

✧ BY FAY COBB PAYTON ✧

# RETHINKING THE DIGITAL DIVIDE

*African-American students are all too aware that the digital divide is not merely about Internet access. Rather, it involves access to the social networks that ease the path to success in high-tech careers.*

**When industry analyst Forrester** Research announced study findings several years ago that the digital divide is not race-based but rather due to a combination of factors, including income, age, education, and technology optimism [3], it did not have the last word. While these findings were said by some to dispel myths surrounding the digital divide, other researchers contended that the socioeconomic conditions characterizing underrepresented minority communities were contributing to the ill effects of the digital divide [9, 10]. Another study found a disconnect between national policies and regional implementations. In his examination of community technology centers in Raleigh/Durham, NC, Kaiser determined that the majority of the centers' users were African-American and Hispanic groups from lower income brackets and subordinate educational backgrounds [6]. These findings and others [3, 9, 10] suggest that broad national policy often lacks an adequate assessment of local social, economic, and/or technical needs. Still others observed that white students without a home PC were more likely than their African-American peers to find Web access alternatives at libraries and the homes of friends and family;

they also accessed the Web more frequently and tended to have superior technology in their schools. More access alternatives for white students suggest that "particularly when students do not have a home computer, race matters" [7].

While these studies shed light on the issues surrounding the digital divide, the opinions of African-American teenagers warrant documentation, especially if future technologists are to be groomed from their ranks and other underrepresented minorities. Here, I report perspectives on the digital divide of 41 African-American teenagers attending seven high schools and one middle school in the Wake County public school system in Raleigh, NC. The students, whose family socioeconomic status ranged from lower- to middle-income, completed a survey (available on request from the author) covering issues related to computer and Internet access, as well as to their future goals and role models. A subset of the students participated in a 1.5-hour focus group discussion. Half of the study participants were between 15 and 17 years of age, and 43% were between 12 and 14 years of age. Roughly 55% were high school students, with the others in middle school. A majority (70.1%) had never taken a computer course. Of the minority that had, 19.5% had taken one to two technology classes, 7% had taken three to five computer courses, and 2% had fulfilled more than six such courses in high school. It must be noted that only 9.7% of the study sample (four students) were high school seniors.

We asked the students about their views regarding college, intended major, family education, and role models. These factors are proven to play a critical role in the educational endeavors and experiences of minority students [8, 11].

Most (95%) of the teenagers specified that they planned to pursue higher education. One participant had no plans to attend college, and another was uncertain of his strategy. Table 1 lists the intended courses of study of those students planning to pursue a college degree. In spite of the technology focal point of the digital divide and calls to action from policymakers and industry leaders to minimize it [11], only 4.8% of the students named computer science and IS/IT as probable courses of study, and only 19.5% named engineering. Of the 10 students planning to follow technical courses of study, four were seniors. Two of them had not yet taken a computer course, although they had taken multiple math and science courses. Another female senior had completed one computer class, while the remaining male student completed three courses in computing technology, math, and science, respectively.

Nearly all (98%) of the students said their parents had completed high school, 61% said their parents had completed college, and 14% said their parents had attended college without earning a degree. The importance of parental presence and involvement is unquestionable: 71% of the students identified their parents as role models, and 51% said family members (such as aunts, uncles, and grandparents) play significant roles in their lives. Professional athletes and teachers are also popular as role models, as identified by 39% and 36% of teens, respectively. Each student chose at least one African-American role model, while 4.8%, 9.7%, and 24.4% of them chose Hispanic, Native American, and white role models, respectively. Only 7.3% chose only female role models, while 68% had role models of both genders.

Intended College Major	Percentage of Students Indicating This Major
Other (General Studies, Political Science, Literature, etc.)	31.7%
Engineering	19.5%
Medicine	17.1%
Business (Marketing, Management, Finance, etc.)	9.8%
Sociology/Psychology	4.8%
Computer Science/Information Systems/Technology	4.8%
Physics/Biology/Chemistry	4.8%

**Table 1. Intended major of those intending to enroll in college.**

Resources Needed	Teens' Responses
More Computer Skills Needed for African-American Teens	Very Important (3 students) Neutral (1 student)
Parental Involvement	Very Important (4 students)
African-American Role Models (Not Athletes)	Very Important-Important (4 students)
Non-African-American Role Models	Neutral (1 student); Somewhat Unimportant (3 students)
Changes in Public/Government Policy	Important (2 students); Neutral (1 student) Somewhat Unimportant (1 student)
Church Involvement	Very Important-Important (4 students)
Improving Your (Teen's) Education	Very Important (4 students)

**Table 2. Resources needed to overcome the digital divide.**

Online Activities/Uses	Percentage of Students Using Activity
Email	59
Chat Rooms	46
Search Engines	63
Shopping	15
Research for School/Homework	68
Research for Personal Interests	51
Bulletin Boards/Discussion Groups	12

**Table 3. Online activities of African-American teenagers.**

With respect to the digital divide, 90% of the participants had never heard of the phenomenon, but the four students who were aware of it had strong views on the resources needed to reduce it (see Table 2). Computer usage was widespread among study participants, with 83% accessing computers at home, 78% having school access, and 9.8% using computers in community technology centers. Only one student reported having no access to Internet-based technologies.

When asked about online activities, the students indicated multiple uses of the Internet, including email, chat rooms, search engines, homework resources, and personal interests (see Table 3). They were not asked to specify whether they engaged in online activities at home or at school, and would have enabled the identification of possible mandated versus voluntary use. They generally frequented entertainment, sporting, and literature/education sites. Preferred Web sites included Bookreview.com, Lyrics.com, Bet.com, MTV.com, ESPN.com, CNN.com, Nasa.gov, Vibe.com, BlackPlanet.com, and Yahoo.com.

Online shopping and bulletin boards were the least self-reported uses of the Web. The 15% of these students who shopped online reported spending \$10 to \$100 on online purchases of CDs, books, clothing, and software from myriad Web sites, including Amazon.com, Bolt.com, Defjam.com, Nike.com, and Gap.com. They said their jobs and parents enabled them to gain the financial resources needed to buy in e-space. Online privacy emerged as a strong concern among students, with those who shopped online and who spent the most time online expressing the most

concern. Forty-eight percent indicated they were strongly concerned about their privacy when using the Internet, 27% said they were somewhat concerned, and only 7% were unconcerned about privacy. Despite these privacy concerns, they also noted their affinity for “freebies” or giveaways that not only tended to increase time spent Web surfing but also overcame some of their reluctance to share personal information to benefit from Internet bargains and freeware.

### The Focus Group

Ten African-American students participated in a focus group session in addition to completing the survey. The six males and four females in grades 10 to 12 all planned to attend a four-year higher-education program after completing high school. Computer access was not a problem for them; all had computers at home, and all agreed they could not imagine life or school without the computers and the Internet.

Some of the most interesting outcomes of the focus group were gleaned during a free-form portion of the discussion, when the students could ask questions and express their technology-related concerns. They were keen on asking for professional advice on their future endeavors and were concerned about how technology was affecting their prospective careers. For example, the students interested in law and medicine were concerned about how legal and health care environments have evolved due to the Internet.

The students seemed aware of the relevance of career mentors [5]. Some looked to their parents and immediate family members to fulfill these roles, and some noted that teachers had molded their thinking and career choices. Several students spoke of having relationships with mentors to gain access to specific career-related information. This observation reflects the social network theory [2] in action, as students gain access to inside information that can enhance their careers. As the focus group leader, I centered their attention on the value of the social network's continual effect beyond primary and secondary education. They seemed aware of the limits of mentors and role models, with many noting the current dearth of minorities in information technology and high-tech careers. Their awareness of the importance of mentors was encouraging, but with African-Americans holding less than 3% of the top jobs in the U.S. [1], who can they look up to?

Such observations illustrate that the digital divide, as traditionally defined, needs rethinking. The divide, as the students posited, is not merely about Internet access. While computer and Internet access is clearly

vital, young minorities are also hampered by a less-tangible divide in the form of limited access to a social network that helps young people succeed. Surmounting this divide means increasing the numbers of African-Americans and other minorities entering, being retained, and succeeding in high-tech careers.

### Conclusion

This small study suggests that while efforts to eliminate the digital divide—including increasing minority participation in academically gifted programs and improving minority performance on achievement tests—are valuable, public policymakers must also seek to improve the social network that will help the digital divide resolve itself. ■

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