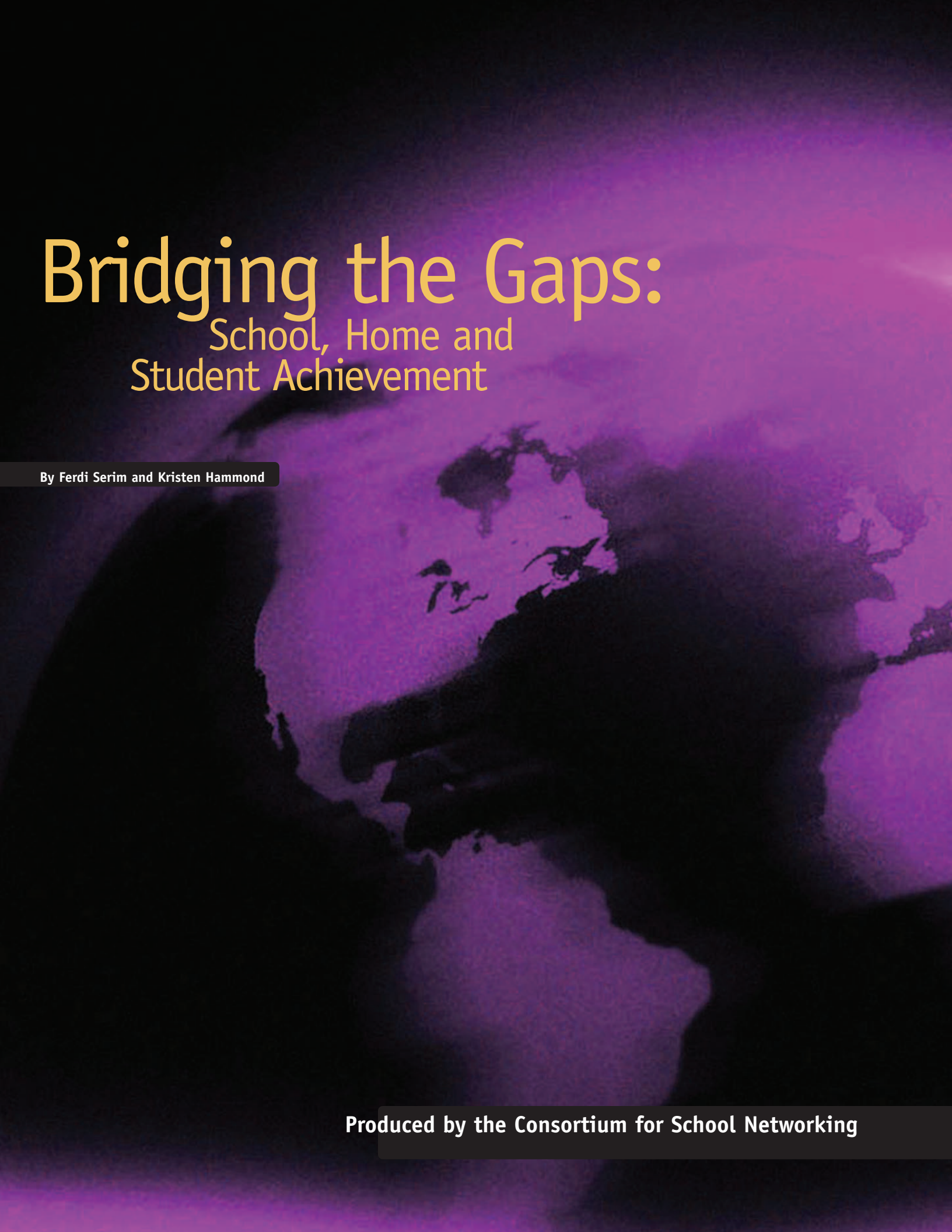

Bridging the Gaps:
School, Home and Student Achievement

By Ferdi Serim and Kristen Hammond

Produced by the Consortium for School Networking

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School, Home and Student Achievement

In the past decade, three profound developments have altered the learning landscape in significant ways. We have introduced our schools and classrooms to the most powerful communications networks ever devised in human history. We have researched the role of parental involvement in student achievement. And we have raised the stakes for school accountability. While each of these developments has the potential to improve outcomes for the others, this potential has yet to be tapped in a systematic way. In the pages that follow we will survey the research and suggest strategies for district technology leaders to consider in harnessing human as well as technical resources to improve student achievement.

In order to craft effective strategies, we must understand the interplay between the following: the role of parents in student learning; the role of schools in promoting effective parent involvement; and the role of technology in strengthening school/home relationships.

PARENTS AND STUDENT LEARNING

"Parent involvement in their child's education is the single most important factor in school success and achievement. Nothing that the school can do has the power of active parenting to foster good attitudes, high achievement, and a strong commitment to education in children and young adolescents." This statement, from the middleschool.com Web site, reflects what many educators have discovered, from experience, to be true. In recent years, a number of studies have confirmed the importance of parental involvement.

In *Homework-Focused Parenting Practices That Positively Affect Student Achievement (1993)*, for example, Reginald Clark identified four variables that comprise what he called "parents' press for academic success." They were:

- Parent knowledge about homework assignments;
- Parent perception of children's homework;
- Child knowledge of how to use a dictionary;
- Parent expectations for children's education.

Together, these factors explained 47 percent of the variation between low and high-achieving students in the study.

In 2000, Clark again reported on the impact of out-of-school activities and family support in his study, *Ten Hypotheses about What Predicts Student Achievement for African-American Students and All Other Students: What the Research Shows*. He found that, in addition to high-quality learning activities at school, the main contributors to student success—as measured by standardized test scores—were:

- Spending 8-15 hours a week fully engaged in out-of-school learning activities;

SIX TYPES OF INVOLVEMENT

Here are the main types of family involvement as categorized by Dr. Joyce Epstein of Johns Hopkins University.

Type 1: *Parenting*—Assisting families with parent skills and setting home conditions to support children as students.

Type 2: *Communicating*—Conducting effective communications from school-to-home and from home-to-school about school programs and student progress.

Type 3: *Volunteering*—Organizing volunteers and audiences to support the school and students.

Type 4: *Learning at Home*—Involving families with their children on homework and other curriculum-related activities and decisions.

Type 5: *Decision Making*—Including families as participants in school decisions, and developing parent leaders and representatives.

Type 6: *Collaborating with the Community*—Coordinating resources and services from the community for families, students, and the school, and providing services to the community.

- Being guided in out-of-school time by adults with high standards for achievement;
- Knowing how to study, plan, and complete projects and having access to libraries and reference materials.

A New Wave of Evidence: The Impact of School, Family, and Community Connections on Student Achievement, published by the Southwest Educational Development Lab at the end of 2002, examined more than 50 research studies and concluded: "Taken as a whole, these studies found a positive and convincing relationship between family involvement and benefits for students, including improved academic achievement. This relationship holds across families of all economic, racial/ethnic, and educational backgrounds and for students at all ages. Although there is less research on the effects of community involvement, it also suggests benefits for schools, families, and students, including improved achievement and behavior."

The benefits for students include:

- Higher grade point averages and scores on standardized tests or rating scales;
- Enrollment in more challenging academic programs;
- More classes passed and credits earned;
- Better attendance;
- Improved behavior at home and at school;
- Better social skills and adaptation to school.

However, the authors caution that, "It takes more than engaged parents to produce high student achievement." Other factors cited as important to academic achievement include high standards and expectations on the part of the school, effective educational leadership, and focused professional development for teachers. Clearly, parental involvement is not a magic bullet, and must be seen in context as part of a larger strategy for learning, in much the same way that technology must be understood as one of many tools to help with student achievement.

THE ROLE OF SCHOOLS IN PROMOTING PARENT INVOLVEMENT

Just as parents want to help their children succeed but frequently don't know how, schools are often at a loss about how to provide meaningful opportunities for parent engagement. To further complicate matters, educators today face conflicting pressures related to ways in which to involve parents and community members. Site-based management, which involves parents extensively in the decision-making process at their own children's school, is not as wildly popular as it was a few years ago. While the site-based approach continues to be embraced in districts that have experienced positive results in terms of community support and student progress, the pendulum has swung the other way in many communities, as centralized decision-making promises to allow administrators to control costs and maintain the sorts of district-wide accountability mandated by No Child Left Behind (NCLB).

At the same time, however, the NCLB legislation focuses heavily on family engagement, requiring schools receiving Title I funding to take action to ensure that it takes place. Specifically, they must:

- Develop a written parent involvement policy created with help from parents and parental approval;
- Notify parents and the community about this policy "in an understandable and uniform format;"
- Use at least one percent of the school's Title I funds to develop a parent involvement program;
- Describe and explain the school's curriculum, standards, and assessments;
- Develop a parent-school compact, or agreement, about how families and the school will collaborate to ensure children's progress;
- Give parents detailed information on student progress at the school.

Clearly the importance of family involvement—and the need for schools to promote it—is as strong as ever, even if the nature of that involvement has shifted somewhat in recent years. A framework that allows education leaders to examine different types of possible involvement has been outlined in several articles by Joyce Epstein of Johns Hopkins University (see "Six Types of Parent Involvement"). In follow-up studies, Epstein and other authors have shown that schools that encourage all or most of the six different types of parent involvement stand a better chance of success.

In a 2001 study of standards-based reform practices and their impact on student achievement in 71 Title I elementary schools, researchers from Westat and Policy Studies Associates used an advanced statistical method to analyze the relationship between student test scores and a number of variables. They found that reaching out to low achievers' parents had a significant impact on student progress. Schools considered to have high levels of outreach were those that reported frequent face-to-face meetings or telephone conversations with parents and the practice of sending home materials to help parents assist their children as they work. Student scores at such schools grew at a rate 40 percent higher than in schools reporting low levels of parent outreach. In fact, of the eight factors studied, parent outreach was second in importance, with only professional development reported as having a greater impact on student progress.

The authors of *A New Wave of Evidence* conclude that, "When programs and initiatives focus on building respectful and trusting relationships . . . they are effective in creating and sustaining family and community connections with schools. What these studies told us was that *relationships matter*. How parents and community members are viewed and treated by school staff—as assets to the process of raising student achievement rather than liabilities—surfaced as a theme throughout the studies."

THE ROLE OF TECHNOLOGY IN BRIDGING THE GAP

Although technology can be a powerful tool in bridging the gap between parents and schools, surprisingly little research focuses on the subject. Of the more than 50 parent and community involvement studies profiled in *A New Wave of Evidence*, for example, not one focuses on the role of technology. Conversely, the authors of NCREL's *Policy Issues in Using Technology For Engaged Learning* point out that, "while several technology and technology-enhanced programs do involve parents and local community members, most do not. Consequently, many parents do not understand the educational shift toward technology use. They do not understand its significance in their children's schooling and on their children's later capability in the workplace. . . . The solution is to bring parents into partnerships with the school and the teachers, to explain programmatic goals and to draw on parental resources."

A close examination of the parent involvement case studies and success stories pointed to on the back page of this white paper does lead to several

that employ technology as a central tool—and that address the equity issues that often arise when considering the home use of technology. Here, using Epstein's framework, are some examples relating to each of the six types of parent involvement.

Type 1: Parenting Skills and Support. An example of type 1 activity involving technology took place at Glenwood Elementary School in Sun Valley, California, where parents with limited English proficiency were invited in to work with a computerized early reading program that their own children were using in school. According the National Network of Partnership Schools, which profiled this and other successful programs, the process helped many of the parents to develop their own English skills and "most significantly, increase[d] their understanding of the reading program their children use every day."

The Riverside Community Digital Initiative, one of 11 California-based community technology centers established in low-income areas by an organization known as Computers in Our Future (***www.ciof.org***), offers family-oriented workshops as part of its Parenting and Technology Series. Topics include "A Parents' Guide to the Information Superhighway," "Digital Keys to Academic Success," and "Financial Health in the Digital Era."

Another community-based organization that focuses on using technology to help families make the home-school connection is located in Buffalo, New York. Offering services and activities for parents and children in the Buffalo City School District, with priority given to families whose children receive Title I services, the Buffalo Parent Center's goal is "to help parents and students gain the skills and motivation they need to stay involved with their local schools." One of the ways this motivation is sparked is through high-tech facilities such as a hands-on science center, a robotics laboratory, two computer labs and an on-site television studio. The center, which is open days and evenings, issues free public transit tokens and encourages families to visit together; there is a nursery for infants.

Type 2: Communicating. A wide range of technologies play a role in helping schools communicate effectively with the families they serve. Word processing technology has clearly made it easier to create newsletters and other parent handouts, while a new generation of telephone messaging tools allow schools to set up 24-hour hotlines with recorded information about assignments and voice mail boxes for parents to leave message for their children's teachers.

Equity concerns have made it more difficult for schools to rely on Web or e-mail as a primary form of communication, although this may be changing as computers become more common in middle and lower income households. Furthermore, through the sorts of computer take-home programs described in the sidebars on pages 5 and 6 and the availability of Internet access in libraries, community centers, and an increasing number of work sites, computer-based solutions are reaching an ever-growing pool of families—allowing parents to communicate via e-mail with teachers and access homework assignments, grades, and exemplary student work at school Web sites.

The Action Team for Partnerships at the Harborside Middle School in Milford, Connecticut, believes in offering multiple ways for family members to participate in monthly parenting workshops. Realizing that many parents have trouble making it to the events, the school features links to articles related to the monthly topic at its Web site, sends home reading lists to parents, and has a lending library with video- and audio-taped versions of the workshops. Other schools, such as the Western Heights School District in Oklahoma City, are adding yet one more form of technology

to the mix by working closely with local cable companies to deliver content to families via cable television.

Type 3: Volunteering. Many schools could use help from parents with aspects of their technology program. However, one barrier that prevents some parents from volunteering is their lack of confidence that they have the necessary skills and knowledge. Programs that address this concern by teaching parents "digital literacy" skills and then allowing them to apply these new-found skills helping students in the classroom, can make a big difference to both parent and child.

Orchard Hills, another Milford, Connecticut, school found it hard to recruit parents for all the volunteer posts that needed filling—including time spent in the school's Publishing Center helping young students create books. The school succeeded in doubling the number of volunteers who came forward simply by reaching out more effectively. School administrators set up a "Volunteer Network" database and encouraged classroom teachers to gather information about parental interest at the start-of-the-year open house. Once names were collected, the groups

A SCHOOL FOR THE WHOLE FAMILY

Cane Run Elementary is a high-tech, family-friendly school in Louisville, Kentucky, an urban community located in one of the 25 largest school districts in the U.S. Approximately 80 percent of the school's 450 students are eligible for free or reduced-price lunch.

In addition to focusing on basics and a safe learning environment, Cane Run offers special programs for students interested in creative arts and global communications. The school provides a technology-rich environment with Internet-connected computers and a state-of-the-art communications studio used by fourth and fifth graders to produce public-service commercials and daily broadcasts for the school community.

Parents are an integral part of the day-to-day operation of Cane Run. Through the PTA and site-based decision-making team, parents work closely with school staff to set policy and administer programs. In addition, Cane Run reaches out to a broad range of families through its Family Resource Center, take-home computer program and Family Technology Nights.

Learning With and From One Another

As part of Kentucky's state-supported network of Family Resource and Youth Services Centers—designed as "stepping-stones to assist students and families in overcoming educational barriers"—Cane Run's resource center brings parents into the school to volunteer, advance their education, and receive health or social services. The center has flexible hours and frequently offers evening workshops with dinner and childcare provided. Certain workshops, including one on using the Internet, are designed to allow parents and children to learn together. Cane Run is also an Even Start family literacy site. Adults can earn their GED here while bringing their infants, toddlers, or preschool-age children to school with them.

The Family Resource Center also sponsors an affordable after-school program. Parent volunteers are important to this program, working side-by-side with paid staff members to tutor students, perform administrative tasks and supervise student use of the computers and other equipment. The center charges $10 a week for the program, but parents who are unable to pay can waive the fee by volunteering their time at the school, at the center, or on tasks completed at home to accommodate their work schedules.

A computer check-out program enables Cane Run families to sign out laptops overnight or on the weekends. The multigenerational interest in technology has been so great that the school now offers Family Technology Nights several times each year. Parents and children who attend can use the television studio, access the Internet, learn about desktop publishing, and more. Educators at Cane Run report that both the computer check-out program and the technology nights have been particularly successful in drawing older, upper-elementary grade students and their parents.

A Concerted Effort That Pays Off

To look at the large number of parents who attend PTA meetings, take part in technology nights or volunteer their time at Cane Run, one might assume that things have always been this way, but that is not the case. Before school leaders set their minds to improving parent involvement, the PTA was relatively small and events were often poorly attended, for all the usual reasons—parents' busy schedules, childcare and transportation problems, and a general lack of engagement. Flexible scheduling, real-world learning opportunities, resources for the whole family, and an appreciative and welcoming attitude on the part of staff members have all contributed to a thriving community in which parents feel like an essential part of their children's learning.

SENDING THE DISTRICT SERVER HOME

The Plano Independent School District in Texas is proud of the online resources students can access from the Internet-equipped computers they use at school. Which is why the district wants to help students, parents and other family members access those same sorts of resources from home. Since many of the most powerful tools—including multimedia instructional software and a collection of over 1,000 streaming media titles and image clips—require high-speed connections, Plano ISD is serious about helping families upgrade to faster service.

MyPISD.net is the district's own subscription service. It is being rolled out one neighborhood at a time, with district-wide availability expected by January, 2004. Subscribing families—who must have a student currently enrolled in the district—access their school's internal network where they can tap into encyclopedias, multimedia databases, word processing tools and other valuable school-based resources.

Although the district is relying on local DSL, cable modem and wireless broadband providers to deliver the high-speed connectivity, PISD leaders have negotiated special pricing packages with several of them for myPISD subscribers. Households that are already equipped with high-speed Internet can simply add on the $10 monthly myPISD subscription.

And what of the families that can not afford home computers with which to make the connection? The district's Computers@Home initiative addresses this challenge by providing selected families with computer systems to use throughout the school year. In order to qualify for the free loaners, families must sign a Letter of Understanding and agree to attend monthly training sessions, offered in both English and Spanish.

PISD's educational foundation is also covering the myPISD subscription fee and the high-bandwidth connection costs for a number of low-income families. In addition, a partnership with the public libraries extends access to the myPISD tools to even more parents and children.

seeking volunteer help offered training at various times to accommodate a range of parent schedules. Parents who attended the Publishing Center training learned how to interview children about their writing and help them revise their work. They also learned how to enter text into publishing templates, use digital cameras and bind the finished books. Because some of the work could be completed at home, parents who had problems making it into school during the day, found themselves able to volunteer as well.

Type 4: Learning at Home. Until computers are as universal as televisions and telephones, initiatives for bridging the digital divide will be an important way of extending technology-based home learning to a full range of students. From Maine's statewide laptop initiative (***www.mainelearns.org***) to programs initiated by individual schools and community centers, a number of organizations have undertaken "take-home" programs that allow students and their parents 24-hour access to computer technology.

Students at eight schools in the South Bronx, Harlem and East Flatbush have this sort of access thanks to the efforts of "Take IT Home NY," a program instituted by the non-profit Computers For Youth organization in 1999 (***www.cfy.org***). Every student, parent and teacher at a participating school receives a home computer, training, technical support, tailored bilingual Web content and an e-mail account on a community-wide system.

"For each family, we insist that a student and at least one parent or guardian attend the training session to encourage intergenerational learning and to motivate parents to become more involved in their children's education," explains the CFY Web site. "We run our training sessions on Saturdays in the school building. There, families have many first experiences: the first time a child teaches his mother how to use a mouse; the first time a student sends and receives an email; the first time an immigrant father surfs the web and finds his local paper online."

Participant surveys indicate that the Take It Home program has had a positive impact on students' feelings about themselves—and has extended new opportunities to siblings and parents who use the computers to write resumes, communicate with the school, and more. Students also noted that their CFY computer keeps them out of trouble, and helps them express themselves creatively and explore the world.

The Buffalo Parent Center offers a take-home program for Title I children in need of supplemental academic work. Laptop computers are loaned to families for five- to six-week periods, during which time parents and students

are expected to work together at the computer on a daily basis. Parent Center staff members report that they have seen substantial academic improvement as a result of this program.

Type 5: Decision Making. Many schools and districts include parents on their technology planning committees. Often the involvement begins with the most tech-savvy parents. As a larger group of parents become comfortable with education technology—on their own or with help from school-based programs—there is the potential for a change in the makeup of the planning teams. That's why the Riverside Community Digital Initiative, in offering its Parenting and Technology Series for non-technical, low-income parents, features a workshop on "Creating a Parents' Technology Committee."

Parent and community surveys are another way of gathering input from a broad range of parents and community members to help shape a district's technology program. Advice on developing and administering such surveys can be found at the National Network of Partnership Schools Web site (see back page).

Type 6: Collaborating with the Community. A variety of high-tech companies and non-profit organizations have devoted considerable resources in recent years to helping schools and communities come together to build technology-rich learning environments. The NetDay organization (***www.netday.org***), for example, which began in 1995 as a grassroots volunteer effort to wire K-12 classrooms for Internet access, continues to work with underserved communities to advance technology understanding and integration.

HP's Digital Village Program, which focuses on building connected facilities and technology portals for use by parents, students and community members in low-income communities, and Sun's Community Action Volunteer Program, designed to help employees share their time and talents with communities in which they work, are just two examples of private industry's philanthropic efforts in this arena. Collaborations between schools and universities offer many win-win opportunities as well. The Buddy Reading Program in Naperville, Illinois, paired fourth and fifth graders at Mill St. Elementary with preservice students at North Central College. The buddies exchanged information one-to-one on a specific novel using a Web-based discussion board located at the college. Project participants reported that the experience enhanced both reading and technology understanding on the part of the children while helping the preservice teachers develop their mentoring skills.

Equally powerful are "service learning" initiatives that have students helping community members and organizations—by doing everything from designing parks to creating Web sites. An evaluation of Learn and Serve America's national grant program (***www.learnandserve.org/research***) found that service learning contributed to:

- Increased student achievement, and problem-solving skills;
- Improved teacher and student enthusiasm and overall school climate;
- Strengthening and inspiring the community groups involved;
- Increased public support for schools.

As technology leaders in your district, you are uniquely positioned to add the power of communications and collaboration to the efforts that increase options for meaningful engagement of parents and community members in the education of today's children. There is no better time to build the bridges that can connect the worlds of school and home.

See page 8 for additional resources.

RESOURCES FOR LEARNING MORE

The National Network of Partnership Schools
www.csos.jhu.edu/p2000
Established by researchers at Johns Hopkins University's Center on School, Family, and Community Partnerships, this network focuses on developing and maintaining comprehensive programs of school-family-community partnerships. Director Joyce L. Epstein and a number of affiliated co-authors have published extensively on the topic, including articles on the six types of parent involvement, a family partnerships newsletter, a handbook, published by Corwin Press (www.corwinpress.com), and annual reports highlighting districts with successful partnership approaches.

National Parent Information Network
www.npin.org
A project of the ERIC system, administered by the National Library of Education in the U.S. Department of Education, NPIN features success stories, discussion lists and a Parents AsERIC question-answering service, plus a "virtual library" of parenting articles and information. Many of the articles and studies cited in this white paper can be found at this site.

The U.S. Department of Education
ed/gov/index.jsp
Clicking on "information for parents and families" leads visitors to databases of schools around the country, explanations of parents' roles and rights under No Child Left Behind, and links to two other department sites with relevant information—the Office of Civil Rights (www.ed.gov/offices/OCR/ parents2.html) with a number of parent involvement success stories and resources and the 21st Century Community Learning Centers program (www.ed.gov/21stcclc/index.html), a federally initiated program that is now being administered by the states.

The Annenberg Institute
www.annenberginstitute.org/work/community_program.html
Annenberg's Community-Centered Education Reform initiative addresses effective strategies for stronger, more productive connections between schools, families and community. The site describes the group's work in the area of public engagement and links to downloadable and orderable publications on the topic. Examples include *Just Waiting to be Asked? A Fresh Look at Attitudes on Public Engagement* and *Reasons for Hope, Voices for Change*, a report on how public-engagement initiatives build citizen involvement and support for school change.

ERIC Clearinghouse on Urban Education
eric-web.tc.columbia.edu/msa.asp
Another ERIC project, this clearinghouse connects to many articles, parent guides, pdf files and other resources focusing on urban and minority families and communities.

Harvard Family Research Project
gseweb.harvard.edu/hfrp
HFRP publishes research on a number of educational topics including family, school and community partnerships. Relevant resources include an evaluation database of after-school initiatives and the Family Involvement Network of Educators (FINE), an organization open to teachers and other educators who want to partner with families and communities.

National PTA
www.pta.org
This site offers organizational information, brochures, and other resources for parent involvement. These include information on NCLB regulations, the PTA's National Standards for Parent/Family Involvement Programs, and schools selected as Parent Involvement Schools of Excellence.

The National Center for Family and Community Connections with Schools
www.sedl.org/connections/
Hosted by the Southwest Educational Development Lab (SEDL), the Center's goal is to "link people with research-based information and resources that they can use to effectively connect schools, families, and communities." Visit this site to access SEDL's research synthesis articles, *A New Wave of Evidence* and *Emerging Issues in School, Family and Community Connections*, or to access an annotated database of over 200 relevant articles.

North Central Regional Educational Laboratory
www.ncrel.org/sdrs
NCREL's Pathways to School Improvement site features research and other articles related to key topics in the area of school reform —including an extensive collection of family and community involvement resources.

PACER Center
www.pacer.org
The Parent Advocacy Coalition for Educational Rights (PACER) Center offers many useful articles and resources for families of children and adults with disabilities.

Join Hands Day
www.joinhandsday.org
The Join Hands Day Project site serves as a national clearinghouse for schools and outside organizations working together to identify special projects to improve their communities. While few of the past projects have been technology-based, this is a good starting point for schools interested in designing their own service projects in collaboration with community members.

CoSN
ADVANCING K-12 TECHNOLOGY LEADERSHIP

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This publication is the eighth in a series of papers that make up the CoSN Compendium, a collection of resources for members of the Consortium for School Networking (www.cosn.org), a national nonprofit organization that promotes the use of information technologies in K-12 education to improve learning. Ferdi Serim is director of the Online Internet Institute, editor of* MultiMedia Schools *magazine and the Big6 eNewsletter, and author of* Information Technology for Learning: No School Left Behind *(available at oii.org/ferdi/ITforLearning.html). Kristen Hammond has been involved in the field of educational technology for over ten years, working as a classroom teacher, school computer specialist, consultant, Web site developer and owner of the EduPuppy.com Web site.* Bridging the Gap *was edited by Judy Salpeter and produced by CoSN with art direction by Glenn Hennessey.