

Minorities and the Digital Divide

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INTRODUCTION

Information and communication technologies (ICT) such as the World Wide Web, e-mail, and computers have become an integral part of America's entertainment, communication, and information culture. Since the mid-1990s, ICT has become prevalent in middle- and upper-class American households. Companies and government agencies are increasingly offering products, services, and information online. Educational institutions are integrating ICT in their curriculum and are offering courses from a distance.

However, while some are advantaged by the efficiencies and convenience that result from these innovations, others may unwittingly become further marginalized by these same innovations since ICT access is not spreading to them as quickly. The "digital divide" is the term used to describe this emerging disparity. Government analysts argue that historically underserved groups, such as racial and ethnic minorities, rural and low-income communities, and older Americans, are at a distinct disadvantage if this divide is not closed because American economic and social life is increasingly becoming networked through the Internet (National Telecommunications and Information Administration, 1995). The digital divide is not only an American social problem. Digital divide issues are of concern in developing countries as well as in information technology marginalized communities within developed nations.

Over the last decade, access to ICT has increased for most Americans, but does this mean that the problem of the digital divide has been solved? Is further research in this area warranted or has the digital divide become passé? In this article, we take on these questions by first reviewing major issues and trends in digital divide research. We do so by reviewing the digital divide literature as it relates to one historically underserved group, namely African-Americans. Next, we present a conceptual framework that contrasts 1) social and technological access perspectives, and 2) asset-based/resource and behavioral/use perspectives. The paper concludes with our recommendations for future research opportunities for examining digital divide issues.

BACKGROUND

There have been numerous definitions for the digital divide, government and industry reports about the digital divide, and competing interpretations of the statistics contained in these reports. For instance, the digital divide has been defined at the Whatis Web site as "the fact that the world can be divided into people who do and people who don't have access to — and the capability to use — modern information technology, such as the telephone, television, or the Internet." Others (PRNewswire, 2000) offer another definition: "arguably the single, largest, and segregating force in today's world. If it is not made a national priority, a generation of children and families will mature without these tools that are proving to be the key to the future."

Most of our knowledge about the digital divide in the U.S. is based on survey research on computer and Internet access in the home, at work, and in public places. The most cited statistics are found in the digital divide series produced by the U.S. Department of Commerce (National Telecommunications and Information Association, 1998, 1999, 2000, 2002). These studies have found that the divide cuts along the lines of ethnicity and race, geographic location, household composition, age, education, and income level. These and other studies have also documented that these gaps are persistent but closing (Goslee & Conte, 1998; Hoffman & Novak, 1998; Spooner & Rainie, 2001).

When we look at any particular demographic group, however, the analysis is much more complex and contradictory. For example, most research on the digital divide for African-Americans has centered on physical access to computers and Internet in the home, as well as technical skills to operate computers and information literacy skills to engage with content. These researchers have found that African-Americans are less likely to have ICT access and skills, even when controlling for other factors, such as income and education (Mossberger & Tolbert, 2003). The Pew Internet and American Life Project suggests that these gaps are closing, but African-Americans with access to the Internet do not go online as often on a typical day as whites do (Spooner & Rainie, 2000).

Blacks also tended to use ICT differently than other racial and ethnic groups. Novak, Hoffman, & Venkatesh (1997) summarize previous research on African-Americans with regard to different media as follows:

African-Americans have the highest participation in radio and TV and the lowest participation in newspapers. In terms of our classification, it means that historically, they have participated in greater measure in entertainment-oriented technologies rather than in information oriented technologies. Previous studies have also shown that African-American ownership of telephones is lower than white ownership, which may be due in part to differences in income.

They go on to theorize that culture helps to explain these results. African-Americans have found their social expression historically through the arts, and have been less successful in gaining entry to other dominant domains such as business, education, technical employment, and professional occupations. Culture may also help to explain Spooner & Rainie's (2000) observation that online African-Americans are 69% more likely than online whites to have listened to music on the Web, and are 65% more likely than online whites to have sought religious information on the Web. Music and spirituality has traditionally been integral components of African-American culture.

Although African-Americans may use ICT relatively less than other ethnic groups, they have more positive attitudes toward ICT than do similarly situated whites (Mossberger & Tolbert, 2003). Kvasny (2003) found that working class African-American women believed that ICT skills would prepare them for higher paying jobs, and improved their parenting abilities. In a study of ICT adoption in community technology project, Youtie et al. (2002) found that African-American women were among the highest adopters of cable TV-based Internet devices.

Although African-Americans harbored favorable attitudes towards ICT, these same technologies may have little impact on social inclusion. In a more recent study, Sipior, Ward, Volonino, & Marzec (2004) examined the digital divide in a public housing community in Delaware County, Pennsylvania. With 31 African-American participants with ages ranging from 13-65, these researchers concluded that effective community-based programs could help reduce the divide. While these interventions notably have improved computing skills about underserved groups, a one-time shot fails to eliminate or even reduce broader feelings of cultural isolation among minority groups.

MAJOR ISSUES

When analyzing the digital divide literature, one of the foremost issues is whether a gap still exists. For example, in an article titled "True Nature of the 'Digital Divide' Divides Experts" (Jerding, 2000b), four technology watchers provided radically different standpoints. Mark Lloyd, an executive of the Civil Rights Forum on Communications Policy, states that technology inequality is the latest in a history of economic gaps. In his view, although private enterprise has put forth altruistic efforts, "real government action" was needed to bridge this void. Rick Weingarten, the director of the Office for Information Technology Policy, states that being connected wouldn't solve the problem. What is really at stake is the quality of access such as high-speed access and complex information literacy skills. Professor Jorge Schement believes that the digital divide will persist until Americans can put a face on the problem. So long as this is seen as a problem of the "Other," it can be more easily ignored and rationalized. The final panelist, Adam Clayton Powell II, denies the existence of a digital divide. Using the National Telecommunications and Information Administration studies, he argued that the gap between ethnic groups has dissipated. For him, the digital divide is largely a myth, and education rather than race or ethnicity was the highest barrier to technological access and effective use.

We contend that these debates about the existence of the digital divide result from a rather narrow treatment of a complex social phenomenon. In fact, many of the newer studies in this genre call for a rethinking of the digital divide (Warschauer, 2002; Gurstein, 2003; Hacker & Mason, 2003; Kvasny, 2003; Payton 2003). In what follows, we organize a discussion of the current trends in the digital divide discourse. We do so through a framework (Table 1) that contrasts two perspectives of access (technological and social) and two perspectives of use (asset-based and behavioral). Technological access focuses on the computing artifact, while social access focuses on know-how and competence. Asset-based perspectives view the divide as a deficiency in requisite resources, such as income or education, that enable ICT use, while behavioral perspectives tend to focus on the effectiveness of ICT use. Although these perspectives are presented as separate categories, authors tend to draw from both categories. For instance, the argument that the digital divide is based upon a lack of access to computing artifacts and computer skills suggests a technological access/asset-based perspective. An argument that the digital divide emerges from a lack of understanding about how to use ICT to further life chances adopts a social/behavioral perspective.

Table 1. Competing Perceptions for Examining the Digital Divide

Access Factors	Use Factors
Technological	Asset-based
Social	Behavioral

Technological and Social Access

The technological access view, with its focus on broad statistics on ICT diffusion and use rates, has led some policy analysts to assume that the answer lies in certain characteristics of the technology. Hence, policy solutions tend to employ technological fixes such as wiring public schools and libraries and providing computing resources with Internet access in poorer communities (Norris, 2001). We contend that an over reliance on descriptive statistics largely contributes to this technology-centric understanding of the digital divide. The more important question for studying as technological access increases is “what are people able to do with this access?”

We further argue that emphasis on quantitative descriptions of who has and who lacks access fuels debates about the degree to which the divide is temporary or permanent, whether the divide is widening or narrowing, or whether a divide exists at all. We have already seen the initial have/have not thesis superseded with the more complacent have now/have later prediction. Proponents of the have now/have later position argue that given enough time, competition will eventually alleviate any natural disparities in the marketplace.

Digital divide interventions informed by a technological access perspective are likely to subside once the technology gap has been narrowed through various programs and policies designed to distribute these resources more evenly. From this perspective, the digital divide would not warrant long-term policy remedies. High profile, short-term injections of government, foundation, or corporate assistance will occur until such time as the technology diffusion problem is lessened. Then, further critical attention to social inequities that are deeper than descriptions of technology access and use may be stifled. The digital divide will be simply defined away (Kvasny & Truex, 2001). For instance, in 2002 the Bush Administration declared the end of the digital divide and proposed deep cuts to federal digital divide programs. The biggest proposed cut was levied against the Technology Opportunities Program (TOP), a federal grant program designed to bring aid to communities that are lagging in access to digital technologies. Under the Clinton administration’s 2001 budget, the program distributed \$42 million in grants to 74 different non-profit organizations. In 2002, that number fell to just over \$12 million (Benner, 2002).

Analysts and researchers who adopt the social access perspective critique this shortsightedness, and assert that the technological access paradigm ignores social constraints, such as workforce literacy, income differentials, and the inevitable household tradeoffs required in making a PC purchase. Simply put, Maslow’s Needs Hierarchy must be addressed from the most fundamental level if one is to progress to higher-order affiliation. The digital divide reflects not only differences in the structure of access, but also the ways in which historical, economic, social, cultural, political and other non-technological factors make such differences matter. Technology-centric solutions alone will do little to redress these aspects of the digital divide.

Asset-Based and Behavioral Perspectives

As access diffuses to historically underserved groups, use also becomes an important basis for studying the digital divide (DiMaggio & Hargittai, 2001; Patterson & Wilson, 2000; Warschauer, 2002; Gurstein, 2003). From an asset-based perspective, computer and Internet access are insufficient without the requisite skills and competencies to use the technology effectively (Mossberger, Tolbert, & Stansbury, 2003). These authors take historically underserved groups as their subjects, and point out the ways in which their use of ICT may be hampered. For instance, in a study of African-American youths, Payton (2003) found that these youths were 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. Hargittai (2001) introduces the concept of “second level divides” to signify the disparities in computer skills and how these disparities are patterned along age, racial, gender and income categories. She found, for example, that search time was positively correlated with age, and negatively correlated with education and prior experience with technology.

In contrast, the behavioral perspective sees the digital divide in terms of disparities in benefits like social inclusion, economic opportunity and political participation that one derives from ICT use. These disparities provide primary justification for realizing that the digital divide is a public problem and not simply a matter of private misfortune (Warschauer, 2003). Groups that are historically underserved in their quality of employment, their level of qualifications, their level of income, their quality of education, and their consumption opportunities tend to also be marginalized in their access to and use of IT. The digital divide, therefore, is a political outcome rooted in these historical systems of power and privilege, and not simply a gap in access to technological artifacts.



Promoting access and basic training to improve the computer skills of individuals is warranted, but may do little to redress the social forces that may limit these actions in the first place. From the behavioral perspective, the divide is about disparities in what individuals and groups are able to do with their ICT access. Gurstein (2003) contends that effective use of ICT occurs when people are able to use ICT purposively and independently to improve their life chances in culturally relevant domains such as economics, employment, health, education, housing, recreation, culture, and civic engagement.

FUTURE TRENDS AND CONCLUSION

Despite one's alignment regarding the nature and context (technological or social access; asset-based or behavioral use) of the digital divide, the topic warrants reconceptualization. Holistic approaches and frameworks will assist academic, government and industry leaders to first understand the "Other" and the social conditions under which these groups function. Technology access and skills can equip; however, taken in isolation, they cannot sustain, maintain, or offer access to the social, financial, or educational networks needed for empowerment of the "total person."

Thus, as digital divide research matures, there is a continued need to better understand the social dimensions of access. Kling (2000) contends that we do not have a good understanding of the ways that social access to the Internet is effectively supported for ordinary people at home and in public service agencies, such as schools and libraries. This is a topic that merits significant inquiry, since a large body of research points to its importance. He also argues that it is important to examine the specific kinds of networked services that will actually be of value to ordinary people. This goes beyond the current survey research and laboratory studies that contrast the use of ICT by various demographic groups. We need to understand why groups use ICT in the manner that they do, be appreciative of the culture relevance, and study how people use ICT in various contexts such as work, home, churches and public access facilities.

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KEY TERMS

Content: The various genres of information available on the Internet. For instance, local content is information that is specific to a community, neighborhood, or area, such as businesses, housing, neighborhood services, and recreation activities. Community content is information about the neighborhood that promotes community development and facilitates community building. Examples include a listing of places where GED courses are offered, or a newsletter. Culturally relevant content is information that is significant to people with different cultural backgrounds.

Digital Divide: Refers to the gap that exists between those who have and those who do not have access to technology (telephones, computers, Internet access) and related services.

Effective Use: The capacity and opportunity to integrate information and communication technology into the accomplishment of self or collaboratively identified goals. What is most important is not so much the physical availability of computers and the Internet but rather people's ability to make use of those technologies to engage in meaningful social practices.

Historically Underserved Groups: Refers to those who lack access to computers and the Internet. Historically this has included Americans who have low incomes, live in rural communities, have limited education, and are members of racial or ethnic minorities.

Social Access: Refers to a mix of professional knowledge, economic resources, and technical skills to use technologies in ways that enhance professional practices and social life.

Social Inclusion: Refers to the extent that individuals, families, and communities are able to fully participate in society and control their own destinies, taking into account a variety of factors related to economic resources, employment, health, education, housing, recreation, culture, and civic engagement.

Technological Access: Refers to the physical availability of suitable information and communication technologies, including computers of adequate speed and equipped with appropriate software for a given activity.