

MULTICULTURAL EDUCATION AND TECHNOLOGY EDUCATION: INDEPENDENT MOVEMENTS ON PARALLEL PATHS

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Abstract: Over the last few decades, two major forces affecting the lives of second language learners have emerged in educational systems throughout the world: the increasing diversity of student populations and emerging technological advancements. The juxtaposition of these two phenomena presents an opportunity to bring together two educational movements: multicultural education and technology education. These entities are examined as parallel social movements whose convergence would provide the momentum for needed changes in today's educational systems.

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INTRODUCTION

There is a major global shift afoot. The emergence of global market economies, the information and technology revolution, and

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the unprecedented levels of immigration have led to a new era of globalization (Spring 2009, Suarez-Orozco 2001). “Businesses seek students with the knowledge and skills to succeed in the international marketplace of today’s information-based society” (Gabbard and L’Esperance 2002:343). We must prepare our students for a new world in which technology extends our reach and entire populations are transient due to displacement caused by war, relocation related to job transfers within multinational corporations, and general migration for quality of life improvement. Such global shifts signal new times for our global community and new needs for our educational systems.

The digital divide is a symptom of inequities across a broad societal context that includes racism, sexism, gender, and other social injustices. A better understanding of that fact will help conceptualize the need to institute multiculturalism as the framework for all education. Educational leaders searching to close the gap must embrace a new understanding that technology is not culturally neutral, but is rather a new way of conveying information that perpetuates old inequities under the old cultural context that serves the privileged. It is important to temper the enthusiasm about technology until the “pervasive digital inequities” (Gorski 2007:3) are eliminated. Before we hail computers and the Internet as “the great equalizers” (Gorski 2007:3), we must create a partnership between multicultural education and technology education that will meet the demands of the nation’s ever-changing population.

Educational change is vital if our young people are to be prepared to live, work, and socialize in a world where distance and proximity no longer determine access to success. Such changes can take place through the channels of information created by two parallel educational movements: multicultural education and technology education.

MULTICULTURAL EDUCATION

Multicultural education is both a philosophical stance and movement that embraces diversity; multiculturalism assumes that the diversity of a pluralistic society should be reflected in all of the structures of educational institutions (Banks 2010). Multicultural education is a broad concept that includes not only the integration of diverse content into the curriculum, but also the incorporation of the diverse ways of constructing knowledge. “Multicultural education needs to be more broadly defined and understood so that teachers from a wide range of disciplines can respond to it in appropriate ways and resistance to it can be minimized” (Banks 2010:20). Multicultural education also strives to reduce prejudice and promote social equity (Banks 2004), a dimension of multicultural education that is reflected throughout the literature on the topic.

According to the goals of the National Association of Multicultural Education (2010), educational institutions should encourage students to respect and appreciate cultural diversity; expose students to culturally responsible curricula in an effort to develop in students the attitudes, skills, and knowledge to function in our multicultural world; and empower students to strive to eliminate discrimination and achieve equity. Teaching students to understand and appreciate diversity is just the first step in the process of pluralizing the curriculum, although it certainly provides the foundation of multicultural education. Diversity, then, warrants discussion.

Although diversity is commonly described in terms of race, ethnicity, nationality, gender, economic group, language, religion, ability, age, and sexual orientation, there are many other group identity constructs that involve differences in power and privilege from one group to another (Noel 2008)—and these differences affect education. “At the same time that diversity becomes an integral part of education, students learn about similarities across groups. They also learn to be active and contributing participants in a democracy in

which diverse groups work together to forge a better society” (Grant and Ladson-Billings 1997:94). The United States is one diverse nation that is often regarded as a leader in education; yet, Damarin reminds us, “The architects of American education were primarily Eurocentric men, and our educational systems bear the legacy of their sociocultural assumptions” (1998:12). However, education that embraces diversity and promotes equity must represent all cultural groups (Hilliard 1991/1992:12).

Thus, educators must consider the notion that the Eurocentric curriculum that has served to shape the lives of so many students has not benefitted all students equally. In fact, because education is one of the most significant social institutions, many contend that it is the very institution that serves to perpetuate inequities (Dewey 1966, Freire 1970, Giroux 1997, Kozol 1991, Spring 2007). Drastic discrepancies that exist among our schools in funding, program quality, and accessibility of resources – particularly in technology education—seem to predict the differences in student outcomes that continue to reflect cultural inequalities in our society. These disparities persist throughout the years, from kindergarten to college (Finklestein 2000, Kozol 1991, Polakow 2000).

Willingness to consider education from this point of view presents a dilemma for teachers and educational leaders, who are often expected to maintain the status quo rather than critique it. Meyers and Jones (1993:8) describe at dilemma in the following way:

Though it is trite to say that a white, male, hierarchical system has dominated higher education, teaching too often has reflected an authoritarian, detached, and competitive style that leaves little room for the views of women and other cultures.... Such an environment robs teachers of the opportunity to learn what women and students of color have to offer and disregards the fact that their intellectual development can take different forms as a function of their gender and culture.

The fact that there are different forms of knowing and learning is painfully apparent to those whose background does not reflect the cultural mainstream, but, ironically, it can be invisible to members of the mainstream. McIntosh concurs: “It seems to me that obliviousness about white advantage, like obliviousness about male advantage, is kept strongly inculcated in the United States so as to maintain the myth of meritocracy, the myth that democratic choice is equally available to all” (1995:5). McIntosh also believes that restructuring power systems to include minority cultures will require decades of consciousness-raising regarding the Eurocentric dominance in education and society, in general.

Another potential source of culture clash in the classroom is the fact that, as the number of minority students continues to rise, the percentage of minority teachers and teachers-in-training is falling (Delpit 2006, Noel 2008, Spring 2010). Scholars are calling for systemic change to create education that is culturally meaningful for all students, not just the privileged who are born into the “culture of power” Delpit (2006:24), those who are the dominant voice in the framework of their educational systems. “There can be no doubt that issues of diversity form the crux of what may be one of the biggest challenges yet to face those of us whose business it is to educate teachers” (Delpit 2006:105).

Serious examination of the power and knowledge construction framework exposes the cultural inequities of our present system of education. Clearly, multicultural education is more than a curricular issue. Multicultural education also includes educational goals related to creating a school culture that empowers students to achieve equity and eliminate discrimination (Delpit 2006, Feagin, Vera and Imani 1996, Gregory 2000, Hurtado, Milem, Clayton-Pedersen and Allen 1999, Redden 2002). These “social justice goals” clearly overlap with the goals of technology education, another emergent social movement that is quickly changing the landscape of our educational system.

TECHNOLOGY EDUCATION

Technology education incorporates electronic computers, communications, and other multimedia devices into schools and curricula in order to help students develop the expertise required for the workplace and daily participation in society. The rapid growth of these technologies is shifting the parameters of society's expectations that graduates demonstrate literacy and competence in a virtual world.

Electronic technology, like multicultural education, is rapidly being integrated into almost every aspect of academia. Both electronic technology and multicultural education address the need to examine curriculum and pedagogy to ensure that they support a pluralistic, multicultural learning environment. In both movements, researchers are concerned about inequalities relating to computer access between groups of people based on one or more social or cultural identifiers, a familiar phenomenon known to educators as the “digital divide” (Gorski 2001). The term refers to those members of privileged racial groups with higher rates of access to computers, such as U.S. Whites, as compared to those racial groups with lower rates of access, such as U.S. Blacks and Latinos. Delpit (2006:xxv) posits, “The worldviews of those with privileged positions are taken as the only reality, while the worldviews of those less powerful are dismissed as inconsequential.” This is a crucial issue in understanding the digital divide.

THE DIGITAL DIVIDE

In the mid-1990s, the term “digital divide” strictly referred to unequal access to information technology. However, public debate has revisited this term more recently and has redefined it as not just a technology access issue, but rather as a reflection of broader social problems. Gorski (2007:8) suggests, “... research shows that even

when disenfranchised groups do gain physical access to these technologies, they often struggle to find affirming and non-hostile content". Making computers and software available to all is still extremely important to the future of America, but public leaders must also realize that computers are not the panacea for social and cultural problems. In fact, the digital divide is caused by more than mere lack of physical access to technology.

According to Light "The concept of the digital divide is best understood as an artfully constructed public problem, only one way among many to frame and to measure inequality in the information society" (2001:709). However, access to technology is not the only issue related to skin color or socioeconomic class; technological inequities were also found in the way diverse students use technology in the classroom. Researchers discovered that teachers with a high percentage of White students, and with a low percentage of low-income students (those with free or reduced lunch), were more likely to use technologies in the classroom for creative and critical thinking activities (Gorski 2001). Conversely, teachers in schools with a high percentage of students of color, and with a high percentage of students on free or reduced lunch, were more likely to use computers and the Internet for skills and drills. The implications of this disparity in the use of technology in education are significant. Gorski poses the question, "Are computers really contributing to education equity or supporting current systems of control and domination of those groups already historically privileged in the United States education system (such as White people, boys and men, first language English speakers, and able-bodied people)?" (2001:1). Therefore, ongoing critique of instructional technology based on the principles of equity and social justice is crucial.

TECHNOLOGIES REDEFINE SOCIAL PROBLEMS

In discussing how technologies are merely changing—but not necessarily solving—the problems that educators had hoped for,

Light (2001), describes another important event in history: the hand calculator introduced in the 1970s and 1980s. Many educational leaders believed that making these calculators available to underachieving students would close the gap in mathematical performances. The results of a study made by the National Assessment of Educational Progress (NAEP) and the Third International Math and Science Study (TIMSS) were disappointing in showing that while the access gap had closed, the performance gap had not. Despite access to calculators, there was no substantial change to the achievement outcomes, leaving the inequality gap virtually unchanged. From the calculator example, one might infer that even though the access gap is closing between White students and students of color, one cannot assume that the other social inequalities associated with the digital divide will disappear. It is likely that multicultural inequalities will still prevail, regardless of access equality, as technologies are intertwined with the society.

Those who create the technologies, and those who decide the context in which technologies are used, appear to have the most influence on those who will experience the greatest success using them. However, it is important not to de-emphasize the significance of students having access to computers. Educational scholars agree that increasing the use of computers is a good initiative, whether or not they serve to improve social and economic inequalities for all students.

WHY NOT CONVERGE?

Since the goals for both multicultural education and technology education are based on the fundamental principles of equity and social justice, the convergence of the two movements deserves consideration. Yet, since these two agendas are almost totally independent of each other (Damarin 1998), it is unlikely that these two dynamic educational forces will intersect without major collaborative changes in perspectives by those who drive them.

Marshall concurs, “In recent years multicultural education and technology have emerged as key issues in teaching and teacher education. But whether they represent pedagogy's perfect pair or its odd couple is still being determined as teachers at all levels seek ways to integrate the two” (2001:1).

Participants from a variety of disciplines must come together in order to devise plans that will facilitate the immersion of multicultural education into all areas of the educational curriculum, a task that is multifaceted and complex. Scholars and instructional leaders in the field of education agree that the mission for educational and social change requires reconfiguring the educational system to meet culturally diverse needs. Since technologies are incorporated into many aspects of school curricula, the use of culturally rich software programs, telecommunications, and informational websites can help eliminate social prejudices and encourage equitable pedagogies. Technology education is a logical place to promote further change that will serve to provide the best learning opportunities possible for today's youth.

Even though these educational movements are similar in that they are both grounded in equity and social justice, there is one major difference between them. The distinction is that multicultural schema has materialized primarily from political activists, while the electronic technology agenda has been created largely through a combination of powerful corporate and government construction and support.

Nevertheless, common ground exists (Pittman 2007). Empowering the oppressed by providing them the intellectual tools for creating a just society will allow people to build self-worth and to escape dependency on their oppressors. Educators can and must play a pivotal role in the call for action to generate robust solutions to technology's gap—the digital divide—and the gap between multicultural education and technology education.

A CALL TO ACTION

James A. Banks, a leader in the field of multicultural education, outlines five critical dimensions of multicultural education: content integration, knowledge construction, prejudice reduction, equity pedagogy, and empowering school culture and social structure (Banks 2010, Marshall 2001). Virtually all aspects of Banks' vision of multicultural education are directly related to technology education. Therefore, these five critical dimensions can be used to guide the convergence of multicultural education and technology education.

Content integration suggests that curricula should be expanded by adding culturally diverse ideas into all academic subjects. This consists of far more than just a “superficial sprinkling” of beliefs, customs, and practices of people from ethnicities and backgrounds other than those people of White, middle-class European ancestry (Hilliard 1991/1992:14). It is a deep and meaningful integration of diverse content across the curriculum. This same concept can be applied to technologies and the companies that create electronic equipment and software programs, which must thoroughly incorporate multicultural content in meaningful ways, rather than add on superficial “items from the culture and experiences of minority and subaltern groups” (McCarthy, Giardina, Harewood and Park 2003:462). Technology is the logical channel to expedite the integration of multicultural content into the curriculum.

Incorporating different ways of constructing knowledge, the second critical dimension, is essential to reach all students, since different students have different worldviews (Spring 2008). This challenge can be met through technology education, as well, by “break[ing] down the information schemas of our expert learners to open up their minds to the different ideas, perspectives, values, and actions of different cultures” (Bigrigg and Filipiski 2007:1). The application of multicultural knowledge systems into software

systems is a positive, forward movement in progress that serves to converge cultural diversity and technology education. Indeed, since technology inherently incorporated non-traditional methods of learning about the world, it can provide a useful method of incorporating diverse ways of knowing into educational systems.

The third and fourth dimensions, *prejudice reduction and equity pedagogy*, can be accomplished in technology education by training current educators and pre-educators in pedagogical methods appropriate for today's highly diverse, complex classrooms. Workshops and college courses designed to inform and train educators in current technologies and multicultural diversities are needed to develop awareness among educators. If we want our classrooms to adequately educate our students, we must prepare our educators through training in web-learning technologies that are ethnically sensitive, as well as provide culturally rich student teaching placements for future teachers. "Equity pedagogy is about equalizing opportunities to learn" (Marshall 2001:3). As new pedagogies are brought into the classroom, student awareness of diverse cultures will continue to expand. As these same students enter the workforce, acceptance of societal differences will continue to pervade technologies in the future all around the world.

The final dimension, *creating an empowering school culture*, is a complex process that happens over time, but the process can be hastened and enriched through the use of technology. Included in this dimension is a shift of power to another group of stakeholders in the education process—the students. Recognizing the importance of popular culture among youth and using that knowledge to open new avenues of pedagogical interventions can help build an empowering school culture. "It is a fundamental contemporary paradigm through which students across race, class, and gender now obtain knowledge of the Third World and periphery of the First" (McCarthy, et al. 2003:463). Young people's social electronic networks are avenues in

which diverse cultures have opportunities to merge, and youths' influences in the foundation of educational experiences cannot be ignored (McCarthy, et al. 2003). This popular youth culture paradigm could be a foundation for a genuine curriculum reform that pervades diverse cultures.

In addition, educators must explore other options to empower students with the tools necessary to create positive change in society. Some strategies include wiring America's schools to provide virtual connections, creating cultural diversity course offerings institutions of higher education, partnering inner city schools with universities for computer instruction, creating co-curricular computer clubs, applying for government grants to fund hardware and software needs, and asking local industry for donations to fund computer-oriented education and projects.

SUMMARY

W. E. B. Du Bois' (1903) claim that the “problem of the color line” was the major challenge of the 20th century is relevant today as well. Today, we need not see the color line as a problem, but rather as a promise of change. “The time has come for us to embrace our varied selves...a society where diversity is destiny” (Takaki 2008:439). But, whether problem or promise, we have a responsibility to heed the warning by William E. Kennard (2000:4), Former Chairman of the Federal Communications Commission, who reminds us that our major challenge is “preventing the color line from determining who is online.”

Multicultural education and technology education are both grounded in the same principles of equality and social justice, yet current curricula and teacher pedagogies do not interlock the two as a conjoined problem in contemporary education. Merging these two educational frameworks has the potential to create solidarity between

these independent, yet interrelated concepts. Educational systems would benefit from an international forum of educational leaders, professional organizations, companies, and government leaders gathered together as a united front for discussion and further research. Such knowledge-building will not only close the gap between multicultural education and technology education, but will also combine the two major forces that are driving education today.

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