

Insisting on Digital Equity:
Reframing the Dominant Discourse
on Multicultural Education and Technology

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Although definitions of multicultural education in the U.S. vary, a review of scholarship by the field's leading and pioneering voices (Nieto, 1995; 2000; Sleeter, 1996; 2003; Grant & Sleeter, 1998; Banks, 2004) reveals a critical point of agreement: Multicultural education, at its heart, is social reconstructionist in nature, a movement to identify and eliminate the inequities and injustices that plague our schools, societies, and world. So although individual educational practices, programs, or resources may be *consistent with or reflective of* multicultural education philosophy, authentic multicultural education is achieved only through systemic and comprehensive school reform—through the identification and elimination of racism, classism, sexism, heterosexism, and other inequitable distributions of privilege and power. In other words, multicultural education's chief concerns are equity and social justice.

Unfortunately, most of the policies, practices, programs, and literature that pass as multicultural education seem concerned more with *celebrating the joys of diversity or learning about cultures* than about equity and social justice (Jackson, 2003; Nieto, 2000; Gorski, 2006). As a result, much of what people call “multicultural education” results more in supporting stereotypes and sustaining inequities than demolishing them (Díaz-Rico, 1998; Cochran-Smith, 2004; Gorski, 2006). For example, many U.S. schools sponsor “multicultural” assemblies, guest speakers, food festivals, craft fairs, and other feel-good diversity programs, but very few demonstrate a deep, consistent commitment to uncovering, much less eliminating, the oppressive conditions that pervade the education system. Likewise, many local U.S. school systems host “multicultural” conferences or professional development workshops, but very few dedicate to addressing the systemic inequities in educational opportunity and access between their wealthiest and poorest students.

And all indications are that this depoliticizing of multicultural education will grow worse before getting better. This is due, in part, to an overall rightward shift in U.S. politics which, in turn, has spawned a myriad of education policy hostile to multicultural education. The result: standardization, privatization, corporatization, high-stakes testing, and millions of teachers feeling pressured to abandon any activism or classroom practices that do not prepare their students for federal- and state-mandated tests.

Given this sociopolitical context, if we intend to consider technology from an authentic multicultural education framework, we must begin by acknowledging the inequities that exist in our schools. We must acknowledge, too, that these inequities do not disappear when we add computers and Internet access to classrooms. I was not always so insistent on this point. Truth is, I wrote a dozen essays and the first edition of a book (*Multicultural Education and the Internet: Intersections and Integrations*) praising the multicultural education potentials of computer and Internet technologies before I ever wrote about digital inequities. I bowed to the temptation so often presented by new technologies, assuming that technological progress meant social progress. It doesn't. So before we exalt at the enriching cross-cultural learning opportunities, resource-rich educational Web sites, and multicultural professional development potentialities made possible by technology, we must ask ourselves some critical questions: *Who has the easiest, most consistent access to these resources? How are educators using technology differently with different populations of students? Who stands to gain the most—economically, politically, and so on—from the growing urgency to technologize schools*

and classrooms? What are the equity and social justice implications of this educational technology craze?

I do not intend to answer these questions fully in this essay. They require the attention of a multi-faceted line of inquiry, which is more than one person can undertake. However, I do intend to challenge those of us (including myself) who work at the intersections of multicultural education and instructional technology to reject the softening of multicultural education; to frame the conversation about multicultural education and computer technologies by thrusting equity and social justice concerns to the fore; to temper the enthusiasm about this or that technology, this or that Web site, this or that “best practice” with the realities of pervasive digital inequities. And I intend to reignite a sense of urgency to tackle these inequities *before* we dub computers and the Internet, as many already have, *the great equalizers*.

I begin by conceptualizing digital equity using a multicultural education framework. I then synthesize some of the ways in which digital inequities persist in the US, paying special attention to its implications for educational equity. I conclude by posing a series of challenges to multicultural education advocates—including myself—who write, teach, and speak about technology’s educational potentials.

Conceptualizing Digital Equity

Scholars, educators, and activists have used the term “digital divide” since the mid-1990s to describe disparities in access to computers and the Internet based on race, socioeconomic status, gender, and other social and cultural identifiers (Light, 2001). More often than not, “access” has been defined narrowly as *physical access*—as living, working, or learning in close physical proximity to these technologies (Gorski, 2003). According to this conception, if I live in a household or sit in a classroom in which a computer and an Internet connection exist, I have computer and Internet access. It matters not how I use these technologies (to conduct research or to play Solitaire), how obsolete my hardware is, how slow my connection is, or even whether or not I can afford software. Nor does it matter how often society, the media, or teachers tell me, implicitly and explicitly, that people of my gender or race or socioeconomic status are incapable of finding success in technology-driven fields; that we are no more genetically prepared for such endeavors than for advanced mathematics or the hard sciences.

So when, in August 2000, women surpassed men to comprise the majority of the US online population (National Telecommunications and Information Administration [NTIA], 2000), many information technology experts, policy-makers, and education activists proclaimed the end of the gender digital divide. *Not so fast*, warned scholars from fields like critical theory, feminist studies, and multicultural education, who had entered the national dialogue on the digital divide in the late 1990s. While it was true, they argued, that more U.S. women than men were using the Internet, girls and women continued to face a myriad of inequities related to technology. For example, that same year, 2000, young women represented only 17% of Advanced Placement computer science test takers and only 20% of information technology professionals (AAUW, 2000). Meanwhile, despite popular belief, the percentage of women pursuing technology-related careers has decreased steadily since the mid-1980s (Kramarae, 2001).

As critical consciousness demanded, these scholars rejected simplistic notions of technology “access.” They situated and analyzed the digital divide within larger analyses of racism, sexism, classism, linguisticism, ableism, and imperialism. They framed the divide as a *symptom* of these larger systemic inequities. And they began to ask deeper questions about the relationships between capitalism, globalization, the corporatization of schools, and the growing social and educational importance assigned to computer and Internet technologies.

From their work emerged the digital equity movement and its base concern: that most conceptions of the digital divide, and as a result, most programs designed to address it, are too simplistic and thus replicate the very power-oppression continuum they purport to eliminate (Gorski, 2003). Although the scholarship growing out of this movement has varied in scope, focus, and depth, contributing scholars and activists have been concerned consistently with three primary goals: (1) to challenge the notion that computers and the Internet are or can be the “great equalizers” of the U.S. or the world; (2) to uncover the ways in which these technologies, due to an unequal distribution of hardware, software, infrastructure, digital literacy, and other necessary forms of capital, are contributing to existing inequities; and (3) to expand the digital divide concept of “access” beyond physical access to include social, cultural, and political access to these technologies and the resulting potentials for social and economic benefits.

It is in the spirit of this movement, I believe, that any authentic conversation about multicultural education and technology must begin. And so it is with this lens—the digital equity lens—that I review the ways in which digital inequities persist in the U.S. and its schools.

Digital Inequities

Despite the popular belief that identity-based discrepancies in physical access to computers and the Internet is disappearing, substantial gaps remain. For example, while 70% of White adults in the U.S. use the Internet, only 57% of African Americans are online. Meanwhile, while 93% of households with annual incomes greater than \$75,000 have home Internet access, less than 49% of households with annual incomes less than \$30,000 have access (Fox, 2005). As stands to reason, then, economically disadvantaged children and children of color are more likely than their wealthy and white counterparts to live in households without computers and Internet access (Judge et al, 2004). Their peers with disabilities do not fare much better; people with disabilities in the U.S. have significantly lower rates of home access to computers and the Internet than people without disabilities (Lenhart, 2003). And even as these historically disenfranchised groups began making some progress in physical access rates, the broadband (high-speed access) revolution came along to re-widen the gaps (NTIA, 2004; Fox, 2005).

Although schools have inched closer to digital parity (Judge et al, 2004), inequities remain there, too. Overall, 94% of public school instructional rooms have Internet access, a significant jump from just 3% in 1994 and 77% in 2000 (NCES, 2006). But the percentage remains higher in schools with less than 6% students of color (96%) than in those with more than 50% students of color (92%). Similarly, 96% of instructional rooms in schools with low-poverty enrollments have Internet access,

compared with 91% in high-poverty schools. A review of data on student-to-computer ratios reveals the same trend: Schools with less than six percent students of color have, on average, one instructional computer with Internet access for every three students; schools with more than 50 percent students of color have one computer for every 4.1 students (NCES, 2006). And although similar data related to (dis)ability does not exist, Ability Hub (2002) reports that computers in both public and private schools frequently are ill-equipped for students with disabilities who need adaptive technologies in order to use them or access the Internet.

So even when we limit our analysis by the digital divide *physical access* model we find lingering inequities. But this is only the tip of the digital inequity iceberg.

When we dig deeper—when we broaden our concept of access—we find a vast, complex web of inequities, sociopolitical in nature, unsolvable merely by adding more or faster computers and Internet access to homes and schools. These include: (1) inequitable access to support and encouragement to pursue educational and professional interests related to technology; (2) inequitable access to affirming and non-hostile IT and cyber-cultures; and (3) inequitable access to affirming and non-hostile content.

Support and Encouragement to Pursue Technology Interests

Racist, classist, and sexist socializations teach us that certain people are not *supposed* to be interested in, or even capable of, technology-related educational and professional pursuits. Every time a teacher defaults to one of her or his male students to help trouble-shoot problems with audio-visual equipment, she or he sends a clear, if unintended, message: girls are not *supposed* to have the knowledge or skills to help solve such problems. This tendency is, of course, a symptom of larger, systemic oppression, part of the same set of messages that drives young women out of academic pursuits in math and science (Gorski, 2003).

But what may be even more insidious are the ways in which teachers and schools embed these messages in curricula and pedagogies. For example, whereas teachers working with predominantly students of color tend to use computer and Internet technology for word processing, skills and drills, and other lower-order thinking activities, their colleagues in schools with predominantly white students tend to use these technologies to encourage critical analysis, construction of ideas and concepts, and inquiry (Solomon & Allen, 2003). Similar patterns are observed across socioeconomic status: Students in high-poverty schools are more likely to use computers and the Internet for rote learning while their peers in low-poverty schools use them for higher-order thinking activities (Becker, 2000; Judge et al, 2004). So as economically advantaged white students, on average, are being socialized and trained to participate in an increasingly computer-reliant society and world, many students of color and economically disadvantaged students are being socialized and trained to see computers more or less as giant calculators or digital flashcards.

These trends are due, in part, to teachers' inequitable access to resources and support to use these technologies in pedagogically sound ways. According to the National Council on Educational Statistics (2002), compared with teachers in schools with less than 6% students of color, those in schools with 50% or more student of color enrollment are less likely to have training in the use of the Internet (82% compared with 70% having

been trained) and less likely to have assistance in using the Internet, such as an on-site technology specialist (76% compared with 65%).

In order to understand these inequities in their true complexities, we must understand them as part of the larger landscape of racism, classism, and sexism in our schools and society. The pedagogical trends mirror exactly the larger discrepancies in students' access to higher-order thinking instruction. The inequities in teachers' access to the resources and support they need also mirror larger race and class inequities in U.S. schools. Likewise, the patterns of gender socialization are consistent with a history of sexism and male privilege in the U.S.

And in an increasingly techno-centric world, the implications of these socializations are devastating. For example, as mentioned earlier, women represent 17% of Advanced Placement computer science test takers. They represent only 10% of the more advanced AB test takers (AAUW, 2000). Women earn only 27% of bachelors degrees in computer science (National Science Board [NSB], 2006)—the same percentage they earned in 1997 (NCES, 1999), despite the fact that, during the same period, the overall percentage of bachelors degrees earned by women increased dramatically (NSB, 2006). Some studies even suggest that the masculinization of computers and the Internet lead women to resist pursuing technological interests for fear of undermining their femininity (Schofield, 1995; Jenson et al, 2003).

Similarly powerful evidence demonstrates how these inequities influence people of color. Research indicates, for example, that African American and Latina(o) people are much more likely than their white counterparts to view or use computer and Internet technologies for entertainment purposes. White people, on the other hand, are more likely than people of color to use these technologies to seek financial or health information (Spooner & Rainie, 2000; Saunders, 2002). Although studies have not uncovered a direct cause-and-effect link between certain kinds of socialization and these discrepancies, it is difficult to dispute that the dynamics in play are consistent with larger patterns of racism, classism, and sexism.

Affirming and Non-hostile IT and Cyber-cultures

In 1999 the Economic Development Administration (EDA) uncovered a variety of sociopolitical barriers to improving the technology infrastructure of Native American communities. Among these barriers was federal policy that fails to consider the severity of technology gaps faced by Native peoples (EDA, 1999). In fact, since 1998 the U.S. government has published a vast array of reports related to gaps in technology access across race, socioeconomic status, level of education, (dis)ability, and other identities, but for reasons unexplained in these reports, the government agencies conducting this research stopped collecting data on computer and Internet access and use among Native Americans after 1999. According to Kade Twist (2002),

The Bush administration is effectively removing Indians from the public discourse relating to the digital divide, placing them at a further disadvantage in the emerging economy. Furthermore, the exclusion of Indians leaves federal decision makers without evidence of a problem or a solution—it's simply an act of avoidance. (p. 1)

The invisibility of Native communities is not new, nor is it unique to issues of digital equity. But it both deepens and helps explain, along with a long history of racism, other barriers identified by the EDA (1999) study—namely, Native communities’ distrust for new technologies and their distrust for federal assistance. A related mistrust has been found among African Americans, 72% of whom are “very concerned” about businesses and other people obtaining their information online, compared with 57% of white Internet users (Gandy, 2001).

Nothing is more hostile, nothing breeds a culture of greater distrust—than being rendered silent, invisible. But this is what the cultures surrounding computer and Internet technologies have done to already-disenfranchised groups in the U.S. And it doesn’t stop at race.

These cultures, constructed by men and for men, are at best unwelcoming to girls and women (Gerrad, 1999; Grigar, 1999; Gorski, 2003). For example, despite the common assumption that the Internet can be an important tool for facilitating democratic dialogue free from the sexist dynamics of face-to-face inter-gender communication, research reveals that these dynamics are reproduced almost exactly online (Herring, 1993; Castner, 1997). These dynamics are reinforced by often-implicit messages from the media that women are not welcome in information technology circles (AAUW, 2000). But they also come straight from the information technology industry itself, whose advertisements have been found to draw on gender role stereotypes (Marshall & Bannon, 1988). To make matters worse, girls and women face a persistent threat of cyber-harassment and cyber-stalking (Brail, 1996; Gorski, 2003).

People with disabilities experience a similarly hostile information technology culture. As mentioned earlier, public computer labs as well as computers in public and private schools frequently are not equipped for students needing adaptive technologies (Ability Hub, 2002). Consistent with this finding, the majority of computer and Internet educational workshops are not designed to accommodate people who need adaptive resources, all but forcing many people with disabilities into segregated workshops (Kearns, 2001). In fact, a study by the International Center for Disability Resources on the Internet shows that a majority of people living without disabilities assume that people with disabilities have no reason to access the Internet (Kearns, 2001). The study reveals, as well, that these attitudes lead people with disabilities to be “hesitant to use the Web for fear of seeming ignorant or unknowable” (p. 4). Following logically, repressively, from these sociopolitical realities is a widespread lack of compliance with Web disability accessibility standards. After all, if people with disabilities do not use the Internet, why would we expend the effort to make Web sites accessible to them?

Again, what is clear is that these technologies are not, in and of themselves, the great equalizers. In fact, as it stands, they more often seem to be tools for further embedding existing inequities and oppressions. So if I, as a teacher, intend to use computers and the Internet in my teaching, I must understand these dynamics of culture and hostility, of privilege and power, in techno-space to the same extent that I understand them in my classroom.

Affirming and Non-hostile Content

I also must think as critically about the content of computer software and Web sites as I do about the other learning materials I use. Because research shows that even when disenfranchised groups do gain physical access to these technologies, they often struggle to find affirming and non-hostile content.

This reality may be most prevalent for girls and women. The prevalence of online pornography—the most lucrative Internet industry—can create, in and of itself, a discomforting online atmosphere for women. But it gets worse. A plethora of studies have shown how educational software often cycles sexism by depicting girls and women in stereotypical and subservient roles, if girls and women appear in them at all (Birahimah, 1993; Hodes, 1996; AAUW, 2000). Demonstrating, yet again, how digital inequities are tied to larger forms of oppression, the American Association of University Women (AAUW; 2000) found that, despite the overwhelming evidence that such disparities exist, more than half of all classroom teachers fail to notice these patterns.

Sexist conditions similarly exist in another computer industry: video games (Gorski, 2003). Although research shows that girls and women have little interest in video games with redundant violence (AAUW, 2000; Kelly, 2000), 89% of top-selling games contain violent content (Glaubke et al, 2001). Most women in these games are trophies for victorious male characters. And even games, like the best-selling *Tomb Raider*, that challenge norms by employing strong, heroic female lead characters tend to do so in highly sexualized ways, portraying them as sexual objects for heterosexual male consumers (Gorski, 2003).

While girls and women face hostile content, some groups, such as economically disadvantaged Internet users, struggle to find any relevant content at all. According to a study by The Children's Partnership (TCP; 2003), the resources low-income Internet users in the U.S. most want to find online scarcely exist: local job listings (including entry-level positions), local housing listings (including low-rent apartments and homes in foreclosure), and local community information about schools and healthcare services. Additionally, due to the interrelatedness of socioeconomic status and literacy (another symptom of systemic classism), many low-income Internet users find very few Web sites accessible. They even struggle to locate limited-literacy resources such as information about working toward high school equivalency degrees, sites that incorporate graphics to help users improve reading skills, and tutorials for using computers and the Internet more efficiently (TCP, 2003).

Like socioeconomically disadvantaged people, speakers of languages other than English who find their way online are unlikely to find culturally relevant resources there (Resta & McLaughlin, 2003). A study of 1,000 of the top U.S.-based Web sites reveals that only 2% offer any content in a language other than English (TCP, 2003). Furthermore, the limited non-English content offered by popular Web portals like *Yahoo!* tends to focus on entertainment rather than daily life needs. Even sites like *LatinoWeb*, perhaps the most popular Latina(o)-focused Web portal, reinforces this inequity, offering links to business, industry, and health information in English only while providing links to shopping Web sites in Spanish. U.S.-based Web search engines contribute to this inequity, as well, as most are not designed for non-English searches. But even U.S.-based search engines for languages other than English pale in comparison to their English-

focused counterparts. According to TCP (2003), users of the former have a one in five chance of finding information relevant to their searches whereas users of the latter have only a one in eight chance of doing so.

Add to all of these dynamics the growing use of these technologies by hate groups in the U.S. peddling everything from white supremacy to Islamophobia to heterosexism, and we're left with the undeniable conclusion, again, that computers and the Internet *can be* contemporary tools of oppression just as easily—perhaps *more* easily—than tools of multicultural education.

Our Challenges

We—those of us who define our work as multicultural education—must dedicate to keeping these and myriad other dimensions of digital inequity at the fore of the conversation about multicultural education and technology. We must challenge ourselves to fight for equitable access to these technologies in the broadest possible sense *before* or, at the very least, *while* we rave about their potential contributions to multicultural curricula. When we fail to do so, we fail in our commitments to the chief goals of multicultural education: equity and social justice.

In the spirit of recommitting to these goals I offer the following challenges. I offer them as much to myself—as part of my own quest for growth and reflection—as to my multicultural education and instructional technology colleagues.

Challenge One: We must never write about, speak about, or encourage philosophical intersections of multicultural education and technology without acknowledging digital inequities. For example, we must acknowledge that innovative uses of technology for multicultural education are innovative only for the people who have access to them—that is, access in the broadest sense.

Challenge Two: We must refuse to advocate for the growing role of computers and the Internet in education until all teachers, regardless of the composition of the students they serve, are trained to integrate these technologies in progressive and pedagogically sound ways.

Challenge Three: We must discuss digital inequities, not as individual phenomena, but as symptoms of larger systemic inequities. And we must challenge strategies for “closing” or “bridging” the digital divide that fail to consider digital inequities in this broader context.

Challenge Four: We must advocate cost limits on computers, educational software, Internet access, and adaptive technologies.

Challenge Five: We must encourage school systems to place educational technology specialists in every school. And we must insist that these specialists be trained educators, not merely information technology experts.

Challenge Six: We must refuse to publicize popular Web portals such as *Yahoo!* until they provide more non-English and limited literacy content.

Challenge Seven: We must critique publicly the notion that technological progress necessarily is synonymous with social, cultural, and humanistic progress. And we must produce more and deeper scholarship on the relationships between technological progress

and globalization, corporatization, imperialism, and other processes for concentrating power and privilege.

Challenge Eight: Finally, and most importantly, as with any work that we call multicultural education, we must push ourselves, ever vigilantly, to push beyond *celebrating the joys of diversity*, beyond learning about this or that culture, and to ask ourselves, *How can we use these technologies to further the cause of equity and social justice in schools and society?*

Anything less can scarcely be called authentic multicultural education.

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