North Carolina school district uses DreamBox to help students gain math proficiency

RURAL ALLEGHANY COUNTY SEES MATH SCORES CLIMB DUE TO DREAMBOX IMPLEMENTATION

NORTH CAROLINA

Alleghany County Schools

Alleghany County sits in northwestern North Carolina, within the scenic Blue Ridge Mountains. Once called a "lost province" of North Carolina due to its isolation behind a mountain range, the county remains sparsely populated, with a population of around 11,000 people.
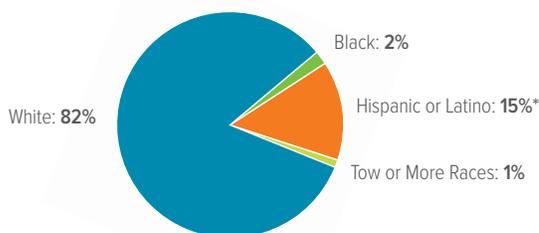
Alleghany County Schools has three pre-K-8 schools and one high school, with a total student population of around 1,400 and 115 teachers. That small student and teacher population creates a strong sense of community. But the county's rural nature also presents some challenges. Its large agricultural sector — the second largest employer — utilizes seasonal workers. Often, those workers' children arrive in a county school late in the school year and may depart early in the year as their parents seek new opportunities. That, and the need for district educators to wear many hats, means students need additional support to have a seamless transition into the classroom.

Despite the county's rural location, the county is surprisingly wired, with 97 percent of households able to access the Internet. As a result, the district had been able to deploy online programs for reading and math. But it wasn't happy with the math instruction — it often left students feeling frustrated. In fact, even as literacy and language skills were improving in the district, math skills were deteriorating. "Two years ago, our math skills were significantly below the state average," says Leigh Ann Dixon, the district's Instructional Coach for grades K-5. "It was kind of shocking."

City School District

District Serves	**4 Schools**
District-Wide Enrollment (1st day of school 2019)	**1,416**
English Language Learners (ELL)	**91**
Free/Reduced-Price Lunch	**65.8%**
Special Education	**199**

Student Diversity

Black: **2%**

White: **82%**

Hispanic or Latino: **15%***

Tow or More Races: **1%**

*Latino/Hispanic population varies by seasonality
Data from National Center for Education Statistics

"Our teachers and administrators aspire to provide students with not only a safe learning environment but one that fosters deep critical thinking skills, a love of learning, and confidence to better themselves every day. I am thankful DreamBox Learning is playing a big part in supporting this mission."

**—Chad Beasley | Superintendent
Alleghany County Schools**

As a result, in March 2019 the district deployed DreamBox as part of a Paid Pilot Program with the goal of improving students' math performance. This led to a district-wide purchase and implementation of DreamBox for all Alleghany students, pre-K-8. District leaders were drawn to several aspects of DreamBox. Foremost was its adaptability – DreamBox enables individual, in-the-moment learning experiences that are deeply personalized for each student to provide the right next lesson, at the right level of difficulty, at the right time. That in turn made DreamBox a bargain compared with other supplemental math programs they evaluated. Says Stacy Miller, also a former Instructional Coach and now Assistant Principal at Sparta Elementary School: "We're a small district so we have to be very conscious of how we spend our money. With DreamBox's adaptive component, we felt like we were getting more for our money."

Today Alleghany County Schools deploys DreamBox in a variety of ways for its pre-K-8 students. "Often a teacher will need to spend extra time with a subgroup of students and, in those cases, time on DreamBox gives the other students a chance to build their skills. In other cases, a class that has an 85-minute block for math instruction will spend the first hour in classroom instruction, and the last 20-25 minutes on DreamBox. "We have one teacher who uses it as a 'bell ringer,'" says Miller. "Once the kids finish their classroom work, they'll move to DreamBox to finish the session. That way the full period is well-utilized."

Integrating DreamBox with the district's existing math curriculum was easy. Alleghany County Schools uses Houghton Mifflin Harcourt's "GO Math," a program that DreamBox already aligns with. DreamBox also supports Alleghany County Schools' Multi-Tiered System of Supports (MTSS), as a Tier 2 intervention tool that all K-8 teachers have access to. MTSS guidelines encourage personalized and differentiated education, which DreamBox provides.

DreamBox fit in well with the district's existing math curriculum, so after some initial training on the platform, teachers jumped on board to implement it into their classrooms and use it to the best of their advantage. But it added an important element: Individualization. "That's huge for a kid who comes to school and doesn't get to pick his or her schedule," says Miller. "With DreamBox they can pick from six or eight tiles (instruction sessions within DreamBox). That's huge for kids."

"DreamBox became a huge part of our work-from home curriculum. The kids knew how to use it, how to log on – it was seamless. And their parents had heard about it and loved seeing their kids use it every day."

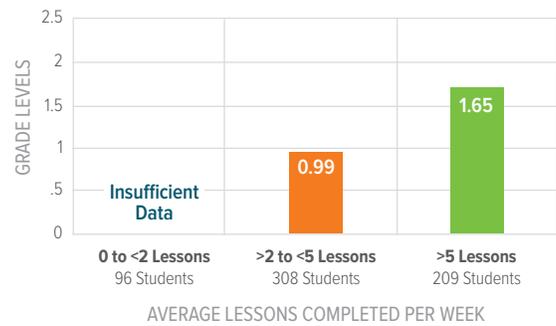**–Melissa Fitzgerald, Director of Student Support Services**

DreamBox's availability in Spanish also boosted instruction in the district where up to 30 percent of the students are English Language Learners, says Melissa Fitzgerald, Director of Student Support Services: "DreamBox has been a tool our Spanish-speaking students could come in and use right away. Before they weren't always able to interact with other students, but now they can do the same thing everyone else is doing."

Of course, one thing district officials could never have imagined in March of 2019, when DreamBox first was rolled out, was that by the early spring of 2020 their students would all be taking classes from home – the result of the Covid-19 pandemic. "DreamBox became a huge part of our work-from home curriculum," says Fitzgerald. "The kids knew how to use it, how to log on – it was seamless. And their parents had heard about it and loved seeing their kids use it every day."

Says Dixon: "DreamBox was clearly our best tool for remote learning. In a lot of grades, it was our only tool. The kids could navigate DreamBox on their own, and teachers could look at the data generated by DreamBox and know where a student stands."

With a full academic year, and part of a second, now behind them, Alleghany County Schools administrators are seeing measurable gains in math performance. Students using DreamBox have improved their comparative scores, making up much of the gap that was noticed two years ago. In addition, DreamBox has given teachers data that helps them catch learning problems before they amplify. Says Miller: "If we struggle with fourth-grade fractions, we struggle with fifth-grade fractions, it just compounds. DreamBox really allows us to hone in on where we need to put in extra work."

Average Grade Levels of Growth by Lessons Completed

GRADE LEVELS

	0 to <2 Lessons 96 Students	>2 to <5 Lessons 308 Students	>5 Lessons 209 Students
Value	Insufficient Data	0.99	1.65

AVERAGE LESSONS COMPLETED PER WEEK

The district is also making use of DreamBox's Predictive Insights, a tool built into DreamBox that helps educators predict students' future proficiency, allowing teachers to quickly find and remedy gaps in the absence of state testing.

Alleghany County Schools is fortunate in its ability to put a device for learning in the hands of students. But given the prominence of remote learning due to the novel coronavirus – and uncertainty over what will ever be "normal" – the district is looking to expand remote-learning options. It's weighing installing Wi-Fi in school buses and using Wi-Fi-equipped vehicles to serve as remote "hot spots" in parts of the county that lack broadband access.

DreamBox shows that even students in remote, rural counties can receive cutting-edge math instruction across grade levels and subgroups. And with those math skills, students in Alleghany County will strengthen deep critical thinking skills, a love of learning, and confidence to better themselves everyday.

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– Leigh Ann Dixon, K-5 Instructional Coach

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