

How Charlotte-Mecklenburg School District Dramatically Increased Science Scores

You often read about the challenges schools face in raising student achievement. One district in North Carolina implemented a program specifically designed for their goals, needs and educator skillsets.

A large, solid blue upward-pointing arrow is positioned to the left of the text "44%". The arrow and the percentage are rendered in a bright cyan color.

When North Carolina began testing for science, Dr. Peter Gorman came to a realization. After six years of intense focus on math and reading, his school district — Charlotte-Mecklenburg Schools (CMS)— was not engaging his kids in science. Somewhere along the way, his teachers' interest in the subject had given way to the more pressing—and tested—disciplines. “They would avoid the subject as much as possible,” says Dr. Gorman, “and in some cases, not teach science at all.” Dr. Gorman decided to change the district's approach to science instruction and teacher preparedness from the ground up.

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Dr. Peter Gorman,
Superintendent,
Charlotte-Mecklenburg Schools, NC



"The fact that Discovery came in as a partner was a huge advantage and why we felt comfortable working with them."

Ann Clark,
Chief Academic Officer,
Charlotte-Mecklenburg Schools, NC

Empowering Teachers, Enabling Students

North Carolina's Charlotte-Mecklenburg Schools (CMS) enroll 137,000 students, with 51 percent of those students receiving free and reduced lunches. While it faces many challenges, the district is also known as a leader in instructional innovation. As Superintendent, Dr. Gorman recognized the need to make his district's science instruction more interactive and engaging. In addition, he wanted to build the confidence of his teachers.

Recognizing Discovery Education as the Solution

The ideal solution, from Dr. Gorman's perspective, would bring the sciences to life. It would engage them. To this end, Dr. Gorman sought to introduce rich, digital media in his classrooms as a replacement for textbooks. He turned to Scott Muri, Area Superintendent for the CMS Northeast Learning Community, to develop a repository of high-quality content aligned with state standards. Muri quickly formed a project team consisting of Dr. Cindy Moss (CMS Science Director), Ann Clark (CMS Chief Academic Officer), and Ron Thompson (CMS Title I Director). Throughout their meetings, the group tackled the importance of boosting science instruction in the district's elementary and middle schools. As Dr. Moss noted: "If we don't engage students with science by the fourth grade— we have lost them."

Scott Muri's group reached two conclusions. First, the district needed to add new digital media content to the classroom curriculum. Second, they needed additional professional development for their teachers. The group immediately began identifying partner organizations to provide the required tools and training. Muri had worked with Discovery Education in the past. While the rest of the group knew Discovery from its television programming like PLANET EARTH, they did not know that today Discovery Education brings this highly engaging content to U.S. schools. Quickly, the group embraced Discovery's compelling digital content from e-books to animation, video to interactive labs.

Discovery Education's Unique Approach Based on Partnerships

After receiving the group's recommendation and a rigorous examination of vendors, Dr. Gorman favored working with Discovery Education. Discovery's approach focused on a partnership based on CMS's desired goals and educator skill sets. This emphasis on partnership, according to Dr. Gorman, played a key role in the district's decision-making process. Ann Clark, the district's Chief Academic Officer, agreed. "So many times companies come into the district just pushing products and license deals," says Clark. "The fact that Discovery came in as a partner was a huge advantage. It was why we felt comfortable working with them."

Both CMS and Discovery Education agreed that, no matter how inspiring the content, they also needed to train the teachers to ensure they feel more comfortable using digital instructional materials in the classroom. Professional development stood at the core of the new initiative. Using ten percent of the CMS Title I budget for funding, the district developed a successful model for teacher training that incorporated face-to-face and online components. Led by two coaches in each school, the program included over one hundred days of intense professional development. In the end, the teachers became not only deft at using the Discovery Education service, but also fervent believers in the power of rich interactive media to inspire the kids.



"Once the teachers and kids worked with it just one time, they were hooked."

Dr. Cindy Moss,
Science Director,
Charlotte-Mecklenburg Schools, NC

Program Launch

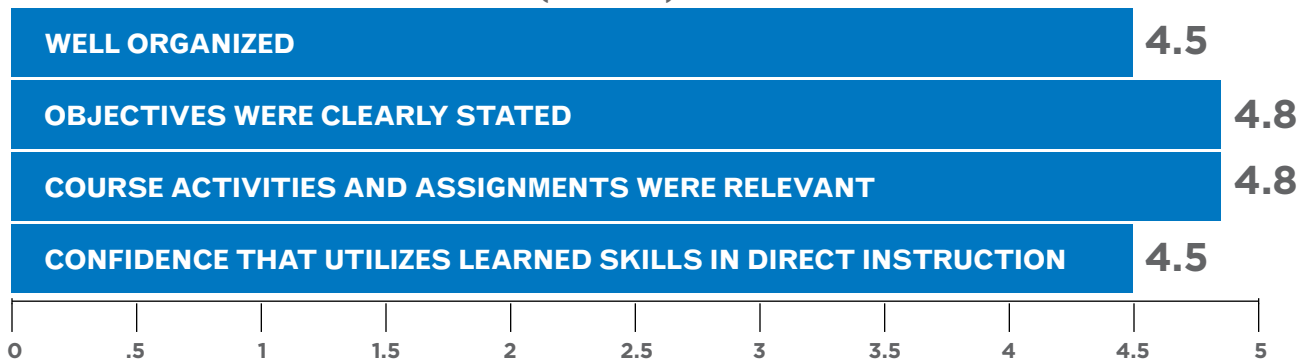
CMS had two advantages integrating the Discovery Education service. First, the district already owned a local media server to host the video content (thus keeping network infrastructure and transport costs affordable). Second, the district had previously invested in technology tools for the classroom; they just weren't using them to their full effect. As Muri noted: "Having one teacher show a Discovery video to the entire class on a 19-inch monitor was not as effective as having a whiteboard in front of the classroom."

Originally, the new pilot called for a modest program with one or two schools, involving a few principals and teachers. Over a short period of time, other schools requested to take part as well. Soon, an initial grouping of schools was added. The final rollout of the project included 81 Title I and non-Title I elementary and middle schools, with the Superintendents, Chief Academic Officer, the Title I Director and the district's Accountability Department—as well as technology department representatives—participating. "In the beginning it was very much a 'tell two friends' approach to get the teachers on board," says Dr. Moss. "But once they would see the ease of the program and the impact that it had on instruction in the classroom, they became evangelists and spread the word for us. Once the teachers and kids worked with it just one time, they were hooked."

First-Year Results: An Unqualified Success

Since implementing the program, CMS has seen that the schools with the largest increases in test scores have been the schools with the deepest integration of Discovery Education. Successful, sustained professional development led to an average of 24 educators per school across the 81 schools involved in the initiative. As you can see from the chart below, the district's teachers embraced professional development.

PARTICIPANT SATISFACTION (out of 5)



Additionally, professional development fostered local capacity by building an active Discovery Educator Network (DEN) community. This group shares a common passion for teaching with digital media, sharing resources, collaborating, and furthering the district's newfound success. Over 1,500 CMS educators joined the DEN. Of these, ninety-four achieved STAR status, meaning they are most active within the community and have taken on greater leadership responsibilities. Ultimately, this involvement translated into more energized teachers and students.



Digital media in the classroom has become widespread across the district. Access to thousands of digital resources (all in compliance with state standards) has empowered educators to engage technology-savvy students with relevant, up-to-date content.

Academic Results: Beyond Our Wildest Expectations

So have test scores improved in CMS? Dr. Gorman's goal was a 3-5% gain in a very short time frame. However, this pilot program led to double-digit gains in science scores year-over-year in CMS. Composite retest scores on North Carolina's science end-of-year exam for grades 5 and 8 increased by 44%. While these are impressive numbers, it is just the beginning. Discovery Education continues to work with Charlotte-Mecklenburg Schools to enhance the curriculum in new meaningful ways to benefit Charlotte students.



SCIENCE PROFICIENCY	2008	2009 without retests	2009 with retests	1 yr change
5th Grade	40	50	60	+20
8th Grade	47	55	64	+17
Composite	43	52	62	+19

"Science has taken on new life and new meaning in this district."

Scott Muri,
Area Superintendent,
CMS Northeast Learning Community

Future Plans: Partnering with Discovery Education to Increase Performance in Language Arts, Mathematics and Social Studies

Going forward, CMS plans to use Title II funds to pay for the program; moreover, the district, according to Thompson and Clark, intends to expand into the subjects of Language Arts, Mathematics and Social Studies. "We really want to focus on the quality of student outcomes," Clark says. Dr. Gorman agrees: "Many of the students in the higher-poverty schools have never been to a zoo or seen many of the things that we all take for granted," he says. "The Discovery content opens doors to an experience that those kids have never dreamed of."

As the CMS/Discovery partnership illustrates, successfully impacting student performance takes more than just dynamic content. You must provide high-quality professional development and ongoing monitoring and support for your instructors. As Dr. Moss states, "If a district can only do one thing, I would recommend [that they partner with] Discovery." To which Dr. Gorman adds, "Working with Discovery Education, they do unbelievable stuff."