



## EXPLORING THE WORLD FROM THE CLASSROOM: INTRODUCING DISTANCE LEARNING TO K-12 SCHOOLS IN RURAL COMMUNITIES

*"NGN built this network so that the schools, hospitals, businesses and community could take ownership of it and use it to improve lives. The discussion we had with the educators here today is huge and it's exciting, and we've still only just scratched the surface of what can be done with this kind of broadband technology."*

NGN President & CEO Paul Belk

Exploring The World From The Classroom powered by NGN

May 2016



## WHAT IS DISTANCE LEARNING?

Distance learning allows individuals in separate locations to interact with each other in an educational manner via modern technology. Whether educators use Internet-based courses or enhance traditional classroom learning with videoconferencing, distance learning expands on curriculum and provides a deeper learning approach that goes well beyond the textbook. Distance learning also often opens the door to opportunities for students that they wouldn't otherwise have due to limited school district resources and budgetary restrictions. Initially used by postsecondary and professional development educational institutions, distance learning has been adopted into the K-12 learning environment to inspire young students to continue beyond an Internet search and dig deeper into a subject matter.

*"We are a Title I school, so we are a low-income, high poverty school. Distance learning provides us opportunities to take our students places that we could not afford to take them. We have right around 500 students, and field trips for all 500 are not feasible. However, through the virtual lab, we can take our children places on a daily basis. It's been a tremendous offering for our students." - Marybeth Thomas, Principal, Hillard A. Wilbanks Middle School, Habersham County, Georgia*

*"What I have found throughout my 20 years in distance learning is that technology is what drives distance learning. Thanks to technology the best education can be accessed at the local and rural levels." - Marci Powell, Chair Emerita and Past President of the United States Distance Learning Association*

**How are educators using distance learning in the classroom? Here are just a few examples:**

- Remote dual enrollment programs
- Student connections to labs, teachers and courses only available at other schools
- Early college enrollment for high school students
- Person-to-person video conferencing
- Virtual field trips to locations around the world
- Curriculum enhancement programs
- Cultural immersion through long distance interviews
- Classroom collaboration with peers around the globe in real time
- Teacher professional development courses

## CLOSING THE DIGITAL DIVIDE

Distance learning can be used to offer students in rural communities similar educational opportunities found in urban and suburban settings so they can ultimately compete with the global community academically and professionally.

### Exploring the World from the Classroom

Children in rural communities often do not have many opportunities to be exposed to world events, foreign cultures or languages not commonly taught in their school. Many times, this leads to small aspirations rather than dreams of a larger scale.

Thanks to the evolution of the Internet and technology, distance learning provides a cost-effective means to cultural exposure beyond the outskirts of town. It can introduce students to experiences that get them excited about what they learn in the classroom and introduce them to the possibilities that the world has to offer - to dream beyond a life restricted to the opportunities available in their immediate community. Imagine these real-life scenarios in your classroom:

- A student interested in cooking learns how to make a special recipe from a chef in New York City through videoconferencing and is inspired to go to culinary school.

- A student especially gifted in math dual-enrolls in postsecondary math classes and upon high school graduation is accepted to an Ivy League school.

- A class talks to a holocaust survivor and learns firsthand about his story of survival, forgiveness and rising against diversity. For the first time, the previously disengaged students are inspired to write lengthy reports on what they learned and insist on flooding their new friend with "thank you" cards for sharing his experience.



### Higher Education Accessibility at Any Level

Distance learning allows students of all ages to enhance their education without requiring them to travel great lengths or spend exorbitant amounts of money.

#### *Middle School / High School Distance Learning*

Middle school and high school students are largely limited to the curriculum their school is operating under. If a student wants to learn Mandarin Chinese but their high school only has faculty equipped to teach French and Spanish, what are they to do?

One option would be to hire a personal tutor, but that can be very costly and it can be difficult to find a tutor certified to teach a desired language. That's where distance learning comes into play. Many high schools are now partnering with colleges and international high schools to offer their students alternative learning opportunities to the traditional curriculum. This opens up a wide variety of new areas of study for rural students, broadening their knowledge base and ultimately making them better global citizens.

*"We see an opportunity to expand our relationship with local universities because we have several students that are speakers of other languages, so we are looking forward to increasing the offerings that we can give them here at our school through the video conferencing." - Marybeth Thomas, Principal, Hillard A. Wilbanks Middle School, Habersham County, Georgia*

**Some high schools are using distance learning to help their students earn college credits while attending the latter years of their secondary education.**

*"In the U.S. we have many high school students that are simultaneously receiving their associates degree while they earn their high school diploma. This can be an excellent, cost effective way for children to get a jump start on a college degree and it's all due to the technology that distance learning has brought to the table." - Marci Powell, Chair Emerita and Past President of the United States Distance Learning Association*

### College Distance Learning

A large majority of colleges and universities offer online courses, which provide a variety of benefits to undergraduate and graduate students alike. For those who cannot afford room and board at a college or university, an online academic arrangement may be the most affordable option.

For graduate students, distance learning allows the continuation of education from the comfort of their home to top universities throughout the U.S. Professionals rarely have time in their busy schedules to attend a brick-and-mortar college. Distance learning allows them to get a graduate degree on their schedule, without compromising their job or family.

DistanceLearningPortal.com recently named the following U.S. universities that offer top distance education:

- Boston University
- University of Florida
- Arizona State University
- University of Wisconsin-Madison
- Pennsylvania State University
- Stanford University
- University of California, Berkeley
- Northeastern University
- Rochester Institute of Technology
- Washington State University

*"When it comes to colleges and universities, bricks are turning into clicks. Universities look more at investing in online learning environments than they do at building new academic buildings." - Marci Powell, Chair Emerita and Past President of the United States Distance Learning Association*

## DIGITAL LEARNING CAN LEAD TO VIRTUAL CAREERS

Not only has the evolution of technology enabled distance learning, it has also drastically increased the number of virtual job opportunities in the United States. Students who have experience with distance learning are ideal candidates for these virtual positions, as they are schooled in successfully communicating and exchanging ideas via technology. These virtual positions provide the opportunity to have a competitive professional career without the requirement to move to a larger city.

As long as they have access to high-speed broadband and phone service, many employers are allowing employees to work from home. As a matter of fact, the GlobalWorkPlaceAnalytics.com report states that regular work-at-home, among the non-self-employed population, has grown by 103% since 2005 and 6.5% in 2014. This represents the largest year over year increase since before the recession.



A September 2015 update from GlobalWorkplaceAnalytics.com on the latest U.S. telecommuting statistics, cited the following:

- 3.7 million employees (2.5% of the workforce) now work from home at least half the time.

The employee population as a whole grew by 1.8% from 2013 to 2014, while the population of employees who telecommuted grew 6.5%.

- 50% of the US workforce holds a job that is compatible with at least partial telework and approximately 20-25% of the workforce teleworks at some frequency.

- 80% to 90% of the US workforce says they would like to telework at least part time. Two to three days a week seems to be the sweet spot that allows for a balance of concentrative work (at home) and collaborative work (at the office).

## IMPLEMENTING EFFECTIVE DISTANCE LEARNING PROGRAMS

### A Unified Voice

Successful distance learning programs require 100% commitment from school boards, administrators and teachers. Each level of the school district needs to get behind distance learning as a local education initiative.

Many times this change is met with resistance and thoughts such as, "Why change it now? It's always worked for us this way." This can be especially true in rural communities where exposure to new technologies is not as frequent as seen in neighboring urban or suburban communities. It's paramount that rural community leaders and educators understand the benefits of distance learning. As one could imagine, it's generally not enough to simply explain the benefits. The key to full adaptation is to show those resistant to change how distance learning could specifically impact their school system and their broader community. This can be achieved through application awareness.

By allowing administrators and educators the opportunity to get valuable hands-on experience with distance learning tools, you help them make an informed decision. As distance learning is accepted and implemented, the focus will begin to shift to properly and cohesively training educators on distance learning tools, empowering them with the confidence necessary to utilize this new resource to its full potential.

### Teachers vs. Technology

Educators are our most valuable resource and distance learning should be seen as a tool to better prepare them to perform their duties - not replace them. Some teachers see distance learning as a threat to their career. They are concerned the onset of new technology will reduce the need for traditional classroom instruction. However, what these teachers don't realize is distance learning is a complementary tool to traditional teaching methods.

It's a common practice for people to initially question new technology. It is in our nature to be hesitant to adapt if it means changing everyday practices. The Apple iPad is a great recent example of this. When the iPad was first released, education professionals were not convinced bringing them into the classroom would be beneficial, but based on multiple research studies, iPads have been found to improve student productivity and retention.

- A research study, conducted in Auburn, Maine showed that kindergarten students using iPads scored much higher on literacy tests than students that didn't use the device.

- According to Pearson Foundation's survey, more than six in ten college students and high school seniors agree that tablets help students to study more efficiently (66% and 64%) and help students to perform better in classes (64% and 63%).

*"A teacher is a compass that activates the magnets of curiosity, knowledge, and wisdom in the pupils" – Ever Garrison*

- A study from KIPP Academy in Houston, TX showed the percentage of students who rated either proficient or advanced (the 'passing' rate) was 49% percent higher in the 'flipped classrooms' using the iPads than in the traditional classrooms with no iPads.

- In a study done by Houghton Mifflin Harcourt in California showed that students using iPads saw their math test scores increase 20% in one year compared to students using traditional textbooks.

If iPads can benefit students by supplementing traditional classroom learning, imagine what distance learning could do for them.

Furthermore, educators familiar with distance learning have been able to enhance their career by teaching online courses at the high school and collegiate levels.

### Finding the Right Network

A reliable fiber optic network provide the ultra-fast broadband speeds needed for Internet-based multimedia courses and seamless videoconferencing. When selecting a network keep the below questions in mind:

- Is the network being used solely for education, or are there other industries connected?

- What geographical area does the network cover?

- How reliable is the network you're looking into? Have they had any issues with downtime in the recent past?

- What technologies are in place? Is the network future-proof? Will it allow your school to adapt its offerings as technology evolves?

In North Georgia, NGN has you covered. We've created a private network exclusively for education, the NGN Education Exchange; which boasts an emphasis on education as a whole and distance learning. NGN connects with many area businesses beyond learning facilities; opening doors for community partnerships previously closed to schools and libraries. What about reliability? We're glad you asked! NGN is proud to provide an extremely reliable service of 99.999% up time seen in 2015. Our sights are set on the future and we are committed to deliver all the latest technology to help take your learning plans to the next level.

*"Many times community colleges will use a teacher in the classroom to teach an online course, broadcasting the lesson to its student from a remote location. Being well versed in distance education improves a teacher's personal stock value."*

*– Marci Powell, Chair Emerita and Past President of the United States Distance Learning Association*

*"Beyond the use of our students, teachers have also had the opportunity to interact with teachers of other schools, even in other nations, we've teleconferenced with a school in Honduras and we plan to do some professional learning with them."*

*– Marybeth Thomas, Principal, Hillard A. Wilbanks Middle School, Habersham County, Georgia*

## THE EDUCATION EXCHANGE'S ROLE IN GEORGIA DISTANCE LEARNING INITIATIVES

### History of the Education Exchange

In March 2013, eight local school systems, the University of North Georgia and the Georgia Department of Education met with NGN to talk about developing a regional education network for shared learning in North Georgia. School superintendents and information technology directors from Forsyth, Lumpkin, White, Habersham, Union and Dawson counties along with Towns and Franklin schools systems met and agreed to share and develop an "educational cloud." This shared information access could provide schools with resources such as electronic textbooks, Internet security, access to college courses and video conferencing.

Later that year, a group of 13 educators met with NGN to discuss the creation of the Education Exchange, a program that would leverage the powerful NGN network to improve education in North Georgia. The group met at the Blue Ridge Mountain EMC in December 2013 to elect an Education Exchange Oversight Committee to support and guide the program's efforts.

In September 2014, more than 100 educators and supporters from all across North Georgia came together to witness the birth of a partnership that would expand educational opportunities across the state. Together NGN, ETC Communications and Parker Fibernet signed an agreement to launch the Education Exchange: Georgia's only 10 Gigabit private cloud for exclusive use by school systems.

The Exchange utilizes a 3,600-mile fiber optic network connecting every county from the western to the eastern state borders of North Georgia. This interconnected network can potentially connect 330 public and private schools, allowing unprecedented collaboration, shared resources and expanded STEM curriculum. Schools participating in the Education Exchange govern their content, activity and access to this cloud; empowering them to create an education experience without boundaries.

The NGN Connect team leads the development of the Exchange over the fiber optic network, including the facilitation of the network connections and participation in the Education Exchange. The team works closely with the region's educational institutions to grow their dedicated network with additional schools and colleges to share educational assets.

The team also spearheads the establishment of strategic resource partnerships that provide the valuable resources for administrators, teachers and school IT professionals to fully take advantage of the network's technology. These resources open the door to significant cost savings through shared software, media licensing and more, while allowing educators to transform learning using video collaboration to expand the STEM curriculum.



## The Education Exchange in Action

During the 2015 – 2016 school year, Georgia educators involved in the Education Exchange have enhanced their students' education with a broad range of distance learning opportunities.

Students took a virtual field trip to the National World War II Museum in Louisiana after completing a study on The Diary of Anne Frank.

Eighth grade Georgia History classes participated in a videoconference with Irene Munn, General Counsel and Director of Policy for Georgia Lt. Governor Casey Cagle. They learned about the Office of the Lt. Governor and Georgia State government first hand to complement their history class lessons.

Students connected with a classroom in Honduras to learn about their culture and give the Honduras students an opportunity to practice their English.

Sixth, seventh and eighth grade language arts students wrote scary stories while interacting with classrooms throughout the United States. The students wrote a portion of the story, the other students would write a portion and then they would have a debate back and forth to determine how the story should end.

Preschoolers experienced a live interactive performance from Atlanta's Center for Puppetry Arts followed by a live Q&A with the puppeteer. Located approximately 80 miles from the school, an in-person visit to The Center for Puppetry Arts would have required tiring travel for the young students.

AFJROTC students participated in a business and ethics live simulcast with the University of North Georgia.

"The potential for education using these resources is limitless." – MSgt Robert Wallace, Jr. Habersham Central High School, Habersham County, Georgia



## THE FUTURE OF DISTANCE LEARNING AND THE EDUCATION EXCHANGE IN GEORGIA

In the immediate future, the focus of distance learning initiatives will be fostering awareness and educating administrators and teachers on the benefits of and the equipment for a successful program. The Education Exchange will continue to strive for 100% buy in to create successful distance learning programs across Georgia. If all of the equipment is in place, but the teachers or administrators do not make a point of using it then the educational benefits fly out the window as the cobwebs gather on the unused technology.

This is Georgia's opportunity to harness new technology to better serve our youth. Through distance learning, together we can bring the world to our classrooms and cultivate culture and unique experiences like never before!

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