Technology in the Classroom

AmeriCorps/Project FIRST

NATIONAL PARTNERS

AMERICORPS Established in 1994, AmeriCorps is the newest chapter in the United States' long tradition of national service. Run by the federally funded Corporation for National Service, AmeriCorps allows people of all ages and backgrounds to earn credit for education in exchange for a year of community service. AmeriCorps Members meet the needs of schools and communities with services including housing renovation, child immunization and neighborhood policing. AmeriCorps' three major goals include providing needed community service, building self-perpetuating community, and promoting individual Member development. More than 25,000 AmeriCorps Members currently serve in over 430 programs across the country. National Direct programs (like Project FIRST) are co-sponsored by national, state, and local nonprofit organizations. In order to meet the specific needs of the communities they serve, local AmeriCorps sponsors are responsible for recruiting and training AmeriCorps Members themselves.

IBM's commitment to improve America's schools lies at the heart of our corporate values. We know that no company can succeed if it is a part of an unsuccessful community, and no community can be successful if it lacks an educated population.

As a leading technology and solutions company, IBM demonstrates daily how information technology can help businesses and major institutions operate more effectively. In a similar way, we believe that our technology, experience, and talent can bring substantial and structural improvements to many aspects of elementary and secondary education.

In addition to our support of Project FIRST, IBM is bringing technology to schools through a number of philanthropic initiatives. The *Reinventing Education* grant program forms the centerpiece of our efforts in K–12 education. Through *Reinventing Education*, IBM is contributing $35 million to 15 school districts and 6 states to help spur and support fundamental, systemic change in our nation's public schools. Through each of our partnerships, we are developing cutting-edge applications designed to help solve some of education's toughest problems, raise student achievement and enhance academic productivity.

PUBLIC EDUCATION NETWORK The mission of the Public Education Network (PEN) is to engage communities in building systems of public schools that result in high achievement for every child. PEN accomplishes this mission through its member local education funds (LEFs) and partnerships with other national and local organizations. The work of LEFs has demonstrated that independent, community-based organizations represent the best mechanism for creating broad citizen support for public education, and for achieving fundamental reforms in the nation's public schools.

PEN evolved from the Public Education Fund, a Ford Foundation initiative established in 1983 to improve public education for low-income and minority children, primarily in urban centers. In 1997, the Network included 45 member local education funds in 26 states and the District of Columbia. The work of these community-based organizations affects more than 250 school districts around the country, serving 5 million children — one in every ten public school students in the United States. Local education funds serve communities in which a significant percentage of students are eligible for free and reduced lunch.

LESSONS FROM THE FIELD is a publications series that focuses on local education funds' practical efforts to reform public education in their communities through programs that target issues such as teacher professional development, technology, school finance, school-to-work, and family involvement. Previous issues of *Lessons* describe school-community collaboration and school governance programs.

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Introduction

Access to computers is critical to navigating today's information age. The ability to operate a computer is an essential workplace skill: computers are no longer just desktop word processing tools but also are powerful vehicles for gathering information and analyzing data. Computers have become so integral to our lives that when the office network server crashes, the work stops; the failure of an Internet-access provider makes the nightly news; and moral questions about the regulation of computer material and correspondence wrack our legal and legislative systems.

Given this context, it is clear that individuals who understand and can manipulate technology have a distinct advantage over those who do not. Teaching students to use computers is essential to preparing them for the working world. Schools are often the only place where many poor and minority students have access to computers, software, and the Internet: access to technology at school is particularly indispensable to students whose families cannot afford access at home. The disparity of experience between students who have a computer at home and those who do not is significant, and this disparity goes beyond a simple piece of equipment. Students without access at home are less likely to have the sophisticated computer skills needed for college and the job market. They will not have had the same exposure to the wealth of resources found on the Internet.

Recognizing a critical education reform issue, the Public Education Network applied to the Corporation for National Service (AmeriCorps) in 1994 for a grant to improve educational access to and use of technology. The resulting initiative is Fostering Instructional Reform Through Service and Technology—Project FIRST. Project FIRST works to integrate technology into public school curricula and to increase community involvement in the process by using the unique resources and capabilities of local education funds (LEFs) and their business partners.

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Getting Things Done

In the first year of the grant, Project FIRST encompassed three local education funds (Atlanta, GA; Charlotte, NC; New York, NY). By 1997, nine local education funds had participated:

APPLE Corps, Inc.	Atlanta, GA
Boston Plan for Excellence in the Public Schools	Boston, MA
Charlotte-Mecklenburg Education Foundation	Charlotte, NC
New Visions for Public Schools	New York, NY
Educational Institute	Oakland, CA
Philadelphia Education Fund	Philadelphia, PA
San Francisco Education Fund	San Francisco, CA
Educational Enrichment Foundation	Tucson, AZ
Alliance for Education	Worcester, MA

Each site embraced Project FIRST's three major goals: (1) Enhancing technology use in the classroom; (2) Establishing a committed corps of citizens dedicated to enhancing technological access for students; and (3) Fostering necessary links between schools and their communities. To meet these goals, LEFs constructed alliances with other community-based organizations, local businesses, school systems, and individuals. Each site created its own strategy for implementing Project FIRST's objectives. However, the general process can be summarized in three basic steps: entering the school, integrating the technology, and managing the volunteers. This paper focuses on the experiences of the original project sites (see back page for a year-by-year list).

Project FIRST'S Goals

1. **Enhancing technology use in the classroom**;

2. **Establishing a committed corps of citizens dedicated to enhancing technological access for students; and**

3. **Fostering necessary links between schools and communities.**

Step 1 — ENTERING THE SCHOOL

The success of Project FIRST in a community relied heavily on the LEF's ability to navigate its school landscape. Promoters recognized that the precise manner in which they introduced Project FIRST would effect the program's ultimate outcome. While sites differed in their specific approach, each determined that securing a strong commitment from school leadership and personnel was a fundamental first step. "Effective technology planning cannot be done without the involvement and commitment of the school leadership and a representative population of the school community," stated Kavita Singh, Project FIRST program director at New York's New Visions for Public Schools.

Going through an open door

Atlanta's APPLE Corps, Inc. approached the issue of access to the schools by joining Project FIRST with Library Power, an already successful LEF-sponsored initiative. "Pairing these

two initiatives allowed us to maximize the capacity of both Project FIRST and Library Power," said APPLE Corps senior staff member Nancy Hamilton. "We were able to attach the new and unique resources of Project FIRST to an already-established structure that had legitimacy and credibility within the school system. Library Power schools also became Project FIRST schools, and just as Library Power provided a structure for Project FIRST, so Project FIRST provided additional resources to help Library Power actualize its goals."
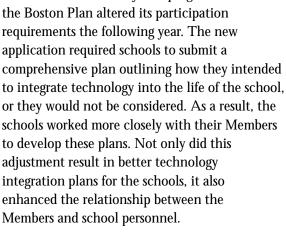
Funded by the DeWitt Wallace-Reader's Digest Fund, the **National Library Power Program** strengthens elementary and middle school libraries through physical renovation, acquisition of materials, and professional development for school library media specialists. The Public Education Network collaborates with the American Library Association in providing technical assistance for this large-scale program, aiming to make elementary and middle school libraries "intellectual centers" of the school. The project currently operates in over 700 schools in 26 school districts.

Building a foundation of trust

Even though their computer equipment was not scheduled to arrive until half-way through the school year, the Educational Enrichment Foundation in Tucson, AZ, felt it was important to begin creating a foundation for integrating Project FIRST into the schools. Tuscon Members focused their initial efforts on developing relationships with teachers, administrators, librarians, and students. When the equipment arrived, Members were able to build on the trust fostered by these relationships. Integrating technology into the schools became an extension of the work they had already begun.

Creating the need for collaboration

Despite its long history of working in the community, introducing Project FIRST was a genuine challenge for the Boston Plan for Excellence in the Public Schools. In response to the Boston Plan's inital request for "technology plans," participating schools only submitted basic needs-assessment surveys. Hoping for better results, the Boston Plan altered its participation requirements the following year. The new application required schools to submit a comprehensive plan outlining how they intended to integrate technology into the life of the school, or they would not be considered. As a result, the schools worked more closely with their Members to develop these plans. Not only did this adjustment result in better technology integration plans for the schools, it also enhanced the relationship between the Members and school personnel.

Step 2 — INTEGRATING TECHNOLOGY

Integrating technology into the life of a school is a much more involved process than simply providing hardware and software. It requires providing access to information technology. It requires training teachers and students how to use these tools. It necessitates merging technology into the curriculum and helping teachers to understand the creative potential of information technology across all academic subject areas. It necessitates that schools see Members as dynamic resources in curriculum development and in designing innovative strategies for using instructional technology.

Training — It takes a lot of it

New York City's Project FIRST program has worked hard to increase schools' capacities to integrate technology into the curriculum and to help schools use Members as resources. Part of New York's strategy has been to develop curriculum-based projects using technology with small groups of librarians, teachers and students. Members developed these curriculum-based projects in several schools, using technology to instruct numerous students, and enabling teachers to provide students with more time and access to classroom computers. It also set a critical precedent for the integration of technology into the life and learning processes of these schools.

> **Teaching teachers both to use technology and to turn to Project FIRST Members at a point of instructional need required a lot of up-front, as well as continual, training.**

Along the same lines, Atlanta's APPLE Corps found that it had to conduct a substantial amount of training with Members and school personnel in order to enable these groups to see the potential of integrating technology and to think about how they could work together. "The critical piece was teaching teachers both to use technology and to turn to Project FIRST Members at a point of instructional need, such as developing curriculum-based, collaboratively planned units of study," said Nancy Hamilton. "This required a lot of up-front, as well as continual, training."

Knowing your audience

For Tucson's Educational Enrichment Foundation, integrating technology into the curriculum meant tailoring programs and activities to the needs of at-risk students. Project FIRST Members had to be particularly creative in developing programs that would capture the attention of the students. The Educational Enrichment Foundation and Project FIRST Members soon discovered that these students (who had a tendency to be bored by traditional schooling) found computers fun and entertaining. Tucson Members worked with teachers to develop computer programs that provided fun ways of learning essential skills, such as math, typing and writing. "Working with technology in the classroom allowed us to engage kids who were bored with school," said the project director.

Likewise, the Charlotte-Mecklenburg Education Foundation found fun and interesting ways to integrate technology into the curriculum. To teach basic skills and to capture students' interest in computers, Members created a baseball-like identification card for each student. Students learned to

scan pictures of themselves into a computer, entered "vital statistics" about themselves, and printed out baseball card-sized identification cards that they carried around and exchanged with one another. Members also created numerous informational treasure hunts on the Internet to teach both students and teachers alike how to navigate the World Wide Web.

San Francisco's Project FIRST Members worked with library media coordinators, through the San Francisco Education Fund's Library Media Center 2000 Project. Together, they identified technology teams within the schools and worked with these teams to assess schools' technology needs and design a plan of action. These teams helped generate a sense of "program ownership" within the school and helped to keep teachers and administrators engaged in the process. Members also helped the teams to develop numerous professional development opportunities for teachers.

> **Working with technology in the classroom allowed us to engage kids who were bored with school.**

Laetitia Johnson

Age: 8	Height: 4'4"
Favorite color: Blue	Favorite food: Pizza
Favorite thing to do: Read	
Something I'm proud I won second prize in school spelling bee	
When I grow up, I wan Doctor	

Julio Santo Domingo

Age: 7	Height: 4'3"
Favorite color: Red	Favorite food Ring Din
Favorite thing to do: Play Soccer	
Something I'm proud I help my older brothe his paper route	
When I grow up, I wa Astronaut	

Kristi Lee

Age: 8	
Favorite color: Purple	Height: 4'5"
	Favorite food: Ice cream
Favorite thing to do: Play sports	
Something I'm proud of: I scored three goals in last week's soccer game	
When I grow up, I want to be: a player for the WNBA	

Step 3 — MANAGING THE VOLUNTEERS

Project FIRST also requires LEFs to focus on building the capacity of communities to support their schools. LEFs achieved this goal through organizing volunteers—namely, placing AmeriCorps Members in schools. Recruitment and retention of Members became another challenge for LEFs, one that required creative management skills. To keep Members interested and invested in the challenging work, many LEFs developed leadership and mentor programs for them. Some sites also experimented with placing teams of Members in a school.

The Charlotte-Mecklenburg Education Foundation attributes its low Member turnover rate to its well-rounded program. Members spend four days per week in the schools and one day in "team meetings." Team meetings incorporate professional development, administrative matters, team-building and a community volunteer activity. The LEF also coordinates a mentor program to which local businesses "lend" staff members as mentors. Each mentor commits to hosting one professional development activity and one social event for all Members in addition to the one-on-one time that they spend with their assigned Member. These events provide important opportunities for networking with prominent Charlotte businesses. Through this program, the Charlotte-Mecklenburg Education Foundation has found a way to integrate the business community into its "committed corps of dedicated citizens."

Several other sites have faced challenges with Member recruitment and retention. New York has addressed these challenges by focusing on recruiting Members with an expressed interest in education, education reform and technology (in addition to an underlying interest in serving the community); talking openly about issues of compensation with candidates; and increasing the degree of collaboration and teamwork for Members. Concerns regarding compensation are highlighted in initial interviews in an effort to screen out applicants who may not find themselves in a position to complete their terms of service.

All sites agree that there are common skills that are critical for doing this work: leadership, interpersonal skills, technological skills, understanding of schools (and school culture), and, most of all, commitment to the goals. Many sites report that it is extremely difficult to find these attributes embodied in one person. Several sites have attempted to address this problem by finding a mixture of volunteers with complementary skills, then pairing or rotating Members with complementary skills through the schools. This has provided schools with access to a broader range of skills, and at the same time has helped to minimize the sense of isolation among Members.

Conclusion

Technology is gradually being integrated into school districts across the nation. According to a survey by the National Center for Education Statistics, almost 80% of public schools nationwide had access to the Internet in 1997 — more than double the number in 1994. The percentage of the nation's instructional rooms (classrooms, computer laboratories, and library media centers) with connections to the World Wide Web increased at an even faster rate— from 3 percent in 1994 to 27 percent in 1997.

Project FIRST and other similar programs are helping public schools across the country to become technologically sophisticated educational institutions. Project FIRST's considerable progress has come about, in part, because it addresses the need to modernize the instructional norms of many classroom settings. Project FIRST is effectively promoting information technology as a means of enhancing teaching and learning — for both teachers and students.

For many students from disadvantaged backgrounds, including most racial minorities, these advances will not be enough to bridge the computer experience gap. According to a study published in the April 1998 issue of *Science Magazine*, white students in high school and college are still much more likely than black students to have computers in their homes and to use the World Wide Web. While 73 percent of white students had a home computer, only 33 percent of black students did, even when accounting for differences in income, according to another report compiled by Vanderbilt University researchers. Elevating the level of technology use and access in schools located in disadvantaged communities to that in other schools throughout the nation is a challenge of enormous magnitude. There is still much work to be done to ensure optimum learning environments and outcomes for all students. Project FIRST's efforts are a step along the way.

Public Education Network
AmeriCorps/Project FIRST

1994–1998
Aggregate Numeric Profile

Full-Time Members	203
Part-Time Members	20
Member Hours of Service	256,435
Participating Schools	284
Non-AmeriCorps Volunteers	1,636
Non-AmeriCorps Volunteer Hours	13,089
Staff Development Hours	26,856

1994-95	1995-96	1996-97	1997-98
Atlanta, GA	Atlanta, GA	Atlanta, GA	Atlanta, GA
Charlotte, NC	Charlotte, NC	Boston, MA	Boston, MA
New York, NY	New York, NY	Charlotte, NC	Charlotte, NC
OPERATING SITES	Philadelphia, PA	New York, NY	New York, NY
	San Francisco, CA	Philadelphia, PA	Oakland, CA
	Tucson, AZ	Tucson, AZ	Worcester, MA

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