Once you know your learning goals, consider: What are the possibilities for using iPads in transformational ways? “Simply taking a snapshot of the curriculum and placing it on an iPad is not transformational change,” said Benjamin Heuston, president of the Waterford Institute. “But when teachers use iPads to deliver inquiry-based, personalized instruction, that’s when real learning happens.”

eSN



uct and marketing for the Waterford Institute, said the app includes all the activities in Waterford's early reading software, as well as new activities that take advantage of the iPad's touch interface. The app is available to Waterford customers at no additional charge, as part of their subscription.

"Children can shift from using Waterford in the classroom or in a computer lab for their 15 minutes in the morning, to using it on an iPad during

one-on-one time with their students.

"Our experience with teachers is that they are overwhelmed. They have children coming to school unprepared," he said. "They're overwhelmed with the complexities of English language learners in the classroom. And they're overwhelmed by the amount of data they need to capture and process and report on."

What teachers really need, he said, are tools "that can take some of the heavy burden off of their shoulders, and free



Technology helps automate teacher tasks—giving them more one-on-one time with their students.

time at school. They can pick up the iPad and start right in the curriculum exactly where they left off that morning," he said.

"They're working in a personalized, individualized sequence, and they can switch back and forth between devices. That's very powerful, and it provides a great way to reach students with whatever device they are using."

**Moving the needle on student success**

Heuston believes that, when used effectively, iPads can help automate many of the onerous tasks involved in teaching, such as grading student assessments or going over letter sounds again and again—while giving teachers more

them up to do some of the other things they really love doing—actually teaching the children—which is why they got into the profession to begin with.

But to do that, teachers need robust tools and apps that combine rigorous instruction and assessment.

"It's vital that people are looking at systems or solutions that can really move the needle on a child's learning trajectory," he concluded. "And that's a really heavy lift. It's not just something a 99-cent app can do." **eSN**

*The former editor in chief of eSchool News, Dennis Pierce has been covering education and technology for nearly 18 years. He can be reached at [dennisw-pierce@gmail.com](mailto:dennisw-pierce@gmail.com).*

**And here.**

Complete Reading, Math and Science instruction for classroom, iPad, and home.

**To learn more, call 855-998-6327 or visit [products.waterford.org](http://products.waterford.org)**

"Waterford is the best program I have ever seen for reaching all our students."

**DR. BARBARA WRIGHT**  
PRINCIPAL  
Common Lanes Elementary  
Florissant, MO

EETC CONFERENCE 2015

# Think of it as a primer for the rest of the week.

**Early Education and Technology for Children  
November 18, 2015 in Orlando, Florida**

---

**Join us for a special one-day, deep-dive track immediately preceding the NAEYC Annual Conference & Expo.**

This is an ideal setting for researchers, educators, administrators and policymakers to connect and share with others who are passionate about improving early childhood education.

- Hear emerging policy directions affecting early education and technology
- Learn about the latest research being done for early education
- Discover what works in educating young children using technology

