

**TRAVELING
THE SUPERINFORMATION
HIGHWAY**
**African Americans' Perceptions and
Use of Cyberspace Technology**

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According to the 1997 American Internet User Survey and the Georgia Tech Research Corporation's WWW User Survey (1998) there are approximately 31 million American adults using computers, the Internet and the World Wide Web (WWW), with 5 million of these users being African American (Hoffman & Novak, 1998). This colossal figure supports the general consensus that more and more Americans believe that a working knowledge of computer technology in general and the Internet and WWW in particular is essential for business, education, and personal applications. The data from the American Internet User Survey and Georgia Tech's Research Corporation's WWW User Survey also indicate that, as a group, African Americans, Latinos, and Asian Pacific American adults make up less than 14% of these users.¹ The Internet and WWW data that are specific to African Americans are difficult to find. That is, quantifiable data concerning their use of computers, the Internet, and the WWW are virtually absent from the literature, and there are very few data concerning their attitudes toward computers, the Internet, and the WWW.

The usage data that do exist describe a picture of privilege and segregation. For example, Brook and Boale (1995) and others (Anderson, Bikson, Law, & Mitchell, 1995) have found that those who are "surfing the superinformation highway" are typically well

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educated and can afford home computers and the related access fees. Most studies have concluded that, for most adult users, income and education are the two most important variables that are most likely to influence access to and use of computers, the Internet, and the WWW (Hoffman & Kalsbeek, 1996; Katz & Aspden, 1996).

As with any population under study, it is important to realize that users of computers, the Internet, and the WWW are not a homogeneous group. For example, of those using the Internet and the WWW, college students are more likely to engage in electronic surfing than users in the general public. And, a discrepancy in electronic use has been found between White and African American college students. For example, Hoffman and Novak (1998) found that White college students surpassed their African American peers in terms of computer ownership and time spent using the Internet and the WWW. Although Hoffman and Novak found no differences in Internet and WWW use among students who owned personal computers, they did find a difference between noncomputer-owning students. That is, African American students who did not own a personal computer were less likely to go to an access location (e.g., library, computer lab, etc.) to use the Internet and the WWW than similar White students were.

Why is it that African American college students who have access to computers, the Internet, and the WWW are not using them? In the case of college students, it may not be a matter of income or education. In other words, of those students who do have access, beyond the economic barriers to computers use, what are the factors that are keeping African American college students from using computers, the Internet, and the WWW? In addition, it is just as important to include other students of color in the investigation. That is, what is the usage level and attitudes toward computers, the Internet, and the WWW of Hispanic, Asian Pacific American, and Native American college students?

The purpose of the present exploratory study is to investigate these questions. That is, what is the level of use of computers, the Internet, and the WWW of African American, Hispanic, Asian Pacific American, and Native American college students? And, what are their attitudes toward this technology?

METHOD

The present study was conducted in two parts, and the design was multimethod. That is, qualitative (focus groups) and quantitative (a questionnaire) methods were used to ascertain African American, Hispanic, Asian Pacific American, and Native American college students' use and perceptions of computers, the Internet, and the WWW.

PART 1: FOCUS GROUPS

The first part of the study consisted of conducting several focus groups with 8 to 10 participants each. The participants were White, African American, Hispanic, Asian Pacific American, and Native American college students attending a large Pacific northwestern university. Focus group participants were recruited by posting flyers around the campus and in various multicultural centers. The participants were paid \$5 each for their participation. Each focus group was purposely segregated (e.g., all White or all African American, etc.) in an effort to allow the participants to feel free to discuss any racial components (if any) concerning their use of the Internet and the WWW. This allowed for a systematic investigation into the nature of participants' subjective experience with computers, the Internet, and the WWW.

The qualitative data gathered from the focus groups then provided the information needed to develop a theoretical proposition concerning these students' perceptions of and use of computers, the Internet, and the WWW. These data were also used to develop and construct a self-report questionnaire. An analysis of the qualitative data revealed that these students enjoy relatively free access to computers, the Internet, and the WWW, but the data also indicated a theoretical theme of distrust. The data suggested that the students used computers mainly for word-processing applications but did not employ a high use of the Internet and the WWW because they were extremely distrustful of the technology.

Most participants, regardless of race, believed that it was unsafe and a threat to their personal privacy to conduct certain transactions (e.g., purchasing plane tickets or sending e-mail) on the Internet

and the WWW. The suspicions of the African American students with conducting business transactions and sending e-mail messages were no different than the concerns expressed by the non-African American students. However, only the African American students indicated a perceived connection with the Internet, the WWW, and a governmental spying conspiracy against African Americans. As such, the African American students indicated that they had no interest in using the Internet and the WWW, even if they had personal computers or free access.

PART 2: QUESTIONNAIRE

The themes uncovered from the qualitative responses recorded during the focus groups were then used to develop a self-report questionnaire. However, because of the exploratory nature of this study, no specific hypotheses are offered concerning specific issues of trust. However, the theoretical premise was to test the idea that African American college students are not using the Internet and the WWW as much as their peers and that this lack of use is due to a mistrust of the Internet and the WWW.

In Part 2, participants completed a questionnaire that requested answers to several computer-, Internet-, and WWW-related questions. For example, in addition to demographic questions that pertained to age, gender, and race, participants were asked to indicate how long and how often they use computers, the Internet, and the WWW and their perceptions of how important this technology is for their careers. They also reported on their level of knowledge of the Internet and the WWW and the extent to which they believe a particular situation was a problem with using the Internet and the WWW. For example, among other things, there was a question that ascertained participants' belief that the Internet and the WWW were governmental spying tools.

PARTICIPANTS

A total of 247 college students attending the same Pacific northwestern university participated in the study. The largest proportion of participants were White (47%, $n = 127$), followed by Asian

Pacific American (18.5%, $n = 50$), African American (14.8%, $n = 40$), Latino/Latina (7%, $n = 19$), and Native American (4.1%, $n = 11$). The participants ranged in age from 17 to 36, with the average age being 19 years. A total of 47.4% of the participants were male, and 52.6% were female. The participants represented all academic classifications (30.7% were freshmen, 30% were sophomores, 17.8% were juniors, and 15.9% were seniors²) and three socioeconomic strata of lower (7.8%), middle (84.4%), and upper (7.4%) class. All participants were recruited from various comparative American cultures courses and were given extra credit for participating.

RESULTS³

Overall, the majority of the students (regardless of race) owned a personal computer (56.1%), with a good portion (22.2%) indicating that although they did not currently own one they planned to buy one in the near future. And, of those who did not have the luxury of owning a personal computer, nearly all (95.8%) indicated that they went somewhere (e.g., school, work, a friend's house) to use one. The majority of all students (89.6%) believed that a knowledge of computers, the Internet, and the WWW was important for their careers, yet the majority (50.1%) also admitted that they did not have a lot of knowledge about the technology. The relative frequency of use differed somewhat by race. That is, there were some differences between ownership of personal computers and use of computers by race; meaning, of those students who owned a personal computer, the majority indicated that they used that computer often, with Asian Pacific American students using their computers the most (71.4%) compared to African American (63.2%) and White students (61.0%). However, in contrast to Hoffman and Novak's (1998) prior findings, the African American noncomputer-owning students in this study actually used a computer more often than the White students who did not own a personal computer (see Figure 1).

African Americans' Use & Perceptions of the Internet and WWW

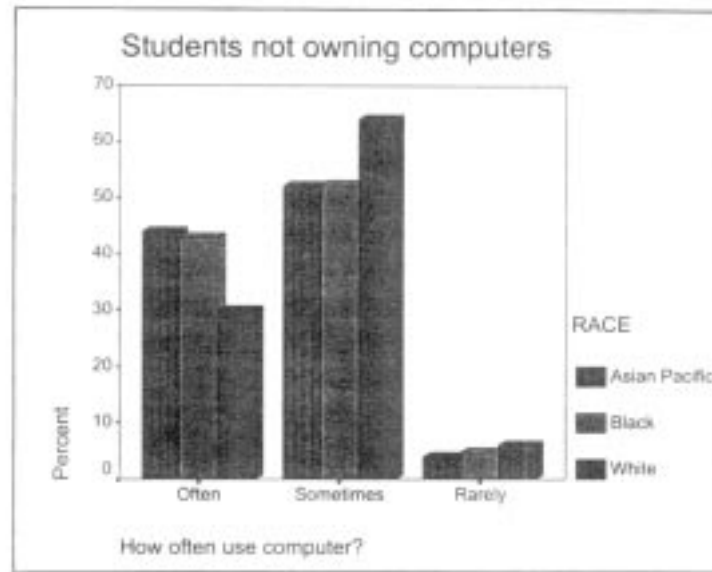


Figure 1: Students Not Owning Computers

It appears that the students in this study are comparable in terms of their engagement in computer technology and cyberspace science. However, a more divergent and interesting picture is portrayed when the participants were asked about their perceptions of various problems with using the Internet and the WWW. The majority of Asian Pacific American, White, and African American students felt that not being able to find the information they needed on the Internet and the WWW was somewhat of a problem. Likewise, most participants felt that the Internet and the WWW were somewhat too slow. However, the majority of African American and White students felt that not being able to keep their personal information private (e.g., credit card numbers) was a great problem, whereas the Asian Pacific American students felt this was only somewhat of a problem.

The majority of African American students felt that the threat of access to their physical personal information (e.g., age, race, and

gender) was great, whereas both Asian Pacific American and White students felt this was less of a problem. And, relative to their White and Asian Pacific American peers, the majority of the African American students believed that the Internet and the WWW were tools used by the U.S. government to track and monitor individuals. The majority of all students indicated that they did not believe that the expense of using the Internet and the WWW was a problem nor did they feel that the technology was too difficult. See Table 1 for the percentage of individuals responding to each extent category.

Interestingly, on a closer look at within-group responses (i.e., only the African Americans), a clear distinction between African American males and African American females emerged. That is, only 36% of African American males believed that the Internet and the WWW were government tracking devices, whereas 58.8% of the African American females did. The majority of the African American males either felt that this was not a problem (36.4%) or did not know if it was a problem (22.7%). On the other hand, only 23.5% of the African American females felt it was not a tool, and 17.6% did not know. Based on this finding, a look at computer use between African American males and females was in order.

Not surprising, the majority of African American males (54.5%) were using computers, the Internet, and the WWW 1 to 4 times a day, whereas the majority of African American females (47.1%) were using computers, the Internet, and the WWW only a few times a week. Thus, it appears that the African American female students in this study are not using this technology as often as African American males.

DISCUSSION

The results of this study did not support the idea that African American college students were using computers, the Internet, and the WWW less than non-African American college students. In fact, the data indicate that there were no differences in Internet and WWW use among those who owned a personal computer. However, African American students who did not own a personal

TABLE 1
Internet Problems (% of individuals responding to each category)

	<i>African Americans</i> (n = 40)	<i>Asian Pacific Americans</i> (n = 54)	<i>Whites</i> (n = 127)
Problem 1: "Can't find the information that I am looking for."			
Moderate to great extent	20.5	13.0	22.2
Little to some extent	53.8	64.8	62.7
Not a problem	25.6	22.2	13.5
Don't know	0	0	1.6
Problem 2: "The Internet and WWW are too slow."			
Moderate to great extent	20.5	24.1	30.2
Little to some extent	64.1	64.8	57.9
Not a problem	15.4	11.1	11.1
Don't know	0	0	.8
Problem 3: "Personal information (credit card nos., name or address) is not private."			
Moderate to great extent	47.7	35.2	44.4
Little to some extent	34.2	37.0	34.9
Not a problem	10.5	14.8	7.9
Don't know	7.9	13.0	12.7
Problem 4: "Physical information (age, race, gender) is not private."			
Moderate to great extent	46.2	22.2	31.0
Little to some extent	20.5	44.4	43.7
Not a problem	20.5	18.5	15.1
Don't know	12.8	14.8	10.3
Problem 5: "The Internet and WWW are surveillance tools for the U.S. government."			
Moderate to great extent	33.3*	11.3*	8.7*
Little to some extent	28.2	32.1	26.5
Not a problem	17.9	30.2	38.6
Don't know	20.5	26.4	26.2
Problem 6: "The Internet and WWW are too complicated."			
Moderate to great extent	7.7	9.3	11.1
Little to some extent	41.0	46.3	47.6
Not a problem	48.7	42.6	41.3
Don't know	2.6	1.9	0
Problem 7: "The Internet and WWW are too expensive."			
Moderate to great extent	20.5	11.1	12.0
Little to some extent	38.5	42.6	39.2
Not a problem	35.9	42.6	40.8
Don't know	5.1	3.7	8.0

* $p < .05$.

computer actually used a computer more often than White students who did not own a personal computer. This finding contradicts the idea of a great "racial divide" in terms of Internet and WWW use.

In the general population, Whites have been found to own a personal computer and use the Internet more often than African Americans. The reasons for this disparity have been attributed to income and education levels. However, it may be a factor of mistrust that is keeping African Americans, especially African American students, from using the Internet and the WWW. The idea that African Americans do not trust the Internet and the WWW should not be surprising. African Americans have experienced many instances in which their trust has been violated (e.g., government-sanctioned medical experiments or unfulfilled political promises). It is no wonder that these students eye this seemingly invasive technology with a skeptic's eye.

Scholars, educators, and those who construct public policy should incorporate and acknowledge this skepticism when singing the praises of the Internet and the WWW to students. However, a more important endeavor may be to find out whether these students are correct in their suspicions.

NOTES

1. Neither of these national surveys provides data on Native Americans' use of the Internet or the World Wide Web.
2. A total of 5.2% of the respondents claimed that they were unsure of their academic classification.
3. Unfortunately, the data for Latino/Latinas and Native Americans were dropped from the analysis due to the relatively small numbers in each group.

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