

# Broadband Helps Bridge the Achievement Gap

By Jamal Simmons

In education, technology is giving new meaning to the phrase “equal opportunity.” Teachers and students in schools across America—urban, rural, wealthy, and impoverished—are gaining access to online learning and all of its benefits through broadband technology.

What is broadband? According to the Federal Communications Commission (FCC), it is high-speed internet access that allows users to tap into information and take advantage of internet-related services that are difficult or impossible to move through slower, dial-up telephone lines. Text, images, and sound are all transmitted digitally as bits of data.

Broadband is an education equalizer. A high-speed internet connection breaks down the barriers to accessing advanced learning materials and instruction. It also can heighten student engagement and enable personalized instruction that caters to varying learning styles. According to a September 2012 poll from the Leading Education by Advancing Digital (LEAD) Commission ([www.leadcommission.org](http://www.leadcommission.org)), teachers and parents say schools should be doing more to advocate for improved access to technology in education, with access to the internet a priority.

## Innovation at Kramer Middle School


Kramer Middle School, a part of the District of Columbia Public Schools, is one of the district’s 40 lowest-performing schools. Kramer is embarking on a new program that is predicted to better engage students and dramatically improve test scores. A blended learning model that combines face-to-face and online instruction tailored to the needs of individual students and made possible through the use of broadband technology will be tested at Kramer and then extended throughout the district. District, state, and federal funding sources have come together

to support this shift, as well as improve monitoring and management of results enabled by broadband.

Online and blended learning programs started about 15 years ago and continue to grow at a fast pace around the country. Online learning, or e-learning, utilizes rich digital content delivered via a computer or other digital device and the internet. Students can take courses in their classroom, at home, or anywhere with high-speed internet access. David Teeter, director of policy for the International Association for K-12 Online Learning (iNACOL, [www.inacol.org](http://www.inacol.org)), predicts that digital content will replace traditional textbooks within the next five to 10 years.

Kramer’s blended learning design incorporates 50 percent virtual instruction. Students receive real-time performance scores after they complete online tasks related to the virtual lesson. Students also receive 50 percent traditional instruction, with teachers who are specially trained to offer feedback, support, and additional instruction based on online student performance. Research shows that face-to-face teacher instruction to clarify areas for improvement and reinforce learning is the ideal complement to e-learning. With this new blended learning approach, it is predicted that test scores measured by the District of Columbia Comprehensive Assessment System (DC CAS) will improve by 40 percentage points over the next five years at the district’s 40 consistently low-performing schools, thus increasing the district average by 19 percent for math and 20 percent for reading.

An online learning management system will aggregate schoolwide data and facilitate better organization and communication. In addition to having access to due dates, grades, and class announcements, students will have 24/7 access to their courses’ learning materials. Teachers will have all assignments that need their attention and a summary of student data related to performance, responsiveness, and pace online in a central location.



Parents will be invited to the Kramer campus many times throughout the school year. Workshops with the school's parent coordinator will be held so that parents will be able to identify academic areas they should be monitoring with their children.

### Barriers to online learning

The FCC's National Broadband Plan reported that only 37 percent of all teachers have electronic access to achievement data for the students in their classrooms. They say, "a significant proportion...still do not have access to the data necessary for making instructional decisions."

Lack of digital access is also very common in high-poverty and rural areas, as well as underserved communities across the economic spectrum. Thanks to grant money, every student at Kramer Middle will have a laptop available for use, but this new learning environment poses other challenges. The campus expects to need greater broadband capacity to play online video, download pictures, share data, and engage in other online activities. Private investment by internet providers to build and maintain a robust broadband network will be critical, as will advocacy to ensure the investment happens.

Although the FCC considers speeds as low as 200 kilobits per second (kbps) to be "broadband," our nation should look at transitioning from outdated technologies that transfer data over traditional copper telephone lines, for example, and moving to faster, next-generation internet-protocol (IP) networks to support and expand quality online learning opportunities for students and teachers. With reliable, high-speed internet connections, schools in rural communities can capitalize on the same educational opportunities as big-city schools like Kramer Middle School. Investing in broadband is an important foundation for improvement of education across America. David Teeter says, "Without sufficient broadband capacity and access, schools and students are out of luck."

### Advocating for broadband

Thanks to broadband, physical proximity to teachers and educational resources is no longer a requirement for learning about any subject of interest. Elementary-school children, for example, can livestream educational videos and play learning games on sites designed especially for them. Middle schoolers can study art from a museum in Paris or take lessons from an instructor in Johannesburg without ever leaving home. Nearly all teachers (95%) and nine in 10 parents believe that home access to broadband gives students a big or moderate advantage when it comes to classroom performance, according to the LEAD Commission poll.

Fueling excitement for learning from an early age can help children develop the drive to stick with their education later on. The more challenged and stimulated young people are, the more likely they will be to complete high school, have a shot at going to college, and be able to compete for better jobs or start a company of their own.

The federal E-rate program (<http://transition.fcc.gov/learnnet>) subsidizes broadband to libraries and schools, but government funds alone cannot achieve the broadband build-out that our country needs. School administrators, teachers, and parents should encourage the public and private sectors to invest in and work collaboratively toward development and expansion of next-generation networks as part of our national infrastructure. Spreading high-speed internet access means expanding opportunities for high-quality education to all children.

*Jamal Simmons is the cochair of the Internet Innovation Alliance (IIA), a broad-based coalition supporting broadband access and adoption for all Americans.*

### Become an Advocate for Broadband

The huge advantages high-speed internet access affords children make it appropriate for PTAs and other concerned adults to advocate for broadband in communities with limited or no access to it. Discuss launching a campaign with your Legislation Committee. Then take steps to educate the public and your legislators. Get help with National PTA's Online Advocacy Toolkit at [PTA.org/3020.asp](http://PTA.org/3020.asp).



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### Connect2Compete Dedicated to Widespread Internet Access

In November 2011, the National Cable & Telecommunications Association (NCTA) and its cable internet service providers launched a major initiative to promote education and broadband adoption:

**Connect2Compete (C2C).** C2C is a national nonprofit organization designed to help narrow the digital divide by making affordable high-speed internet access, computers, education and jobs content, and digital literacy training more accessible for Americans without home connectivity. Since its launch, C2C has spearheaded a number of initiatives, including:

- Launching PC Pledge 100, a nationwide campaign to urge corporations to divert at least 100 computers that otherwise would be headed to landfills to be refurbished and donated to low-income Americans in need of access to technology and broadband
  - Providing digital literacy training at nearly 2,800 employment and training centers operated by the U.S. Department of Labor
  - Securing a major grant from the Institute of Museum and Library Services (IMLS) to identify model approaches for partnerships with libraries to meet public demand for training
- Parents, PTA leaders, and schools are encouraged to visit the C2C website ([www.connect2compete.org](http://www.connect2compete.org)) to see how to qualify for low-cost, high-speed internet and the other benefits C2C is making available.