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Closing Gaps Early

As more students enter kindergarten already behind their peers, closing these gaps quickly is critical to their success. Here's how software can help

Located in Marion County, a rural area of north central Florida, the town of Weirsdale doesn't offer many opportunities for preschool education. The median family income in the county is around $37,000, or $12,000 less than the state average, and about one in 10 families lives below the poverty line.

As a result, many children are starting their formal education already well behind where they should be, according to the Florida Kindergarten Readiness Screener (FLKRS, or "flickers" as it's known to the state's teachers). In fact, some students enter kindergarten not knowing any letters or sounds, said Chris Sandy, principal of Stanton-Weirsdale Elementary School.

"It's amazing to me that a child can walk in the door and not even know the letter 'M' for McDonald's," Sandy said, noting that the normally ubiquitous fast-food chain hardly exists in her community.

The staff at Sandy's school work tirelessly to get these students up to speed as quickly as possible, using a combination of software and other supports. A central component of their efforts is the Waterford Early Learning program from the nonprofit Waterford Institute.

Closing Gaps...

"It's a full-court press to close those gaps and give students a chance at a high-quality education," she says.

But these efforts are paying off, as Sandy says all of her students are functioning at or near grade level when they leave kindergarten.

The challenges facing Stanton-Weirsdale are common to many elementary schools nationwide, as the number of children arriving for kindergarten already behind their peers is on the rise (see sidebar).

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.

If this gap isn't closed early on in a child's education, it will only get worse. That's a tall order facing the nation's early childhood educators; but fortunately, software such as Waterford and other early learning programs can help.

In this Special Report, we'll take a closer look at how some schools are succeeding at closing learning gaps early.

Form a plan—and stick to it with fidelity

The students who attend El Paso Independent School District in Texas are predominantly Hispanic and come from low-income households.

Pam Howard, a former principal who is now the assistant superintendent of special education for El Paso ISD, said the district's students often enter kindergarten without much background knowledge or vocabulary in English, which makes it hard for them to comprehend their lessons.

Closing early reading gaps leads to later success.

"The only time [many of] these kids hear English spoken is at school," Howard said. Yet, "research suggests that if a child isn't on grade level by second grade, it's almost impossible to catch up after that."

To help these students succeed, El Paso elementary schools focus on providing a language-rich environment that includes plenty of oral reading. "As a principal, I required teachers to do three read-alouds a day," Howard said.

In addition, El Paso schools incorporate lots of music into the curriculum, because this "enhances students' ability to learn the language," she said. The rhyming and rhythm of the songs "helps kids develop patterns of speech."

As principal of El Paso's Burleson Elementary School, Howard used a software program called Lexia Reading to help her students learn to read English at grade level. She now uses the software with the district's special-education students as well.

Lexia Reading Core5 provides adaptive, personalized reading instruction for students of all abilities in pre-kindergarten through grade 5. It also supplies norm-referenced performance data and analysis to teachers, without interrupting the flow of instruction to administer a test.

Students are placed at the proper level automatically and work independ-

Closing Gaps...

ently—via a web browser, desktop client, or iPad app—to develop their foundational reading skills. Free school-to-home access allows students to continue their work at home, in extended-day programs, or in libraries and other community centers.

Struggling readers typically use the software for 20 minutes a day, five days a week, Howard said—but the software tells teachers exactly how much time each child needs to use it in order to become proficient.

In 2007-08, Burleson Elementary was rated barely "academically acceptable" by the state. The following year, Howard became the principal there—and from 2008 through 2011, Burleson was a "TEA recognized" school, with a 95-percent pass rate on the state reading test.

As a district, Howard said, El Paso ISD's English language proficiency has risen from less than 60 percent in 2010 to nearly 80 percent in 2012.

"Anything you do with oral language, you have to do with fidelity," she advised. "You have to have a plan, and you have to do it well."

Avoiding the 'Matthew effect'

There are about 3,200 kindergarten students in Marion County, Fla.—and each year, more than 200 of these children would arrive at school without knowing any letters or sounds, Sandy said.

"We had to do something," she said. "We had to provide for these kids, as quickly as we could, experiences that could help close those gaps."

Sandy was the executive director of elementary education for Marion County when she led the implementa-

More students starting school already behind

As if educators didn't have enough to worry about, the number of students entering kindergarten already behind their peers has risen sharply in the last few years—making programs aimed at closing gaps early even more critical in schools.

The Great Recession that began in 2008 has led to a dramatic rise in the number of U.S. children living in poverty, from 13.2 million children in 2008 to 17.1 million in 2012.

The figures come from Kids Count, a project of the Anne E. Casey Foundation. They were taken from U.S. Census Bureau data and reflect the number of children under age 18 who live in families with income below the federal poverty level, defined as $23,283 for a family of four.

As of 2012, sixteen states had at least 25 percent of their children living in poverty. Mississippi had the highest percentage, at 35 percent, followed by Arkansas and New Mexico at 29 percent.

"Too many of our kids get an unequal start in life, because their families struggle just to make ends meet," Kids Count said.

In a report called "Investing in Our Future: 2013 State of Texas Children," Kids Count noted that Texas has the third highest birth rate in the country—and it accounts for one out of every 11 children in the United States. Nearly 1.8 million Texas children live in poverty, or 26 percent of the state's children.

"Texas spending on children as part of the state budget … has remained comparatively small and largely unchanged over the last decade, even as [its] child population grows," the report noted.

"During this period of austere state spending and large population growth, Texas has seen a dramatic increase in child poverty, and ranks poorly in comparison to the nation as a whole on many indicators of child well-being."

Making matters worse, sequestration—the automatic, across-the-board reduction of more than 7 percent in federal funding enacted in 2013—has led to cuts in the number of children attending federally funded preschool programs across the nation this year.

According to the National Head Start Association, more than 57,000 children lost their seats in Head Start programs this past fall.

In Texas, "4,800 fewer three- and four-year-olds enrolled in Head Start programs in 2013," Kids Count said. "Because Head Start primarily serves economically disadvantaged children, these cuts will reduce the number of children who will enter kindergarten ready to learn in 2014."

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Closing Gaps...

tion of Waterford Early Learning throughout the district's elementary schools. Now, as principal of Stanton-Weirsdale Elementary School, she says she can see the software "impacting kids' lives from a day-to-day perspective."

The research-based software is a computer-adaptive program that teaches reading, math, and science to students in pre-kindergarten through second grade. Children can work through the software independently, so it can be used either at home or at school, said Benjamin Heuston, president of the Waterford Institute.

The program uses music, animation, games, and other interactive elements that can draw students in—but "we do so in a thoughtful and developmentally appropriate way," Heuston said.

He added: "We've found that kids are using our software in their home setting 50 percent more than we're asking them to; that's a signal to us that we're on the right track with the engagement piece."

Closing gaps early on is critical to a child's development, Heuston said, 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 compounds 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.

Waterford Early Learning is designed to take a child from having no language experience to becoming an independent reader. "We found that took about three years of content to

"Children who can't read fail publicly in front of their peers and their teacher … 180 days of the year," Heuston said. They start to believe that reading is something they can't do.

Closing Gaps...

accomplish," Heuston said.

The software's makers recommend that students use it for about 15 minutes a day in pre-kindergarten or kindergarten, and 30 minutes a day for grades 1 and 2. As a student works through the program, it "builds a model for that child, remediating on areas that are needed while progressing quickly through areas being mastered," he said.

Keys to Stanton-Weirsdale's success

At Stanton-Weirsdale Elementary, success begins with "high-quality teachers," Sandy said.

The school supplies all kindergarten teachers with a paraprofessional for at least 45 minutes a day, and "we bring in as many volunteers as we can to add to that base," she said.

Teachers use Houghton Mifflin Harcourt's Saxon Phonics as their core reading curriculum, and they supplement this instruction with the Waterford Early Learning program.

"I am such a believer in computer-assisted instruction," Sandy said. "The students average 14 minutes a day on the software, but it varies based on what they need."

Every kindergarten classroom in Sandy's school has five computers. Because the largest class size is 22 students, "we can easily get kids on the software in the morning through a rotation on the computers," Sandy said. "Then, in the afternoon, we can offer a second rotation for the students who need it."

Sandy attributed her school's success to four main factors:

(1) The program's scope and sequence.

In evaluating the Waterford Early Learning software for use in her school, Sandy said she asked this key question: "If my students spend time on this pro-

Teacher support ensures strong outcomes.

gram, will they master the skills they need?" The answer, she said, was a resounding "yes."

(2) Fidelity of implementation.

To close early learning gaps and get all students reading on grade level, the software has to be used with fidelity. Sandy said she looked at how much time it would require each day, then asked: "Could we make that work in our classrooms?" Again, the answer was yes.

(3) Teacher support and buy-in.

Stanton-Weirsdale Elementary School has a reading coach on campus, and this person has helped with implementation of the software—guiding both teachers and students.

In addition, district officials make sure the software is working every day. That's not hard to do, Sandy said, because "it's very consistent—you can count on it every day." These two factors have helped ensure teacher buy-in, she added.

(4) Monitoring of the data.

Waterford Early Learning includes a full suite of reporting and analytics tools for teachers and administrators, and that's extremely important, Sandy said.

"I dog the data," she said, explaining that she monitors students' progress on the software every day. "If you don't do this, the program fades."

But if you follow all these recommendations, "kids will make progress—even without having attended a preschool program," Sandy asserted.

For proof, she pointed to her school's results. Although Stanton-Weirsdale is at or near the bottom among Marion County's 31 elementary schools in terms of the FLKRS scores of its incoming kindergarteners, the scores of children leaving kindergarten meet or exceed the district's average.

"This is what we do here on campus, and it works," Sandy said.   **eSN**

Dennis Pierce is the Editor in Chief of eSchool News. Follow him on Twitter: @eSN_Dennis.

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