

Technology Empowerment for Students,
Teachers and Low-Income Families

Best Practices in Innovation and
Sustainability

Synopsis

Karen Archer Perry

Founder and Principal Consultant
Karacomm LLC

Putting the Community in Community Wireless
www.Karacomm.com

March 1, 2007



Technology Empowerment for Students, Teachers and Low-Income Families

Best Practices in Innovation and Sustainability

Best Practices in Technology Empowerment

Schools and communities across the country are rising to the challenge of putting information technology in the hands of students, teachers and families and providing training and applications that empower users to leverage technology to further lifelong learning and achievement.

With an eye towards scalable and sustainable program design, this white paper summarizes the work of six communities that have used computers to empower students, families and teachers. These are all communities with comprehensive programs that include computing, access, training, support and application and they all represent best practices in technology empowerment for students, teachers and low-income families.

- **Technology Goes Home** – Managed by the Boston Digital Bridge Foundation, this program, which operates both at community centers and in more than fifty Boston Public Schools, provides extensive training on PC basics and applications. Students attend with a parent or guardian and training groups aim to increase collaboration among all participants. On graduation, families can purchase a PC bundle with a zero-interest loan.
- **K12nects II** – With a focus on the low-income schools in the county and sponsored by the Fairfax County Public Schools, K12nects II offers families a preferred PC bundle with a zero-interest loan and encourages families to increase their financial literacy. A county-wide map makes it easy for families to sign up for computer training. One motivator for participation is getting home access to the schools' extensive web-based educational resource, a system-wide application that includes homework, collaboration groups and enrichment resources.
- **FamilyNet** – The School District of Philadelphia also offers parents and students access to grades, attendance and enrichment resources through a web-based application. They have complemented this program with a resource directory for community services, parent training, technical support and discounted PC purchase programs offering both new and refurbished PCs.
- **Computers for Youth** – Branching out nationally from its New York City home base, Computers for Youth works with schools to offer every student in the sixth grade a home learning system – a PC with a suite of software designed to support learning and school engagement. PCs are distributed at a half-day training session that students attend with parents or guardians.
- **One-to-One Laptop Program** - Gateway Regional School District's One-to-One Program allows parents to lease a laptop for students in grades seven through twelve. Combining this program with a strong technology base in the school achieves an effective one-to-one with a financially sustainable model. One-to-One computing is just one feature of the Gateway program. Technology integration starts early with laptop carts and take-home PC loans at the younger grades. Its strong focus on professional development has resulted in offering educators a Masters program in assessment in partnership with a local college.
- **Technology Placement Program** – Supporting all 250,000 teachers in New York State, the Technology Placement Program provides teachers with the opportunity to purchase a preferred PC bundle designed specifically to support technology integration and twenty-first century skills development. Extensive training options are available through 133 Teacher Centers located across the State.

Critical Elements of a Model Program

While each program has a different form and focus, successful programs address all or most of the following components:

- Communication and awareness campaign
- Value-enhanced PC bundles
- Affordable Internet access
- Applications that enrich learning
- Enhanced communication channels between school and home
- Financing options
- Training and Support
- Vouchers or Incentives
- Integrated Management

Technology Empowerment for Students, Teachers and Low-Income Families

Best Practices in Innovation and Sustainability

Benefits of Scalable Technology Programs

Boston Digital Bridge Foundation started its program in 1999 and is now supporting 1,000 people a year. Computers for Youth launched their services in 1999 and is currently serving 4,600 people a year. Other programs are quite new, with the Technology Placement Program launched in fall of 2006 and K12nects II launched earlier that same year. Each program offers some form of inspiration and guidance for those looking to support teachers, students and families in using Information and Communication Technology (ICT) to empower students of all ages to be life-long learners and innovators for the twenty-first century.

As a whole, these programs:

- Support teachers in developing and teaching twenty-first century skills by integrating technology tools into curriculum
- Extend the learning environment for students and bridge the digital divide for low-income students and families
- Increase communication between teachers and parents and increase collaboration across the community
- Enable students to become “digital leaders” for their families
- Support financial literacy as well as digital literacy improvements
- Offer sustainable and scalable models for nonprofits and schools

Why Now Is the Time to for Technology Empowerment

In the first national study on the results of home computing on educational outcomes, Beltran, Das and Fairlie from the University of California Santa Cruz found that “teenagers who have access to a home computer are six to eight percentage points more likely to graduate from high school than teenagers without home computers.”¹

“The Report of the New Commission on the skills of the American Workforce, Tough Choices or Tough Times,” notes that “While our relative position in the world’s education league tables has continued its long slow decline, the structure of the global economy

has continued to evolve. Every day, more and more of the work that people do ends up in a digitized form. From X-rays used for medical diagnostic purposes, to songs, movies, architectural drawings, technical papers, and novels, that work is saved on a hard disk and transmitted instantly over the Internet to someone near or far who makes use of it in an endless variety of ways. Because this is so, employers everywhere have access to a worldwide workforce composed of people who do not have to move to participate in work teams that are truly global.”² Without an aggressive focus on developing twenty-first century skills, “an entire generation of kids will fail to make the grade in the global economy because they cannot think their way through abstract problems, work in teams, distinguish good information from bad or speak a language other than English.”³

In the following pages, you’ll find overviews of six innovative programs designed to increase digital literacy and develop twenty-first century skills. Each program is truly a Best Practice in innovation and sustainability and each offers structure for increasing the appropriate use of information technology for students of all ages.

¹ D.O. Beltran, K.K. Das, R.W. Fairlie, “Are Computers Good for Children? The Effects of Home Computers on Educational Outcomes”, April 2006.

² The Report of the New Commission on the skills of the American Workforce, Tough Choices or Tough Times, December 14, 2006, <http://www.skillscommission.org/index.htm>

³ C. Wallis, S. Steptoe, “How to Bring Our Schools Out of the 20th Century,” Time Magazine, December 10, 2006.