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Though computers have become almost universally available in the U.S., many people don't have the knowledge and skills to take full advantage of the digital age. Miami Dade College is bridging the gap for thousands in our community.



Society

By Gariot P. Louima and Natalia Maldonado

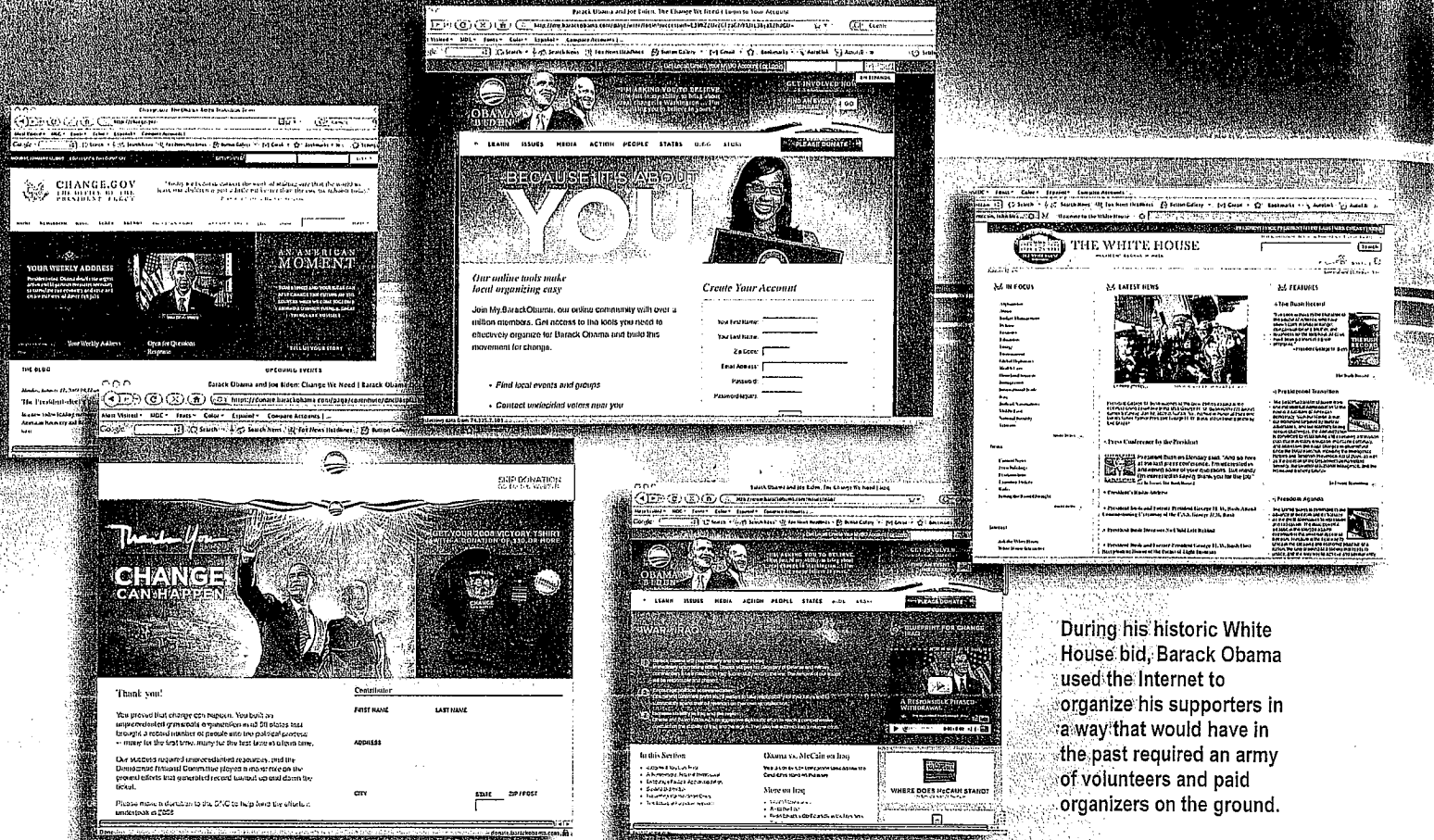
This seems a simple premise, but most people aren't aware of the Internet's growing role in our day-to-day lives. When a relative is ill, where do you go for information? If you want to know about a particular career, where are you most likely to get details first?

Moving to a new city? Do you buy a guide or do you Google?

What about paying bills, checking your bank account balance, researching colleges and universities, buying a car or looking for an apartment?

There is no denying the powerful role the Internet played in President Barack Obama's historic victory. Obama's campaign used the Internet to organize his supporters in a way that would have in the past required an army of volunteers and paid organizers on the ground.

Wired.com reports that by the end of the campaign, myBarackObama.com had 1.5 million accounts. Additionally, Obama raised a groundbreaking \$600 million in contributions from more than 3 million people, many of whom donated through the Web. ▶



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A recent study by the Pew Internet & American Life Project reports 45 percent of Internet users – a number equal to about 60 million Americans – say the Internet “helped them make big decisions or negotiate their way through major episodes in their lives.”

But millions of people still don't have the technology or knowledge to follow. Being disengaged from the Internet's potential leaves them economically and socially disempowered, scholars agree.

What does this mean for Miami Dade College? And what role, if any, should colleges and universities play in bridging the technological divide for students and the greater public?

A partial answer can be found at a community center in Little Havana.

Elevate Miami

Sisters and Brothers Forever Senior Center is located in a squat building off of Southwest Eighth Street in Miami. An unfamiliar visitor would miss the place. It's set back from the main street at the end of a small parking lot.

In the front room, eight senior citizens tap away at computer keyboards. Spanish-language radio plays in the background, along with hushed conversations and the whir of a fan.

Three women rove the small U-shaped computer lab answering questions and correcting errors. Leading the group is Lillybeth Guilfucci, a program coordinator in MDC's School of Community Education. Her job for the three hours she's here two days a week is to teach basic computer skills to the city residents who sign up for the course.

She's assisted by two technology coaches, accounting major Adriana Besada and adjunct professor Antonia Cantalice, who teaches foreign languages (primarily Portuguese) at North Campus.

On this day, in addition to setting up e-mail accounts, the students also practice searches in Google, visit YouTube and get a brief introduction to the services available on the city of Miami's Web site.

The sessions are generally held almost exclusively in Spanish, unless an English-speaking user arrives, which is rare at Sisters and Brothers Forever.

“Everything on the computer is wonderful,” Leandro, a stout older man, said in Spanish as Guilfucci translated.

Antonia, a woman with white-blond hair and scarf, said the computer lessons have provided her with a new method of communicating with her family in Cuba. “I can send e-mail now. It's

Collapsing Divide

"The digital divide is not gone," writes **Dr. Mario R. Sánchez**, an assistant professor at Miami Dade College's InterAmerican Campus. "Extirpating its existence will come close with further advances in technology and social initiatives, but it is assuredly waning."

Sánchez heads the InterAmerican Informatics Institute and has published many peer-reviewed papers as well as three books. In his paper, "**From Digital Divide to Information Gauntlet**," Sánchez writes about the challenges that have emerged with the digital age. "We now rely on the Internet for the overwhelming majority of information," he writes. "But what good is that information if it's buried, suffused with noise, its access throttled, a segment of society unable to process it and practically no

one able to discern its veracity? It isn't any good."

In his paper, "**Miami Dade College and Cisco – Partnering Together to Address the Digital Divide**," **Dr. Sergio Cobo** describes an avenue that MDC has taken to help bridge the divide for some students.

Cobo, an assistant professor of computer information systems at North Campus, has 15 years experience as a software engineer and software manager for companies in the aerospace and data communications industry. MDC's Cisco Networking Academy program "is a comprehensive e-learning program that provides students with the Internet technology skills essential in a global economy," he writes.

You can read the full text of their articles online at www.mdc.edu/main/mdcmagazine.

much easier to write," she said, also through an interpreter.

The lessons taught in the small lab at Sisters and Brothers Forever are repeated at 11 parks and six senior centers several times a week. It's all part of the city of Miami's "digital inclusion" program called Elevate Miami.

With Miami Dade College, the city is providing training on the fundamentals of computer and Internet use and how to access health, financial, education and other resources through the use of technology.

Nearly 30 percent of the residents of Miami live at or below the poverty level. Computer access and training is the city's attempt at remaining competitive.

Computer courses at Sisters and Brothers Forever aren't a "quick fix," city officials say. Rather, they are just one aspect of a comprehensive digital inclusion program that reaches out to students in public schools, businesses, workforce age adults and seniors.

"How do you change long-term expectations?" James Osteen, Miami's assistant director of information technology, asked rhetorically. "You give people the skills to make them competitive. You be proactive not reactive."

A New Divide

Since the early 1990s, new media scholars throughout the world have been quantifying what they see as the increased social and economic differences between people who have and use computers and the Internet and those who do not.

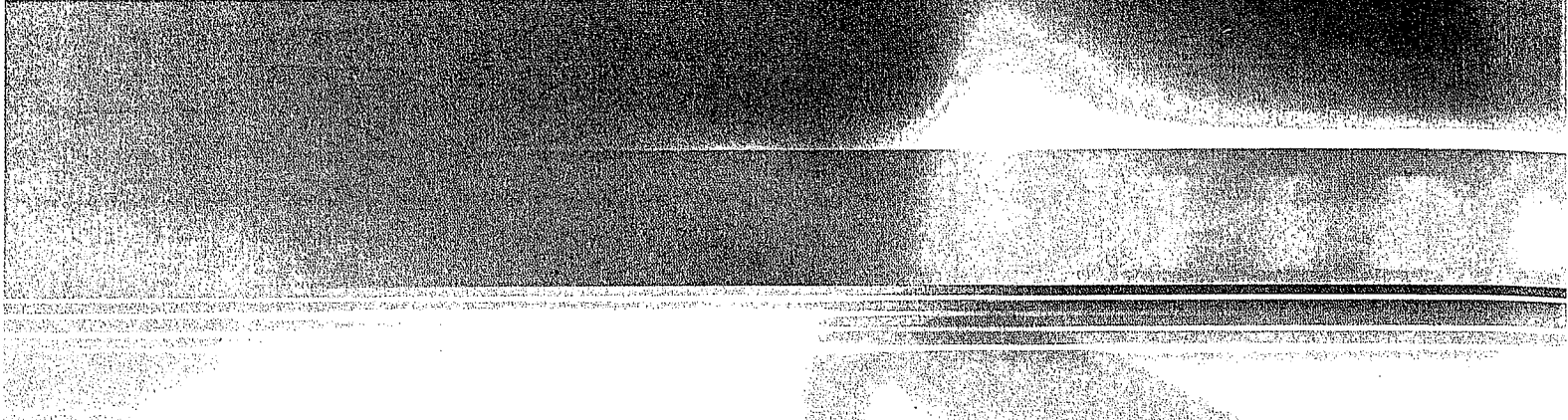
Immigrants are less likely than native-born residents to have access to home computers, Internet at home and high-speed Internet, such as cable or broadband connections.

While 70 percent of native-born U.S. residents have access to a home computer, only 55 percent of immigrants can access a computer at home. Slightly more than 60 percent of native-born U.S. residents have Internet access at home, compared to 48 percent of the immigrant population.

The contrast is startling when compared to other readily available technology. Cell phone ownership, for example, is consistent across demographic groups.

By 2002, some research suggested the access divide was rapidly receding. This was due in part to the near universal access of computers in schools, libraries and community centers coupled with the relatively low cost of a PC.

But providing access to computers didn't erase the divide; it



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simply morphed the issue, according to more recent research.

Though more people have access to computers with some Internet capability, not all are able to fully use those resources.

Sixty percent of white non-Hispanics use the Internet while roughly 33 percent of Hispanics and only 40 percent of African-Americans use the Internet, according to a report submitted to the Latino Policy Institute and California Policy Research Center.

"Research indicates that the digital divide may have serious economic consequences for immigrants as information technology skills become increasingly important to the labor market and for education," according to the Center for Justice, Tolerance & Community.

The implications can be far-reaching, particularly in South Florida. In Miami-Dade County, immigrants make up more than 50 percent of the population, the highest in the state and one of the highest nationwide.

"The new divide is a knowledge divide – those who know how to use the resources and those who don't," said Rolando García, director of the Computer Courtyard at Miami Dade College's Wolfson Campus. "If you have access to a computer but you don't know how to conduct research on the Internet, for example, you're limited."

The Importance of Education

Miami Dade College and institutions like it have a dual responsibility – to their students and to the community in general.

Just as the College has partnered with the city of Miami to provide computer access and training to the general public, it also provides unparalleled access to computers and the Internet to its students.

The issue isn't just convenience. Before they leave MDC, stu-

dents must have a certain level of familiarity with digital technology – that is, basic use of computers and the Internet and more advanced knowledge for research.

In fact, technology and Web proficiency are written into the College's 10 Student Learning Outcomes alongside ethics, communications, science and qualitative learning, among other necessary skills.

Students seem to understand the importance of crossing the divide. The last time MDC polled its students on computer use, 84 percent said they believed computer skills will be very important in getting and keeping a job. Ninety percent of the students surveyed said they own a personal computer, and 73 percent use the computers on campus. Younger students were more likely to rate their ability level as "excellent" or "good" (91 percent) than students over 40 years old (69 percent).

And though the majority of students said they were proficient computer users, that isn't always the case.

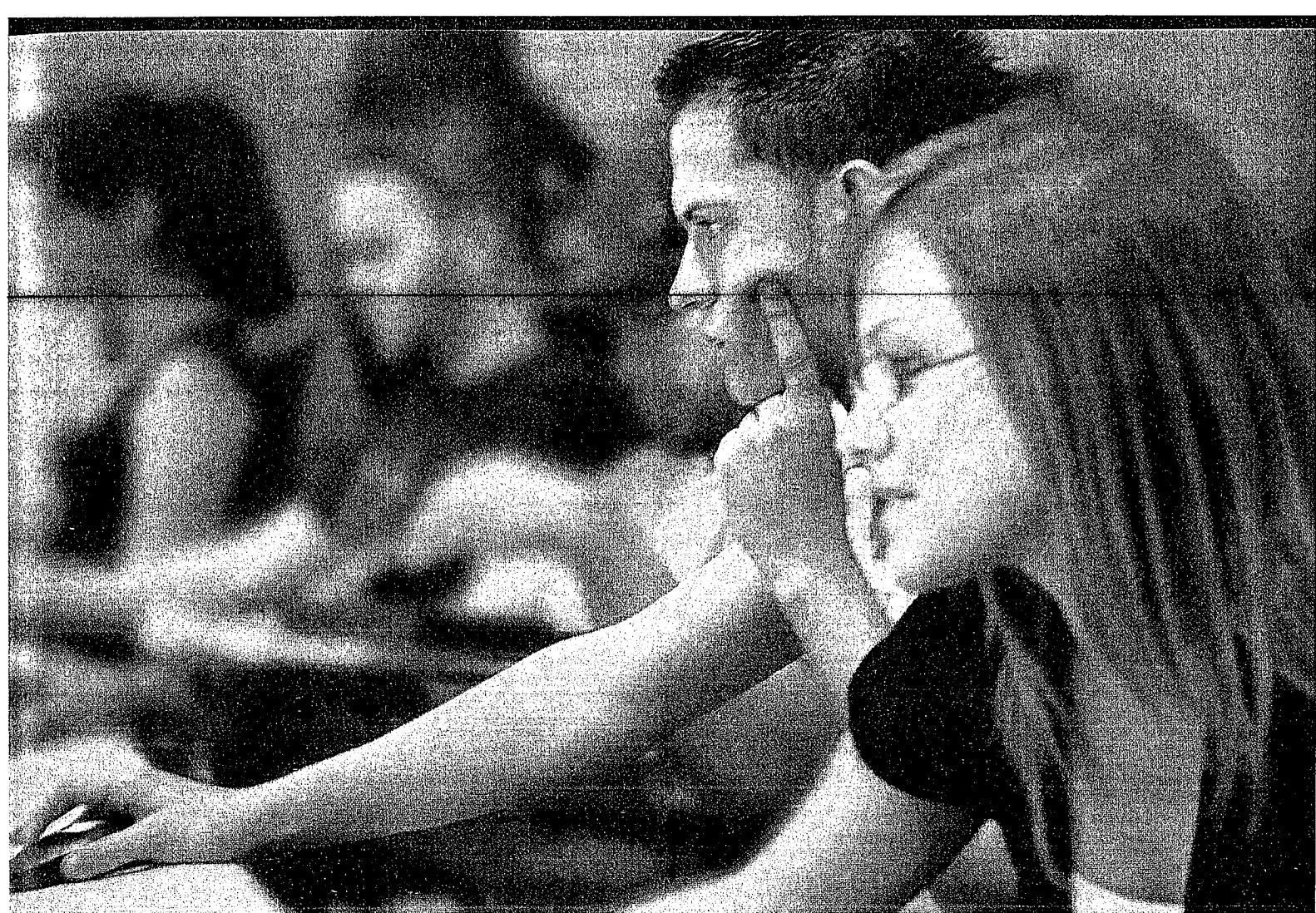
"Not everyone takes Introduction to Microcomputers," said García, the Computer Courtyard director.

His position as director of the Computer Courtyard at Wolfson Campus gives him the perfect vantage point to gauge the issue up close.

Seven of MDC's eight campuses house Computer Courtyards, full-service computer laboratories that provide students with free access to numerous digital resources and instructional support services. Courtyard services will come online at West Campus in the near future as the campus continues to grow.

García said there were 1.1 million collegewide log-ins during the last academic year, and there is a wide spectrum of proficiency among students who use the Computer Courtyard.

"Some people have been out of school for several years, so the technology has evolved and changed," said García, who has



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been researching the digital divide for "The Digital Divide and Distance Education Learners," his doctoral dissertation. "Or you might see a user who's been using Microsoft Word but doesn't know how to use all of the features."

The Computer Courtyard and Academic Labs Workgroup has developed a string of workshops that students can take to bone up on their computer skills. The workshops will be taught at Wolfson and North campuses starting in the fall, with plans to expand to each campus courtyard in the future.

Familiar Ground

Through its Center for Community Involvement, the College has partnered with numerous community groups to provide computer training opportunities for the entire community.

In 2000, Miami Dade College joined with Barry University and the Bethel AME Church/Mattie Koonce Technology Learning Center to provide computer literacy workshops and services to residents of Overtown.

With support from a WorldCom grant, the College installed 28 computers, arranged for Internet connectivity, set up a network and staffed the Koonce Center lab with America Reads/America

Counts tutors and service-learning students.

The students provided a variety of services, including tutoring, mentoring, aiding in technical support and teaching Web design.

NANAY Community Center, a nonprofit in downtown North Miami that seniors age 60 and older as well as young adults, has also joined with MDC to offer computer courses.

Additionally, the College is a partner in Intel's Computer Clubhouse project. Established in 1993, the project provides creative and safe after-school learning environments where children from underserved communities work with mentors to explore their own ideas, develop skills and build confidence through the use of technology.

MDC's Center for Community Involvement connects student volunteers with the Intel Computer Clubhouse at the YWCA of Greater Miami and several other locations throughout the county. At the YWCA, children ages 10 to 17 learn Flash, Dreamweaver, Photoshop, Fireworks, Premiere and a host of other software programs. They also participate in programs in a state-of-the-art music studio.

Elevate Miami is the newest and most comprehensive project. Bringing together the city of Miami, MDC's Center for Com-

Elevate Miami brings together the city of Miami and MDC's Center for Community Involvement, School of Community Education and the School of Computer and Engineering Technologies.

munity Involvement, MDC's School of Community Education and the School of Computer and Engineering Technologies, the project speaks to the importance of digital education at MDC.

Keeping Up With the Times

It's a Thursday evening at José Martí Park in downtown Miami, and the parking lot is empty except for a few scattered cars and a group of puddles left over from the afternoon's heavy rains. Parts of the county were under severe storm watches a couple of hours before Elevate Miami's computer class started, and inside attendance is lower than usual, down from an average of 12 students to six.

Although about 22 computers line the perimeter of the classroom, the students gather around one computer in the center, where instructor Raul Pérez, an adjunct professor at MDC, is demonstrating how to save a Web site onto a removable hard drive. He uses the Elevate Miami Web page as an example and asks the class if they'd be able to access the live site if they were logged off the Internet.

A mixture of answers follow.

"On the Internet we're working in real time, it's happening right now as we're speaking," Pérez said. "If I disconnect the Internet what's going to happen? It's like trying to get on I-95 during rush hour traffic, and the ramp is broken. You can't get on because there's no connection."

One by one, students take turns saving the Web site onto a drive in a folder they create. On the screen, the letters and icons have been enlarged for easier viewing. Laura, who's been coming to the class for about two months, double clicks on her saved file. The page won't open. Pérez has disconnected the Internet.

"Teacher, *no está!*" she said, switching between English and Spanish. Laura has lived in Miami for 10 years. After losing her job in sales, she decided to learn computer skills to make herself more marketable.

"In my country I learned some computing skills, but that was 10 years ago, and everything I learned is obsolete now," she said. Aside from coming to the class, Laura also uses the lab hours they offer four times a week to work on her typing skills.

Reina, who comes to class with her husband Pedro, doesn't have a computer at home but is working on it piece by piece. So far she has a monitor and a keyboard. She started coming to class because she felt computers make life easier. "It's necessary. If I want to pay my bills I can do it easier online. It's important to access information."

She and Pedro also have children who live outside of Florida, and she's learned to chat with them online.

The class is a mixture of students of all ages and levels, so Pérez and teaching assistant Archimides San Sebastián, a network administration student at MDC, try to work with each individually as necessary. "You have to balance the class," Pérez said. He notes that while some students are here to help their job search, others have minors at home who are computer literate and simply want to understand what their children are accessing on the Internet.

Then again, some students, like Maria, just want to keep up with the times. "My niece makes fun of me because I don't know about computers and she does. So I thought, 'I'm going to learn, even if it's little by little like a tiny ant.'" □

To read more on the digital divide and MDC's programs, visit www.mdc.edu/main/mdcmagazine.