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Chapter 5

Defining Equity: Multiple Perspectives to Analyzing the Performance of Diverse Learners

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Defining equity within the context of a diverse, multiracial, multiethnic, multilingual, and multicultural society, and one where social class strongly influences one's life chances is problematic. This chapter reexamines equity in an attempt to advance the discourse beyond the debate about strategies to close the achievement gap between White students and students of color. I situated the issue of equity within an analysis of broader social forces that cultivate inequality throughout society—in employment, housing, criminal justice, and so forth—so that educational inequality is part and parcel of overarching social ills. The notion of equity will be unpacked by asking a more basic and fundamental question about the ultimate purpose of education. If we assume the end game of education is producing student learning, then we should ask whether learning outcomes are distributed randomly across race, ethnicity, and social class. Moreover, I will explore whether No Child Left Behind (NCLB)-like assessments or high-stakes tests measure real learning necessary for social and economic success, or do they measure something else. The role of increased accountability via state-based systems as an approach to obtaining equity is hotly debated. Although advocates are many, several studies have found the consequences of high-stakes testing, which are nonobvious and perhaps unintended, have not helped advance the nation toward equitable schooling.

The pursuit of educational equity has long been a goal of reform efforts in the United States. Yet creating a system of education where all children have equal access to quality instruction and widely available opportunities to learn to their fullest human potential has been elusive. More than half a century ago, the *Brown v. Board of Education* decision settled persistent concerns about the degree to which access to quality schooling was based on race (Ball, 2006; Ball & Samy, 2006; Gutiérrez

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& Jaramillo, 2006). However, structural inequality in education based on race and class, which was overt and legally sanctioned prior to *Brown*, has become murkier since then and the demographic landscape in the public schools has become more complex. In fact, the work of several scholars document how we have come full circle in the segregation of American schools—a complete cycle from segregation, to integration, and back again to segregation (Darling-Hammond, 2000; Levine, Cooper, & Hilliard, 2000; Orfield & Lee, 2005). Indeed, some scholars argue that integration was never actually achieved, but instead new forms of segregation emerged. Increasing cultural, linguistic, racial, and ethnic diversity among learners makes it timely to reexamine the current discourse and debates about equity and to formulate a clearer definition of equity.

Drawing on the extant research literature, this chapter examines multiple perspectives and approaches for analyzing educational outcomes among diverse learners. Particular attention will be paid to the ways in which learning is studied as a primary outcome of schooling. I focus on learning as the key dependent variable, rather than student achievement, because the latter is a narrower concept and driven to a large extent by dominant policy discourse. This chapter also examines how definitions of educational equity have changed meaning over the years as the discourse on inequality has evolved.

Before advancing a working definition of equity, it is important to provide a brief historical overview of the discourse on educational achievement of students of color in American schools. It is not possible to describe the evolution of the educational system in the United States adequately without addressing the role of race relations and the legacy of segregation (Gadsden, Smith, & Jordan, 1996). In *Brown*, the Supreme Court settled the debate that racially isolated schools were "inherently unequal" and laid the legal groundwork for building a more equitable education system. Yet, as we continue to celebrate this landmark victory over structured inequality, schools nationwide are challenged by increasing racial, ethnic, and social class segregation (Roscigno, 2000).

According to Orfield and Lee (2005), current and rising levels of segregation should be considered in light of the strong empirical relationship between race and poverty, suggesting that unequal access to a quality education continues to play a role in opportunities for social and economic mobility. Orfield and Lee's study reviewed the wide sweep of segregation changes nationally, regionally, and by state since *Brown*. Their analysis included a decade of resegregation since the Dowell decision in 1991, which the authors contend relaxed desegregation regulations and authorized a return to neighborhood schools. Orfield and Lee (2005) asserted that children in racially and ethnically segregated schools often experience "conditions of concentrated disadvantage, including less experienced or unqualified teachers, fewer demanding precollegiate courses and more remedial courses, and higher teacher turnover" (p. 4). Overall, evidence presented in this study suggests that many Black and Latino students attend schools of concentrated poverty, and that many White students experience high levels of racial isolation as well.

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However, the extant literature on equity offers insights on diversity and school segregation, which encompasses thoughtful analysis of cross-cultural and multiracial experiences that go beyond Black/White conceptions of schooling inequality. In analyzing data from the 2000 U.S. Census, Zhou (2003) provides a profile of racial and ethnic demography of the United States and explores challenges that children and their families face at a time of rapid change. She examines intragroup diversity, residential segregation, immigration, intergenerational issues, and highlights challenges of schooling in an urban context. Focusing on Asian American and Hispanic communities in California, Zhou raises the question of the roles communities play in helping diverse children do well in school and finds they do matter.

Notwithstanding Zhou's (2003) work, increasing cultural diversity has shifted but not eliminated lingering traditional race relations as the Black/White and Hispanic/White gaps in achievement have been largely stable over the past decade (a point I will elaborate below). The work of Orfield and Lee (2005), along with those of numerous other scholars (Bali & Alvarez, 2004; Gadsden et al., 1996; Gamoran, 2007; Roscigno, 2000), suggests that while the *Brown* decision helped America stumble forward in reconciling a major social injustice, there remains considerable work to be done to establish a fair and equitable system of education, where opportunities to learn and the ability to reach high standards are uncorrelated to race, ethnicity, and class. After essentially ignoring the demands of *Brown* for more than a decade, school districts nationwide began gradually integrating Black and White children, primarily via busing strategies and the creation of magnet schools. Put simply, school desegregation was an affirmative action policy assuring some Black and Latino students access to schools that previous generations could not attend.

In *Stepping Over the Color Line: African American Students in White Suburban Schools*, Wells and Crain (1997) examine the implementation and impact of a federal court order that imposed an interdistrict desegregation intervention on a highly segregated St. Louis, Missouri metropolitan area. The program linked the predominately poor and Black St. Louis City to its Whiter and more affluent suburbs by allowing city students to transfer to suburban schools. The 5-year case study of the St. Louis urban–suburban desegregation program involved interviewing more than 300 educators, policymakers, parents, students, lawyers, and judges. The authors state "we learned through their eyes [the interviewees] just how entrenched the color line is and why people on both sides of that line lack the will to erase it" (p. 18). According to Wells and Crain, during the postdesegregation era, policies focused on race-based allocations of resources are now seen as largely out of sync with core American values, and perhaps they are. However, they assert,

> Most civil rights legislation and court cases focused on giving African Americans the same opportunities as whites to achieve in a white-dominated society. Under such policies, blacks were suddenly unshackled and then expected to compete in a contest in which whites had a 200-year head start—a contest for which whites had written the rules and constructed the meaning of "merit" on their own terms. (p. 2)

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The present chapter does not dwell on the *Brown* decision and its impact on equity, race relations, and schooling, as this topic is thoroughly described elsewhere (Fruchter, 2007; Ladson-Billings, 2004). Instead, the 1954 *Brown* decision can be viewed as a baseline for a discourse on equality of educational opportunity, or the lack thereof. Moreover, as a result of ongoing demographic shifts resulting from immigration, expansion and contraction of cities, internal geographic mobility, and general population growth, the American cultural tapestry has evolved over the years so that racial politics are no longer simply Black and White, or Black, Hispanic, and White. For example, Akom's (2008) work on Black metropolis and mental life focuses in part on the centrality of race and racism and their intersectionality with other forms of oppression. This theoretical paper was based on a 4-year comparative ethnographic research project on forms of racial domination in the San Francisco Bay Area. Building on the work of Collins (2000), Akom suggests that race can be viewed from the "intersection of other forms of oppression such as class, gender, religion, nationality, sexual orientation, immigration status, surname, phenotype, accent, and special needs, by illustrating how these forms of oppression interlock creating a system of oppression" (p. 257).

This is not to say, however, that race and ethnicity no longer play a role in social interactions and social mobility—because it does indeed. Still, many studies of student achievement often use these racial/ethnic categorizations to illuminate differences between subgroups. This chapter integrates this language (e.g., Black/White achievement differences) along with more progressive language on race, diversity, and learning. I sometimes use the overly broad term *people of color* to refer to several racial and ethnic groups, including Blacks, Latinos, American Indians, Asian Americans, and people of Far East and Middle Eastern decent (Suyemoto & Fox Tree, 2006). I recognize this diverse group of children and families is not monolithic, to be sure. In an essay to community psychologists, Suyemoto and Fox Tree, an Asian American and Native American scholar (self-described), use the phrase "people of color" to contextualize experiences and conflicts in relation to race hierarchies. Their aim was to attack the "divide and conquer strategy" to construct bridges across racial and cultural differences and to critique the maintenance of White privilege.

There is considerable variability on cultural dimensions, school outcome measures, and broader structural factors both within and between these groups. For example, some studies have found similar patterns and distribution of standardized achievement among Asian Americans and Whites (Bempechat, Graham, & Jimenez, 1999; Lew, 2006; Paik & Walberg, 2007). However, these and other studies reject the notion of Asian American students as a "model minority" on the grounds that test scores do not tell the full story and many Asian American students continue to be at risk of school failure and encounter structural barriers in many facets of American society. Lew (2006), for example, in his paper on the "burden of acting neither white nor black: Asian American identities and achievement in urban schools" asserts that "the stereotype of Asian 'success' much like black 'failure' cannot be explained solely

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on their cultural orientation" (p. 350). He concludes that although culture and race influence students' general outlook on life and how they negotiate their opportunity structures, the process is fluid and changes and adapts within specific social and school contexts.

Lew's (2006) study compared educational and cultural experiences of two groups of Korean American students, one attending a competitive New York City magnet high school, and the other dropouts attending a community-based GED program. The purpose of the study was to extend the "acting White" debate beyond a Black-and-White discourse. His research focused on how Asian American students, in two different social and economic contexts, negotiate their race and ethnic identities. Using a model minority stereotype that conflates Asian Americans with whiteness, this study describes how the two groups of Korean American adolescents adopt different racial strategies depending on their socioeconomic backgrounds, peer networks, and school contexts. The findings of this case study research problematize current understandings of the role of culture in school achievement and illustrate how culture intersects with class, race, and schools. To be sure, Lew's work and the research of others point to stark sociocultural differences among people of color (in this case Asian Americans) and between people of color and Whites that manifest in school. At the aggregate level, Asian American students appear to achieve parity or exceed school achievement of White students (Zhou, 2003), yet many continue to struggle in school. Among those who are academically successful, obtaining social justice in mainstream society is an ongoing battle (Zia, 2000).

Black and Latino students frequently share common status as the low achievers in American schools; however, there are critical cultural and linguistic differences between the groups. Bali and Alvarez (2004) investigated when and how the Black–White and Hispanic–White achievement gaps develop in the elementary grades. Evidence for their analysis was drawn from a rich database, containing reading and math test scores, along with a variety of background and school context variables for students attending the Pasadena Unified School District (PUSD), California from 1999 through 2002. PUSD is a district with a large population of students of color, where more than 80% of the students are Black or Hispanic. The methodology of the study employed multivariate analysis to predict the annual reading and math test scores of a student cohort from first through fourth grade, controlling for school context and family background factors. The authors' findings affirm that in this racially diverse school district achievement gaps develop in elementary school for both Black and Hispanic students. The Hispanic–White gaps develop later, however, especially in math, and they were considerably smaller than the Black–White achievement gaps. The authors further conclude that the eventual widening of the gaps for both Hispanic and Black students does not seem to be attributable to attending schools of less quality.

To complicate matters further, Blacks, Latinos, and indeed all racial and ethnic groups, present considerable intragroup variability as mentioned above (Bhatti, 2006; Noguera, 2003). These factors make it difficult to generalize research findings

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to whole categories of students. For example, the classification of "African American" sometimes includes voluntary immigrants of African descent (Ogbu, 1978), for instance, second-generation African students and students from the Caribbean who often perform quite well academically, better than American Blacks who are just a few generations removed from slavery. By contrast, Lee's (2008) historical analysis of the "de-minoritization" of Asian American students suggests that Southeast Asians from Cambodia and Vietnam demonstrate some of the oppositional positions and underperformances of African American and Hispanic students. Such a contrast is important because they are often placed in the same category as Chinese, Japanese, and Korean students.

Lee's (2008) historical study examines the process whereby Asian American students have been gradually removed from minority status, or deminoritized in the University of California (UC) system. The UC system provided the platform for this study because California is home to large numbers of Asian Americans. More higher education in California has also been the site of significant affirmative action developments and controversies about Asian American admissions in past decades. Findings from Lee's study revealed policy shifts at UC reflecting how Asian Americans have been "racialized" over time, "through an unstable and contested process that began with the establishment of Asian Americans' minority status in the 1960s and its removal in the 1980s" (p. 130).

Several themes recur throughout this chapter. First, that the promises of *Brown*—to create a racially and ethnically integrated educational system with equal opportunity and access for all students—were never kept, although progress has been made. Second, there is a tremendous amount of diversity in American public schools that exists mostly in large cities and metropolitan areas that leave many kids behind. I believe urban education should be the frontline on increasingly redressing equity. Third, equity is a complex social phenomenon and equalizing opportunities and equalizing outcomes are vastly different enterprises. What is equitable and fair can be better understood in relationship to other things and from within a given context. In other words, perspectives of equity may vary among diverse groups and may be linked to culture. Fourth, problems in measuring and defining learning using "objective" standards versus cultural knowledge or multiple ways of knowing complicates attempts to define equity. Because it is difficult, if at all possible, to measure learning using a common yardstick in a diverse environment, it is similarly problematical to define equity using a unitary metric.

The No Child Left Behind Act (NCLB) represents perhaps the most recent and significant policy initiative to redress inequity at a national level. Indeed, a major goal of NCLB is to educate all children to proficiency or above by 2014. A primary mechanism for fostering improvement is a series of carrots and sticks, but mostly the latter, aimed at identifying "evidence-based" instructional practices or those activities and experiences that are empirically linked to state accountability systems (high-stakes, standardized tests). The theory of action undergirding NCLB is that increasing accountability for states, districts, and schools—or allocating blame for subpar test

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scores—will apply positive pressure on educators, motivate the use of effective practices, and ultimately improve achievement. However, a problem with this argument is that obtaining equity is not as simple as eliminating or reducing variability in test scores. In fact, there is a broad literature that describes how overemphasis on high-stakes testing can create perverse incentives for educators (Lipman, 2004; McNeil, 2000), which cause them to teach to the test and falsely inflate depictions of student learning. Thus, I argue that standardized testing has only limited utility in helping to understand learning and equity. I further contend in this chapter that learning is complex, dynamic, linked to human development, and embedded with a specific cultural context. A definition of equity should take into account these factors.

Equity is not about providing the same education to all students regardless of race, social class, or gender. In fact, because of increasing cultural and linguistic diversity it is advantageous to define educational equity in terms of providing knowledge, skills, and worldviews which would enable social mobility. Therefore, contexts shape our views of equity, and it takes on different meanings among different populations.

Accountability

The accountability policy framework (Diamond & Spillane, 2004; Mazzeo, 2001) holds that the purpose of schooling should be to educate every student to the same high standards of performance. Mazzeo's historical study examined the early history of academic assessment in the United States. He argued that, while it is generally accepted that school accountability is the raison d'être of educational policymaking, between 1865 and 1965 an accountability framework for state-based assessment failed to take hold, despite numerous attempts. According to Mazzeo (2001),

> [I]nstitutionalized clusters of normative and causal ideas play in educational policymaking. These idea structures—called policy frameworks—define the core principle or principles that animate state action, the legitimate aims served by intervention, and the manner in which these ends are to be achieved. (p. 367)

He further asserts that since the late 19th century, three dominant policy frameworks (examination, guidance, and accountability) have shaped discourse and action in the United States. Mazzeo's (2001) work is important because it suggests the current culture of accountability, which drives reform at all levels, is a fairly recent policy phenomenon. State accountability systems based on standardized testing, according to Mazzeo, first appeared in the early 1970s and have persisted to the present day. The initial theory of action undergirding the accountability framework was that "objective" information about student performance would help educators detect educational problems. Reforms could then be implemented, using knowledge from state tests, to improve academic performance for all students. Mazzeo contends that by the 1980s, states began modifying the focus of their testing strategies from identifying achievement problems of individual students, to evaluating whole institutions, that is, districts and schools. Since NCLB, emphasis on creating bigger and better accountability systems has steadily increased.

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With the exception of the military, each year more resources are devoted to elementary and secondary education than any other common good in the United States, and Americans depend heavily on public schools to narrow social and economic inequalities in society (Rothstein, Jacobsen, & Wilder, 2008). The American public wants schools to produce graduates who will contribute to the stability and health of our democracy and to advance strategic competitiveness in a global economy, and an educational system where past inequities are ameliorated (Goyette, 2008; Sunderman, Kim, & Orfield, 2005). High-stakes standardized tests often are put forward as the primary yardstick against which schools are measured to these ends (Gamoran, 2007; Lee, 2007; Lee & Wong, 2004; Smith & Garrison, 2005; Wolf, 2007; Wong & Rutledge, 2006; Yeh, 2006). The ubiquitous and persistent gap in standardized achievement between students of color and white students is regarded as evidence of lingering inequity in education (Gold, 2007). Although it is probably true that the race gap reflects ongoing inequality, traditional studies of achievement, which compare subgroups of students (typically Black, White, and Hispanic) by selecting quantitative outcomes, fall short of telling the whole story of educational equity (Conchas & Noguera, 2006; Rousseau & Powell, 2005). Rothstein et al. (2008) argue that standardized tests currently in use within many state-based accountability systems can provide necessary information about student performance and equity, but not all traits for which schools should be held accountable can or should be measured by pencil-and-paper exams. Noncognitive or affective outcomes such as motivation (Jungert, 2008; Kozminsky & Kozminsky, 2003; Martin, 2005; Tuan, Chin, Tsai, & Cheng 2005; Zoldosova & Prokop, 2006) and aspirations (Akos, Lambie, Milsom, & Gilbert, 2007; Anderman, 2002; Bandura, Barbaranelli, Caprara, & Pastorelli 2001; Hanson, 1994; Mickelson, 1990) are also important in influencing educational and economic success.

However, in traditional studies of accountability and achievement, such affective variables are seldom captured or investigated. Steele and Aronson's (1995) work on "stereotype threat" is an example of often neglected affective characteristics. According to the authors, stereotype threat is the state of being at risk of confirming a negative stereotype about one's racial or ethnic group. Their research examined stereotype vulnerability of African American college students taking a challenging verbal test by varying whether or not their performance put them at risk of fulfilling the racial stereotype about their intellectual ability. Steele and Aronson suggest, reflecting the pressure of this vulnerability, Blacks underperformed in relation to Whites in what they refer to as ability-diagnostic conditions, but not in the nondiagnostic condition where aptitude is controlled. Their research further suggests that mere salience of the stereotype could impair Blacks' performance even when the test was not ability diagnostic.

There are other often unmeasured factors in studies of achievement and accountability. For example, teacher quality plays an important role in increasing equity and excellence in schools (Jacob & Lefgren, 2004), which is often not accurately measured

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in existing accountability systems. Nevertheless, there has been a clear preference for quantitative factors within educational accountability systems. Perhaps the allure of quantitative factors is the perception of objectivity and precision they contain. However, a nonobvious limitation is that subjectivity is often embedded at the front end of quantitative analysis, as researchers and evaluators operationalize concepts, formulate constructs, and decide how to numerically express meaning. In other words, selecting or creating test items is an attempt to validate what counts as knowledge and to place selective value on learning. Still, quantitative factors are not useless as they provide specific information about what happens in school. Problems arise mainly in educators' and researchers' misuse and misinterpretation of the data.

Standards-based reform and state-based accountability policies, which are ostensibly culturally neutral, are central to current wisdom of educational policy and educational improvement efforts (Diamond & Spillane, 2004; Gamoran, 2007). However, as elsewhere, the accountability debate is seldom placed within its proper historical context (see Mazzeo, 2001), and often neglects the importance of race, class, and culture in measuring student outcomes. As Ladson-Billings (2009) argued, children of color are often viewed as White students who simply need extra help to succeed in school. Rousseau and Tate (2003), in an essay to educational practitioners, argue that efforts to neutralize cultural differences or to view children through a lens of color-blindness can have undesirable effects on the quality of teaching and learning in a classroom. Such notions of colorblindness of race miss how race, culture, and learning are conflated and shortchange the potential cultural assets of students of color. This is why I reject the position of cultural neutrality and argue that schools and school systems must do a better job of incorporating and building on the cultural knowledge children possess.

Learning

Learning always occurs within a cultural context (Bransford, Brown, & Cocking, 1999; Bruner, 1996) and it is fundamentally a socially mediated process. Although cognitive functioning is essential for learning, other psychological mechanisms involved in learning are shaped by socialization and sociocultural factors (Nieto, 1999). As mentioned above, traditional quantitative studies of student achievement approach equity by demonstrating how the amount of knowledge acquired by a certain time differs across diverse groups of students (Bempechat et al., 1999; Bishop, 1998; de Valenzuela, Copeland, Huaqing Qi, & Park, 2006; Griffith, 2002; Zhou, 2003; and others). Bempechat et al.'s (1999) study offers an example of how a traditional quantitative study handles equity and achievement. Their data included roughly 600 White, Black, Hispanic, and Asian American fifth and sixth graders enrolled in public and catholic schools in the Boston area. The purpose of the study was to examine differences in school performance of poor students and students of color, by focusing on cognitive socialization, or ways in which parents influence the basic intellectual development of their children, and academic socialization, or ways in which parents influence students' attitudes and motivations that are critical

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for student success. The analysis involved a series of nested regression models where math achievement is predicted by ethnicity, attributions, and educational socialization, along with a battery of interactions-terms between controls.

But the aim of traditional studies of student achievement is primarily to discover whether or not a given group of students has gained specific knowledge taught in school, ignoring the learning that occurs at home in the communities (Rothstein et al., 2008). Seldom do such studies seek to provide evidence on the varied ways in which students are able to demonstrate cultural knowledge or multiple ways of knowing (Gardner, 1993; Harris, 2007; Nieto, 1999). Conceivably, school knowledge from the enacted curriculum can be viewed as the result of an interaction of home/community language/knowledge with the official curriculum. This interaction is nuanced and often exclusionary, but it is an interaction nonetheless. Still, I believe understanding the teaching and learning of authentic knowledge is essential to defining equity. My definition of authentic knowledge borrows from Darling-Hammond and Snyder's (2000) work on authentic assessment. Darling-Hammond and Snyder's analysis suggests that a growing number of teacher education programs using authentic assessments of teaching as a set of tools to beginning teachers build bridges from generalizations about practice to contextualized instances of learning. According to the authors, authentic assessment includes opportunities for developing teachers' thinking and practices in situations that are experience-based and that include or simulate actual teaching. They argue that the demands of teaching rigorous academic content to diverse students suggest a need for teacher training that enables practitioners to become more sophisticated in their understanding of the effects of context and learner variability on teaching and learning. Effectively teaching diverse learners, Darling-Hammond and Snyder posit, involves attending to distinctive assets each brings to the table, including prior experiences and knowledge, cultural, and linguistic capital, different dispositions, and sources of potential identification and opposition. Thus, authentic knowledge is defined in relationship to human diversity and aims for cognitive flexibility.

Equity is not about educating all kids to the same high standards of achievement (Noguera 2003; Rousseau & Tate, 2003); if so, it would be an unattainable and perhaps an undesirable goal within the context of a diverse, multiracial, multiethnic, and multilingual society. Additionally, a case can be made that schools by definition stratify knowledge. Instead, educational equity in a global society is about providing transformative learning experiences for students who require such experiences for social mobility, as well as social and cultural reproduction for students already on top. Given the educational stratification of diverse students, the implications for equity would suggest the allocation of resources relative to needs of children and families. In other words, to be transformative, schools serving poor students and students of color might require more resources to obtain the desired results. Moreover, rather than imposing a definition of equity that denotes fairness and respect for humanity, a nuanced definition should be co-constructed by all stakeholders of public education, incorporating a wide variety of voices, particularly with the aid of poor families and families of color.

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Definitions of educational equity have changed meaning over the years as the discourse on inequality has evolved (Milem, Umbach, & Ting, 2004; Mohr & Lee, 2000). At least two distinct views have emerged, which represent different worldviews or deep-seated values about the nature of inequality in society and the purpose of policy responses to it. One view holds that there is an assumption that inequality preexists and is inevitable, and that policy and practice are trying to ameliorate it. This view includes proponents of affirmative action policies, which support the notion of assessing groups by using different standards, to fix existing and prior discrimination. Conversely, the counter-perspective holds there are few or no embedded inequalities, thus everyone deserves equal treatment, without regard background characteristics such as race or ethnicity.

PERSPECTIVES OF DIVERSE LEARNERS

Bourdieu and Passeron's (1977) theory of cultural and social reproduction affords guidance in understanding differential educational outcomes for students and problematizing the issue of educational equity. They examine the dynamic relationship between "pedagogic action," which they define holistically as more than teaching but as the work of the educational system, and the reproduction of social class stratification in society. Social reproduction is premised on a fundamental principle of the theory of sociological knowledge, that "every power which manages to impose meanings and to impose them as legitimate by concealing the power relations that are the basis of its force, adds its own specifically symbolic force to those power relations" (p. 4). Like Bowles and Gintis (1976), Bourdieu and Passeron provide a critique of education within a capitalist society. However, Bourdieu and Passeron's analysis of macro-sociological forces challenges us to consider the fundamental purpose and social functions of public education. In so doing, we should also consider what counts as evidence of student learning, which is a necessary precursor to defining equity. Who ultimately decides what the learning objectives or academic standards should be—what a student must know and be able to do—and how achieving such standards relate to life chances (higher education, employment, decent housing, etc.)?

In many respects, poor students and students of colors face inequality at the starting gate (Lee & Burkam, 2002) and, to be successful in school and society, they must rapidly obtain cultural capital that emanates primarily from the dominant groups. Affluent and White students, on the other hand, have ready access to cultural capital, and navigating between the worlds of family, peers, and schools (Phelan, Davidson, & Yu, 1998) is comparatively less daunting.

Knowledge for Teaching

Learning, or acquiring and applying knowledge of the world, and educational equity, the fair and just distribution of learning opportunities and outcomes, can be understood only within a specific cultural context. If the ultimate aim of educational reform is to improve learning for all children and to reduce or eliminate between-group

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gaps, then a sophisticated understanding of theories of learning (Bransford et al., 1999) and human development (Santrock, 2005) should be employed. Providing an exhaustive look at learning theories here is beyond the scope of this chapter. However, minimally, we should be wary of studies that attempt to measure learning and achievement too narrowly (Rothstein et al., 2008). Bourdieu and Passeron (1977) underscored the futility of focusing on any one variable as a determinant of educational success. Instead, they suggested the continual, cumulative interaction between the "objective" measures (test scores) of learning themselves, along with the internalization of objective measures in the form of subjective evaluations (Bali & Alvarez, 2004), along with a variety of explanatory variables (Bishop, 1998; Cooper, 2007; Kim & Crasco, 2006; Nettles & Herrington, 2007; and others).

At a micro-sociological level, identity, family background, and socialization influence children's perceptions, motivations and experiences in schools (Nieto, 1999; 2000), which, in turn influence learning and engagement. In recognition of the "symbolic violence" embedded in pedagogic action, as suggested by Bourdieu and Passeron, the pursuit of equity should involve consciously building on the cultural strengths and human potentials of diverse learners. Educating children, or teaching, then can be seen as a political act and it is never simply about imparting knowledge into empty vessels. According to Nieto (1999),

> If we understand teaching as consisting primarily of social relationships and as a political commitment rather than a technical activity, then it is unquestionable that what educators need to pay most attention to are their own growth and transformation and the lives, realities and dreams of their students. (p. 131)

There are controversial aspects of Nieto's analysis. First, current efforts to reform teaching tend to favor technicist or behaviorist approaches, rather than strategies centered on student thinking, ways to build on students' understandings, or on the political nature of teaching (Kincheloe & Hayes, 2007; Matsumura, Garnier, Pascal, & Valdés, 2002). For example, the discourse around defining what it means to be a "highly qualified teacher" heavily weighs subject matter content knowledge (e.g., in mathematics, science, social studies, and reading) at the expense of pedagogical content knowledge or generalized pedagogical skills. In other words, within the context of current policy debates, having knowledge of a subject trumps having the ability as a practitioner to meaningfully engage children in the learning process. Arguments in favor of building knowledge content in academic subjects are compelling; however, knowledge for teaching is different than knowledge in its own right (Shulman, 1987). In the process of teaching, mathematics teachers apply conceptual and computational knowledge of the subject differently than do carpenters, engineers, or pilots, who also use math in executing their work, yet the level of content knowledge might not be dissimilar among each group. In addition to focusing heavily on content, the view of teaching as a technicist activity is evident in numerous reforms aimed at improving teacher behaviors, such as preparation of lesson plans, writing

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lesson objectives on the chalkboard, posting the state's learning standards in designated areas, wait-time, use of praise, and so on, rather than also informing and challenging teachers' epistemological beliefs about teaching and learning. The other controversy embedded in Nieto's (1999) analysis is that "lives, realities and dreams of their students" are as diverse as the students themselves and can push educators to identifying different outcomes for students. If some poor students and students of color who represent a continuation of generations of unrealized dreams develop low expectancies for self-mobility, should educators accept and sanction their wishes, or should we force them to want more?

To be sure, finding a proper balance between imposing dominant values of educational and career aspiration on students, versus allowing them to find their own way is difficult. Beyond policy discussions around school choice, the field has not yielded evidence of effective strategies for incorporating voices of the students and families served into ideas for improvement. Regarding poor students and students of color, education is something done *to* them, rather than *with* or *for* them, an idea which is asserted in recent research on cogenerative dialogic instruction (Emdin, 2007; Tobin, 2006). The absence of a clear consensus on the purpose and goals of education within a diverse society further problematizes the notion of pursuing the goals of having all students reach the same high standards of achievement, despite widespread inequality in the system and uneven access to quality schooling.

Student Worlds

An ethnography study conducted at four desegregated schools in California by Phelan et al. (1998) illuminated ways in which diverse adolescents negotiate or fail to negotiate social borders and boundaries between family, school, and community. The 3-year investigation involved 55 adolescents and hundreds of hours of shadowing, interviews, and observations. This study examined what the authors referred to as students' multiple worlds, and theorized about factors that enhance or inhibit the conversion of borders into boundaries. Drawing on cultural compatibility theory (Spindler & Spindler, 1992), the authors investigated the congruence of sociocultural components of adolescent worlds to explicate factors affecting learning and engagement. Phelan and her colleagues use the term *worlds* to reflect "cultural knowledge and behaviors found within the boundaries of students' particular families, peer groups and school; we presume that each world contains values and beliefs, expectations, actions, and emotional responses familiar to insiders" (p. 7). This research underscores the writings of Nieto (1999) and other scholars who suggest teaching and learning, and by extension assessment and equity, occur within a specific cultural context.

Findings from Rousseau and Tate's (2003) study of teacher beliefs around race and the cultural context of learning suggest a lack of attention among educators to issues of race, culture, and equity, which also extends to teacher reflection within mathematics education. That is, although there was recognition that inequality

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exists, teachers often viewed themselves as being "color-blind," and interacting with students in a racially and culturally neutral manner. According to Rousseau and Tate, because the teachers conceived of equity as a process (e.g., equal treatment), different learning outcomes among students was not a catalyst for thoughtful reflection on pedagogical practices or relationships with students. Teachers in the study allowed students to fail without treating them differentially based on race, and this pattern of failure was not interpreted as problematical from the teachers' perspective. Teachers had no reason to question their own pedagogy, according to the authors, as long as they believed equal treatment was given to all students, regardless of race and culture. For example, giving each student the same opportunity for instructional help when they believed the students took responsibility for their own learning was seen as a marker for color-blindness. The authors conclude,

> In contrast, an overt reflective process linked to justice and race-consciousness would call into question any situation in which the results for students of color are disproportionately negative. Thus, we argue that it was, at least in part, the teachers' views of justice as simply an equalization process that allowed this pattern of disproportionate failure to go unaddressed. From their viewpoint, the pattern of failure was just. Therefore, it did not trigger any sustained teacher reflection. (p. 215)

Phelan et al.'s (1998) research revealed that school personnel often dwell wholly within the realm of the school, in classrooms and corridors, and as a result, they are frequently ignorant about the broader social milieu that students inhabit. Teachers and administrators are frequently uninformed about deep-seated values, beliefs, and ideals that hold sway in students' "real" world, as well as experiences and events that take place among families and communities outside of the reach of schools. The lack of cultural knowledge of students directly or indirectly affects the teaching and learning of academic subjects. The social context of students' lives that manifests in families and among peers shapes educational motivations, or the lack thereof, but educators are frequently out of position to help students navigate the social and psychological terrain. This research, similar to Luke's (2009), incorporates Bourdieu and Passeron's notion of *habitus*, where cultural capital, created by hegemonic forces, is the primary currency in schools and classrooms. As just mentioned, cultural capital, or the absence of it, offers a useful theoretical framework for explaining school success and the life chances of people of color. However, Phelan and colleagues, rather than accepting the inevitability of structural and sociocultural barriers, which disenfranchise some students, offer suggestions for pedagogical approaches to ameliorate inequities and to bridge boundaries between family, peers, and school.

Culture, Race, and Class

The discourse on the cultural context of learning unveils nuances and variability in the experiences and backgrounds of schoolchildren and challenges our ability to define equity in a straightforward, uncomplicated manner. In other words, given the

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full range of human interests, motivation, values, and ability, expecting education to produce the same outcomes for all students is simplistic, unfeasible, and likely unattainable. Moreover, if equal achievement in American schools was doable, framed as educating all students to the same high standards (where high standards are measured as test scores), I would ask whether it was desirable in light of the required diversity of knowledge, skills, and interest needed to maintain democracy and global competitiveness. However, the extensive body of literature on the persistent race gap in student achievement, like desegregation research which preceded it, points to ongoing non-nuanced, striking, and severe inequality in education (Altshuler & Schmautz, 2006; Gold, 2007; Horvat & O'Connor, 2006; Jencks & Phillips, 1998; Kaplan, 2007; Roscigno, 2000). Research on the race gap broadens the lens allowing us to consider how structural barriers influence equity and learning. Specifically, studies of the race gap in education analyze how race, social class, and culture are often conflated. Nationally, the existence of race gaps in test scores is a largely undisputed fact as evidenced in many studies where achievement is examined after controlling for individual, family, and school factors, and substantial racial gaps still remain (Bali & Alvarez, 2004).

In a study of race and the social reproduction of educational disadvantage, Roscigno (1998) examined several significant factors in the Black–White achievement gap; paramount among them were family background and social class. Merging data from the National Educational Longitudinal Survey (NELS, p. 88) and the Common Core of Data, Roscigno used hierarchical modeling to analyze the influence of family/peer and educational institutional processes simultaneously on the Black–White gap in achievement. The analytic procedures elucidated a more comprehensive understanding of the reproductive interinstitutional dynamics at play, which provided evidence of linkages between family/peer group attributes and access to educational resources. He concludes by suggesting the need for further inquiry leading to the development of theoretically driven contextual and spatial understanding of educational opportunity and achievement. Like Orfield (2001), Roscigno's analysis yielded a strong correlation between race and poverty. Roscigno asserted that socioeconomic status of the student's household—often operationalized as family income, parents' educational attainment, and parents' occupation status—was consistently influential for achievement. This relationship is critical to understanding the racial educational gap for Black and Latino students who continue to be disproportionately from lower socioeconomic households (Zhou, 2003). He adds that family structural differences between Blacks and Whites are likewise important, having implications for the availability of resources, parental time and supervision, and socialization. Using multivariate analysis, this study also contributed to the line of research underscoring the ways in which the educational system itself "perpetuates, rather than reduces, already existent societal inequalities" (p. 1034).

The implication of this research, along with cultural reproduction theory described earlier, is that it directly and indirectly connects equity in education to race relations,

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class struggle, and broader social stratification in society. The observed race and social class gaps are not just educational problems but a widespread social ill (Anyon, 2005; Lipman, 2004). Black, Latino and poor students lag behind affluent and White students, not only in academic achievement but also in access to quality health care, employment opportunities, quality housing, and fair treatment in the criminal justice system, indeed, in virtually all aspects of social life. As Anyon (1997) suggested in her landmark book, *Ghetto Schooling*, core problems faced by schools serving poor students and students of color did not emerge overnight. Anyon's research was centered on a 6-year case study of an elementary school, called Marcy, in Newark, New Jersey that was struggling to improve. This case study was conducted in tandem with a historical analysis of the political economy of New Jersey. Her analysis suggested the core problems of the Marcy School, which served mostly poor Black urban students, were not manifested or originated at the school. Instead, Anyon found that the chronic ineffectiveness and academic failure of Marcy and by extension, many similar city schools and districts, resulted from a perfect storm lasting more than a century. In it, schools suffered willful neglect, municipal mismanagement, incompetent leadership, graft, and institutionalized racism, from which they could not recover. While schools themselves did not have a hand in creating such problems, they were nevertheless manifested in schools.

Given overlapping and intersecting social policy arenas that affect education (housing, transportation, public health, criminal justice, employment, tax law, etc.), Anyon (1997) argues the educational system cannot be "fixed" from within. Instead, broad-based solutions encompassing several policy arenas are warranted. Inequities encountered by diverse students are experienced in many facets of social life, above and beyond education, so that closing the educational achievement gap cannot be adequately pursued without closing gaps in health, housing, employment, equal justice under the law, and so forth. Anyon thus concludes that public will to improve school quality is a necessary precursor, along with bold thinking which combine educational policymaking with social policy reform.

In *Urban Schools, Public Will*, Fruchter (2007) also points to a generalized inability to marshal support for resources to better meet the educational and social needs of urban poor students and students of color as problematic. However, this optimistic piece makes two key arguments: That city schools can be improved to effectively educate students who attend them, and that school districts can be levers to spark the transformation. Fruchter's position suggests the reasons inadequate urban schools continue to exist in the post-NCLB era do not include an absence of understanding about how to create equitable and efficient educational programs. Indeed, the United States has numerous exemplary schools, most serving affluent students. Instead, one of the reasons ineffective schooling persists is because of the challenges involved in marshalling public support to provide meaningful educational opportunities for students who are darker and different (Delpit, 1998).

I believe demystifying and clarifying what educational equity means involves joining competing discourses. On the one hand, much has been written about variations

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in standardized student achievement, a hallmark of high-stakes tests (Diamond & Spillane), as alluded to in the above passage. In policy circles, empirical studies of achievement and technical aspects of teaching and learning have been viewed as the dominate discourse (McNeil, 2000). At the same time, I have argued thus far that considerable research has looked more broadly at learning as primary outcomes, rather than achievement, and connects learning to culture (Bransford et al., 1999; Bruner, 1996; Nieto, 1999; Ladson-Billings, 2009; and others). There is tension between the kinds of knowledge commonly assessed on standardized tests and the kinds of knowledge students of color develop as a result of lived experiences, language use, social networks, and within the total sociocultural milieu of their daily existence. How this is resolved has implications for equity.

HIGH-STAKES TESTING

Several authors have questioned the utility of standardized test scores in advance policy and practice for educational improvement. For example, Abedi (2002) illustrated how standardized achievement measures are less stable indicators for English Language Learners (ELL) than for the non-ELL students. According to Abedi, ELL students at the lower end of the English proficiency distribution suffered from low reliability, and their language background may add another dimension to the assessment outcome, which serves as a source of measurement error in the assessment for English language learners. Additionally, the correlation between test scores and external criterion measures was significantly higher for the non-ELL students than for the ELL students. Abedi concluded,

> [T]he results of this study suggest that ELL test performance may be explained partly by language factors. That is, linguistic complexity of test items unrelated to the content being assessed may at least be partly responsible for the performance gap between ELL and non-ELL students. (p. 255)

In viewing the functionality of standardized testing from a Vygotskian perspective, it is conceivable they measure what students know and can do without assistance or cultural cues, or knowledge within students' zone of proximal development (Nieto, 1999; Vygotski, 1929, 1986). Yet I believe such tests cannot measure a child's full learning potential within a rich sociocultural context (Rothstein et al., 2008); or what students can do in learning ecologies that are saturated with cognitive tools and multiple forms of supports.

The end game of NCLB is said to be the pursuit of equity by raising standards of performance for all students (Downs & Strand, 2006). However, there is an intense debate about the impact, usefulness, and sustainability of accountability policies anchored by a program of state-regulated standardized achievement testing. Some scholars argue that one of the reasons why NCLB has failed to deliver on its promise is because of its narrow and inadequate characterization of learning and equity and overreliance on quantitative measures (Rothstein et al., 2008) that form the basis

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of assessment. According to Rothstein and his colleagues, perhaps the most important reason NCLB and advocates for increasing state-based testing got accountability wrong is because

> We've wanted to do accountability on the cheap. Standardized test that assess only low-level skills and that can be scored electronically cost very little to administer—although their hidden costs are enormous in the lost opportunities to develop young people's broader knowledge, traits and skills. (p. 7)

Low-level skills and knowledge that are tested are often what count as achievement, at the expense of true learning.

Rothstein et al. (2008) instead argue in support of developing more sophisticated and dynamic approaches to measure educational outcomes, for the purpose of both accountability and equity. There are many different ways that equitability might be defined when applied to educational assessments (Brennan, Kim, & Wenz-Gross, 2001). Because we cannot know, or precisely measure, the true intellectual abilities of students, we attempt to approach equity by using proxy measures of achievement on high-stakes tests. However, equating equity and test scores have been fraught with problems.

Since the passage of NCLB, educators and policymakers have used a variety of policy instruments in an attempt to ensure that all children receive high-quality education (Diamond & Spillane, 2004). An increasingly popular but controversial strategy relies on external accountability systems, including high-stakes testing, to improve teaching and learning, and hold teachers and students accountable for student performance outcomes. Critics of high-stakes testing argue that such policies exacerbate inequalities by leading teachers to marginalize low-performing students (McNeil, 2000; Lipman, 2004; and others) by tailoring instruction to tested areas. Further, in the process, teachers themselves become deskilled, according to McNeil (2000), as they focus instructional energies on solely or disproportionately on tested subject areas. Because teachers and administrations are placed in a system where they are forced to equate learning with higher test scores, authentic knowledge of how the world works, or relevant insights which can spark interest among students, seldom enters into the classroom. However, proponents of high-stakes testing assert that such assessments have several advantages, such as removing unreliable and subjective assessments of learning, reducing curriculum differentiation processes such as tracking and ability-grouping, and, hopefully, raising teacher expectations of the learning potential of diverse students. According to Diamond and Spillane (2004), proponents contend that external assessments provide objective information for school-based decision making and therefore work against more subjective judgments that contribute to unfair stratification. Furthermore, they argue, that to understand the implications of high-stakes testing it is important to examine how such policies are understood and implemented in particular school contexts.

I use a working definition of "high-stakes" established by professional organizations in education research, psychology, and measurement and evaluation. According to this definition,

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> When significant educational paths or choices of an individual are directly affected by test performance, such as whether a student is promoted or retained at a grade level, graduated, or admitted or placed into a desired program, the test is said to have "high-stakes." (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 1999, p. 139)

Because educational success is connected to social mobility and social stratification, high-stakes testing has broad implications for students' life chances. In other words, affecting educational paths such as grade retention and program admissions could have dramatic effects on future higher education and job opportunities, or the absence thereof.

According to Lee and Wong (2004) the policy debate about accountability and high-stakes testing tends to be polarized and suffers from a lack of generalizable empirical evidence. Paradoxically, in order to marshal evidence for or against the merits of high-stakes testing in a policy context it is first necessary to engage in the accountability debate and use accepted conventions for its discourse. Attempts to change or shift the discourse from the outside, by reliance on disconfirming evidence and using language not found within the accountability lexicon have been largely futile (McNeil, 2000). Regardless of whether high-stakes testing improves or hinders educational quality, Lee and Wong suggest the actual impact of accountability policies on learning and equity might be contingent on the level of support available to schools, teachers, and students. There is a lack of research evidence illustrating benefits from accountability policies, with or without adequate support for schooling conditions and resources.

McNeil's (2000) study of educational accountability, *Contradictions of School Reform*, which predates NCLB and is based on seminal reform efforts conducted in Houston and throughout Texas, represent the hidden consequences of reliance on accountability systems to produce equity and excellence. She argues that standardized testing, as currently implemented, is harmful and has deleterious effects on teaching and learning. McNeil's research is based on case studies of magnet schools in Houston, along with policy analysis just prior to NCLB. Situating this work in Houston was significant because, according to McNeil, Texas was a seedbed for the most rigid forms of standardization in education. In fact, the Superintendent of Schools in Houston during the period of her study, Rod Paige, went on to become the U.S. Secretary of Education after the publication of *Contradictions of School Reform*. Capturing the voices of educators, McNeil's work chronicles and provides rich descriptions of the impact of state-based accountability on three urban magnet schools, which emerged as part of a desegregation plan, MedIC Pathfinder and Science, Engineering, and Technology. McNeil maintains that prior to the policy shift toward increased standardization, teachers in these schools were empowered to innovate and encouraged to improve their pedagogical practices by focusing on the authentic learning needs of students. According to McNeil, the result was functional, nurturing and effective urban schools that served not only students of color, but the City of Houston.

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Market Metaphor

McNeil's (2000) work also illuminates how the discourse of business, as asserted by the Texas power elite, helped to dismantle authentic school improvement efforts that were being cultivated in Houston public schools. According to McNeil, promising school reform efforts were ultimately replaced with tight bureaucratic control and accountability systems which demoralized students, "deskilled" teachers, and contributed to the downward spiral of the overall quality and conditions of education. Her study describes how many talented educators fled the Houston district under tightly controlled conditions and some left the profession altogether.

Lipman (2004) contributes to the discourse on the potential perils of market inspired, NCLB-like accountability by connecting globalization and deindustrialization to urban school reform. Lipman's methodology is similar to Anyon's in that she highlights case studies of schools in a large urban city, in this case Chicago, while providing a critical analysis of policy reforms. Like Anyon, Lipman analyzes the implications of policy shifts in relationship to the political economy and the cultural politics of the city. Both authors foreground race and ethnicity and view these factors as instrumental in understanding the conditions of education in American cities.

Neoliberal school policies, such as choice and high-stakes testing, Lipman (2004) contends, are ostensibly aimed at preparing students for the global economy. She argues "education policy has been explicitly tied to global economic competitiveness as the fluidity of investment capital and global competition for investments and markets have dominated more and more aspects of social life in cities and nations" (p. 8). The consequence of such social forces is a fundamental shift toward competence-based skills at the expense of critical thinking skills and cultural competencies that are necessary for autonomous learning, and development and participation as citizens in a democracy. Focusing her analysis on an American global city, Chicago, Lipman stresses how educational policy has become conceptualized as a central component of national economic planning and comprehensive urban renewal. Specifically, the national discourse about economic and educational policy is directly linked in numerous ways, including the proliferation of career academies, school-to-work programs, the development of "new" basic skills, and via a host of market-based reforms. Within this framework, where accountability for achievement and learning resembles corporate accountability for productivity and profit, there is precious little room for multiple ways of knowing, co-constructed knowledge, situated learning, or learning as building on children's own understandings.

In view of the current literature on the market metaphor for redesigning educational practice, I share many of the concerns raised by Lipman (2004) and McNeil (2000), but I also see possible benefits. For example, issues such as differentiated salaries for teachers are cornerstones in highly regarded professions outside of teaching (e.g., law and medicine) but have been largely resisted from within. However, presently, there is little empirical evidence suggesting whether rethinking the way in which teachers are compensated can improve the culture and climate within a

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school in a positive way. Ultimately, the challenge for policymakers, educators, and researchers is to determine which market-based strategies have appropriate application to education, which are benign, and which constitute an unwelcome intrusion and hijacking of the school reform. More often, critics of the market metaphor typically focus on the latter. Combined, Lipman and McNeil's analyses offer a cogent argument against increasing accountability in education and other popular market-based strategies, which have had nonobvious but significant effects on the profession.

In many respects, the accountability policy framework or culture of testing that predominates in educational discourse is centered on addressing social justice and equity issues. That a student's opportunity structure and his or her life chances continue to be linked to race, class and gender contradicts mainstream American values and ideals. However, policy efforts to operationalize equity by defining it strictly in terms of standardized test scores seems reasonable on the surface but harbors many contradictions. Such policies continue because there is tremendous power and persuasion in their appearance as simple truths. Despite credible critiques of high-stakes testing, that they reproduce inequality and exacerbate failure among poor students and students of color, only courageous scholars have argued to outright dismantle the educational accountability system. Educational policy is seldom nuanced, so that critics of high-stakes testing are seen as anti-accountability or as if we are arguing that schools and students should not be accountable for outcomes. However, this type-casting misses the larger point—that for accountability to work, it is essential to identify the most critical outcomes, which are often difficult to measure. Learning, as defined within a cultural context, rather than achievement, should be among the core outcomes.

Proponents of high-stakes testing assert that standardized assessment of students can and does improve academic performance in elementary and secondary schools. In a conceptual paper on improving student achievement through frequent assessments, Wolf (2007) rejects the notion that students are overtested and argues instead that testing provides educators with critical intelligence about the abilities and needs of students and they are essential for evaluating the performance of academic programs. While this paper provides no new evidence to support the claims of the benefits of testing, it references the author's previous work in support of vouchers, school choice, and urban educational reform. Although the evidence is thin, the view that testing is good, I believe, reigns in the current policy environment despite notable critiques. According to Wolf, regularly assessing students, using standardized and diagnostic tests, focuses the efforts of both teachers and students on important material that needs to be mastered and fosters higher achievement. He further asserts that standardized testing provides educators with a wealth of information about the learning needs and abilities of individual students as well as whether a specific academic program or instructional strategy is effective for them. This point underscores the link between achievement and accountability. Results of standardized exams are said to give students and parents timely and useful feedback regarding how well or

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poorly the student is acquiring essential academic skills and knowledge. Further, as the argument goes, standardized testing allows for the identification of motivational and learning problems with individual students at an early stage, when interventions have the greatest prospects for success. This, Wolf (2007) asserts, is particularly important in the areas of early reading and literacy. Moreover, he posits that standardized and diagnostic tests are beneficial in their own right. "In and of themselves (standardized tests) provide students with an important skill—test taking experience and facility—that will benefit them as they engage in a world that regularly 'tests' their abilities, concentration, and willingness to follow directions." He concludes that "testing generally is good for kids. America's students would be smarter, more self-confident, and better prepared to be productive contributors to society if teachers and schools did more of it" (p. 691).

Although this view is compelling in many policy circles, it neglects the unintended consequences of using a narrow accountability system to drive teaching and learning, as I have argued above. Yet, Wolf's (2007) paper illustrates how market-based strategies carry over into the field of education and can morph into commonplace, often unchallenged, policies and procedures. To maintain their competitiveness, businesses continually collect and analyze data on a variety of indicators such as staffing, operating procedures, sales, distribution, and cash flow. In this business paradigm, perhaps the most important data elements appear on balance sheets. However, the metaphor comparing student achievement (or learning) and corporate profits is problematic.

In an extensive review of the literature on the impact of high-stakes testing, Nichols (2007) found the number of valid studies highlighting the negative effects of standardized tests overwhelmingly outweighed papers such as Wolf's. Nichols reports dissatisfaction with the existing body of research because of limitations in their approaches for measuring high-stakes testing policy, within the context of a rapidly changing political climate. According to Nichols, states rapidly transform and adapt their accountability systems making it difficult to isolate their effects. Her study created an empirical rating scale capturing a differentiated version of testing pressure embedded in 25 states' accountability systems. The scales were based on data from the National Assessment of Educational Progress (NAEP) and only states with complete or almost complete NAEP participation since 1990 were included. Nichols' scales were termed the Assessment Pressure Rating (APR), which relied on a set of portfolios designed to describe in as much detail as possible the past and current characteristics of accountability practices state by state. Specifically, the portfolios included documents describing the legislative activity, politics, and effects of a state's high-stakes testing program as well as print media serving as a proxy for legislative implementation and impact.

Using a method of "comparative judgments" for scaling study states along a hypothetical continuum of high-stakes testing pressure, Nichols (2007) concludes,

> The findings from the most rigorous studies on high-stakes testing do not provide convincing evidence that high-stakes testing has the intended effect of increasing student learning.

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> Moreover, the modest gains found in some studies should be viewed with caution since the findings indicate that increases in achievement could be the result of teaching to the test. (p. 57)

Interestingly, what Wolf (2007) calls instruction, which focuses teachers and students on important material that needs to be mastered, Nichols (2007) regards as teaching to the test. In preparing students for an assessment, it is reasonable to align curriculum and instruction with the objectives and competencies that will be covered on the test. However, pedagogy is compromised and becomes counterproductive when instructional activities are carried out specifically for students to perform better on a test. According to Nichols,

> This is especially true when it comes at the cost of other kinds of instruction or subject matter coverage. Studies that consider performance on NAEP suggest that by and large, high-stakes testing does not lead to "real" learning gains, but rather manufactured ones that are more likely the result of greater attention to the material that will be tested. (p. 57)

In addition to Nichols' review, other scholars have found little support for the idea that high-stakes testing improves achievement and equity. In a study of the impact of state-level accountability policy on racial and socioeconomic equity, Lee and Wong (2004) found no evidence that accountability yields "significant progress or setback toward equity in educational resources and student outcomes, the policy's long-term effect remains to be examined" (p. 821).

Combining data from state policy surveys, F-33, SASS, and NAEP, Lee and Wong (2004) investigated the degree to which performance-driven educational accountability policy enhances or hinders racial and socioeconomic equity. Their analysis suggests that during the 1990s, states largely did not address racial and socioeconomic resource disparities between school resources and failed to narrow the achievement gaps. Although the accountability policies of the 1990s had no adverse effects on equity, Lee and Wong's research suggests equity was not at the center of accountability reforms. Performance-driven accountability policies alone, they assert, cannot move the nation forward toward equity. However, they argue that long- and short-term impacts might be different. Although state-run accountability systems do not hurt adequacy or equity in education according to Lee and Wong, there is very limited evidence that they yield progress. Further, states' actions in developing accountability policy did not bring significant improvement in the distribution of student achievement outcomes.

Race Gap

Many empirical studies have verified the existence of a persistent race gap (Gamoran, 2007; Jencks & Phillips, 1998; Lee, 2007; and others). As mentioned above, equity is typically investigated and discussed through the discourse of accountability. Before continuing and diving more deeply into issues of equity, learning, and diversity, it is necessary to return to the discussion of achievement gaps to provide

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an overview of national trends in mathematics and readings by race. The figures in this chapter illustrate the NAEP achievement trends for Black, White, and Hispanic fourth grade students in mathematics and reading from 1990 to 2007.

NAEP is often referred to as a common yardstick because it is the only nationally representative and continuing assessment, sponsored by the U.S. Department of Education designed to measure what students know and can do in various academic subject areas. Although not a high-stakes test, NAEP is a standardized exam conducted periodically in mathematics, reading, science, writing, the arts, civics, economics, geography, and U.S. history. Assessments are administered uniformly throughout the United States, using the same sets of test booklets and similar testing conditions. According to its website, NAEP results serve as a common metric for all states and selected urban districts so that national comparisons can be made. Additionally, NAEP instruments remain essentially the same from year to year, which is a designed feature that permits a clear picture of student academic progress over time, both nationally and state by state.

Figure 1 presents the Black/White race gap in mathematics in NAEP. As shown in this figure, there was a 32-point difference in scale scores between Black and White children in 1990, which rose to a 35-point difference by 1992. Since then, the gap has slowly contracted after remaining stuck on a 26-point difference between 2005 and 2007. It is also important to point out that all scores, for both White and Black fourth graders, have increased over time. But Black children continue to lag behind. In fact, scores for Black children in 2007 were roughly equivalent to scores for White children in 1991 (scale score = 222, as compared with 220).

Reading achievement during the same period is presented in Figure 2. Compared with the results for mathematics, scores for White students have remained flat, with modest growth between 1990 and 2007, and a small (1 point) dip in 2000. The Black/White race gap expanded and contracted during this period but it was widest in 1994. Although the smallest gap was evidenced in 2007, there was a 27-point difference in scale scores between Black and White fourth graders at that time.

The pattern of results for the Hispanic/White mathematics achievement gap in NAEP somewhat resembles the Black/White gap; however, there are notable differences. Figure 3 shows the Hispanic/White trends. Perhaps the biggest difference is that the gap was slightly smaller for Hispanic fourth graders, or in other words, Hispanic students scored higher than Blacks throughout this period. For example, in 1990 the average scale score for Black students in mathematics was 188 points (Figure 1), as compared with 200 points for Hispanic students. Because scale scores for Whites were 220, the gap between Black students was 32 points, as mentioned above, but 20 points for Hispanics. However, by 2007, Hispanic students gained no ground as the mathematics gap increased 1 point to 21.

Finally, the results for Hispanic/White students on fourth grade reading are presented in Figure 4. Again, the trend appears similar to the Black/White gap, with the same exception. That is, NAEP scores for Hispanic students are slightly higher, which means the gap was somewhat smaller. Again, Hispanic schoolchildren gained no ground in reading between 1990 and 2007.

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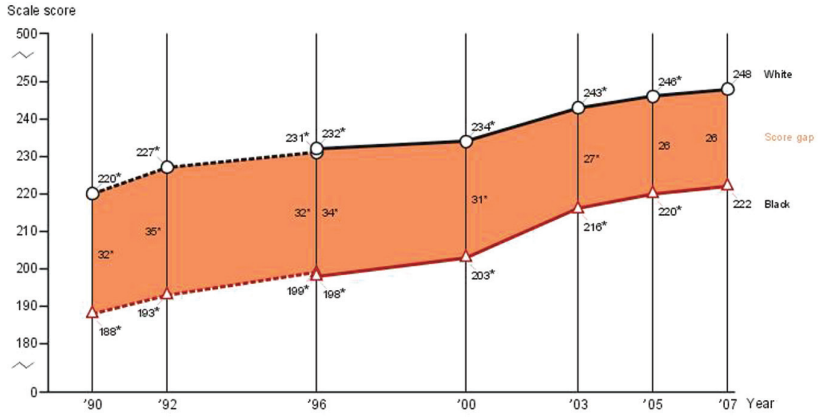
FIGURE 1
Black/White Achievement Gap in Fourth Grade Mathematics



Source. The Nation's Report Card, National Assessment of Educational Progress. Institute of Education Sciences, U.S. Department of Education (http://nationsreportcard.gov/).

Taken together, these figures summarize a blatant and disturbing gap between White students and students of color, which has been well documented in the literature (Paik & Walberg, 2007; and others). While the differences between groups are stark, a question remains about whether NAEP and other standardized assessments actually measure learning as opposed to other sources of inequality in society, such as cultural capital, affluence, and middle class advantages, which are suggested thus far. Moreover, analysis of achievement trends by subgroups, such as the above, has been sometimes misused in applying empirical evidence to policy and practice. Categorization of individuals into specific cultural or racial/ethnic groups has been treated causally (i.e., as if being Black affects outcomes), yielding explanations of achievement or learning outcomes on the basis of category membership, assuming that all group members share the same experiences, skills, and interests (Gutiérrez & Rogoff, 2003). This reasoning led to the increasing support for one-size-fits-all policymaking, or an approach to equity that involves providing equal treatment and resources to all, rather than balancing resources to fit individual and group needs.

Brennan et al. (2001) examined race and ethnic variability in the Massachusetts Comprehensive Assessment System (MCAS) compared with student report card grading. The authors sought to discover whether high-stakes tests were more equitable than teacher-assigned grades. Similar to the studies described above (Orfield & Lee, 2005), they identified a methodological problem in trying to make sense of raw data on high-stakes testing in that socioeconomic status and other important characteristics of students are unevenly distributed across schools and districts. In other

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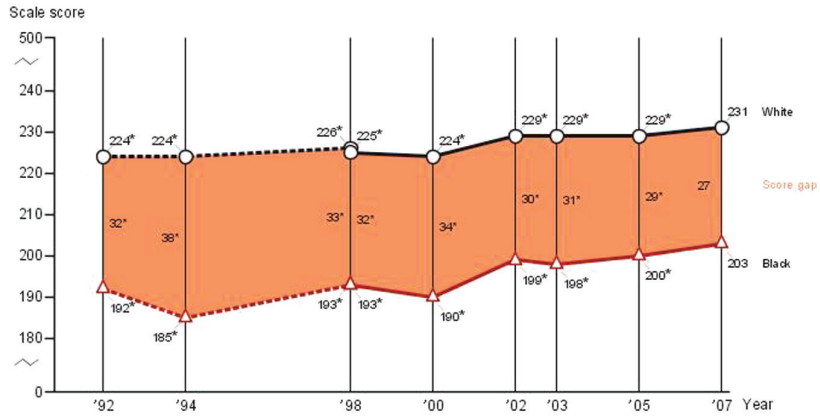
FIGURE 2
Black/White Achievement Gap in Fourth Grade Reading



Source. The Nation's Report Card, National Assessment of Educational Progress. Institute of Education Sciences, U.S. Department of Education (http://nationsreportcard.gov/).

words, differences between racial groups on MCAS may be attributable partly to the fact that the Black, Latino, and White students attend different schools. The authors found that in comparison to teacher-assigned grades, standardized testing appears to hurt the average competitive position of Black students in mathematics and science. Furthermore, there was suggestive evidence that MCAS may also have a differential impact on Latinas/Latinos in math. Based on their analysis, Brennan et al. conclude that Black and Latino students lag further behind White and Asian students when measured against a standardized test. However, they add,

> In arguing that the equitability gaps are maintained or increased under high-stakes testing, we explicitly do not assert that this demonstrates that high-stakes tests are more biased than grades or even biased at all. Bias would exist if we knew that one or both of the assessments resulted in an evaluation of students that differed from their true abilities, but, as Supovitz and Brennan (1997) noted, "to judge which assessment is closer to real student performance, we must know each child's true ability." (p. 496)

A common multivariate model used to measure what affects student achievement includes an array of factors such as prior achievement, family background, school characteristics, and program or teacher characteristics. Such models tend to be hierarchical because student-level factors are nested over time, and these effects are nested within the classroom, which are nested within schools, and so forth (Stewart, 2008; Wong & Rutledge, 2006). This chapter suggests, however, that even sophisticated statistical models of student achievement fail to take culture into account in

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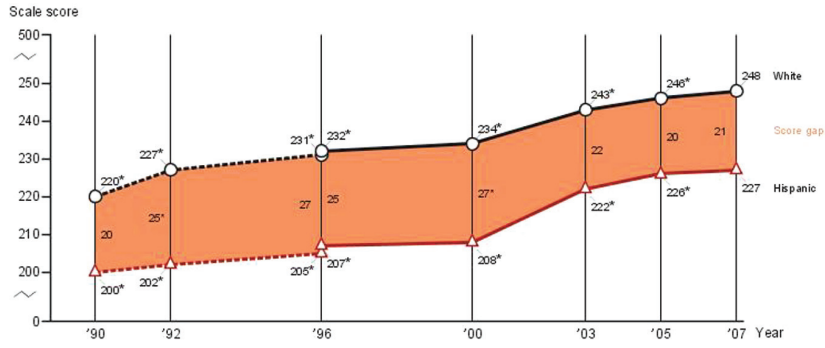
FIGURE 3
Hispanic/White Achievement Gap in Fourth Grade Mathematics



Source. The Nation's Report Card, National Assessment of Educational Progress. Institute of Education Sciences, U.S. Department of Education (http://nationsreportcard.gov/).

the way put forward by the theories of learning (Bransford et al., 1999; Cole, Engeström, & Vasquez, 1997).

The evidence to date suggests that under NCLB there has been a narrowing of perspectives of strategies to measure the complexities of learning, which affects the ways in which equity is defined. Rather than focusing teaching, learning and assessment on understanding big ideas in mathematics or theoretical foundations of literacy, for example, we hold schools and students accountable for only a narrow band of knowledge contained on a statewide test (Rothstein et al., 2008). Several scholars, including the author, believe students' scores on standardized tests and acquisition of knowledge are equated in ways that they should not be (McNeil, 2000), at the expense of helping students to be autonomous thinkers and learners (Nichols, 2007).

Learning: The End Game of Reform

Learning is an often used but complex concept that is challenging to assess and evaluate. It is not simply memorizing and recalling facts, although memory plays a role in learning. Of course learning involves thinking, but measuring "quality" thinking empirically is daunting for researchers and practitioners. Moreover, reasonable people can disagree about what constitutes quality thinking within the context of a classroom. For these reasons, learning is perhaps a phenomenon that is too nuanced and dynamic to form a basis for policy to improve schools, teaching, and learning. Instead, as argued earlier, the term achievement, which is a simpler concept, is often used as a primary outcome. However, learning, in the elaborated sense of the term, should be the ultimate objective of a quality education and the end game of school reform.

Although it is mediated through cultural and social context, learning is above all a mental process and the science of learning is evolving. According to Bransford

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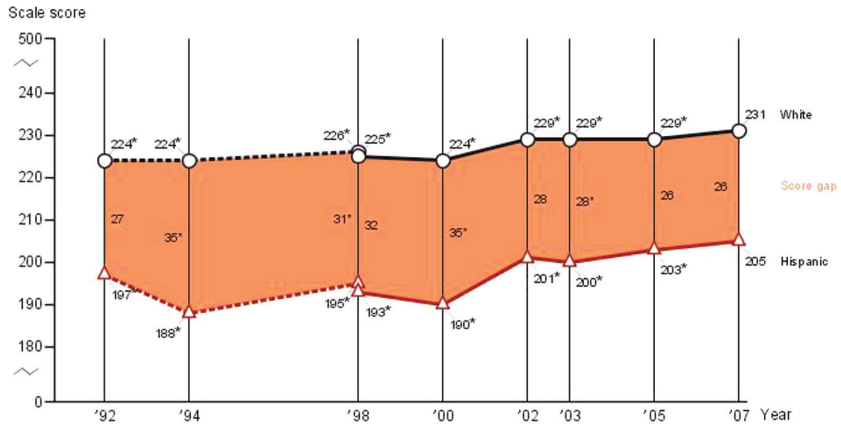
FIGURE 4
Hispanic/White Achievement Gap in Fourth Grade Reading



Source. The Nation's Report Card, National Assessment of Educational Progress. Institute of Education Sciences, U.S. Department of Education (http://nationsreportcard.gov/).

et al. (1999) there are five key characteristics of learning: (a) memory and the structure of knowledge, (b) problem solving and reasoning, (c) the early foundations, (d) regulatory processes that govern learning, and (e) how symbolic thinking emerges from the culture and community of the learner. In a sense, learning can be viewed as mastering knowledge of how the world works while employing these dimensions of mental life. Learning includes not only mastering academic subjects but also the essence of the human mind. Bransford and his colleagues assert, "understanding the mind—and the thinking and learning that the mind makes possible—has remained an elusive quest" (p. 3). However, learning theory has evolved in recent years.

Achievement, as measured by standardized testing, is far less difficult to discern and manipulate in a policy context (Rothstein et al., 2008). Many performance assessments address only the first two or three of Branford et al.'s (1999) key characteristics of learning, memory, problem solving, and early foundations. Few standardized tests are designed to capture information of how knowledge is applied within a cultural context. In essence, standardized and diagnostic tests are crafted in efforts to figure out "whether" students are smart or have learned some aspect of the curriculum, rather than asking "how" are students smart, how do they know what they know, and how can teaching build on their existing knowledge. This raises the question of validity of performance assessments. In a thorough and exhaustive review of the literature on conceptions of validity in testing, Moss (1992) suggests that assessing student performance via standardized assessment presents a number of validity problems not easily handled with traditional methodology and criteria for validity research. She

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further argues that assessments often allow students considerable latitude in interpreting and responding to tasks; however, they result in fewer independent responses. Student responses to assessment items are complex, "reflecting integration of multiple skills and knowledge" and as a result, "they require expert judgment for evaluation" (p. 229). Moss concludes that satisfactorily meeting validity criteria as well as reliability, generalizability and comparability of assessments is problematic. Still, she appears somewhat optimistic that validity research on student performance research will evolve and improve over time, and I share this optimism.

Moreover, as quantitative researchers, we often attempt to measure learning linearly, by default, when we know pragmatically that it is sometimes circuitous, interrupted, or can follow a range of patterns based on the cultural context in which it occurs. Nevertheless, within the current accountability system, the success of school improvement is measured by year to year gains, and we call a teacher "effective" when her students, on average, gain a year's worth of knowledge in a year's time.

Is it possible to obtain high standards without standardization? The short answer, I believe, is yes, but the explanation is not simple within the context of an increasing diverse educational system. The difficulty, or infeasibility, of objectively measuring multiple ways of learning and of knowing, and cross-cultural meaning making complicates this discussion. The longer answer will involve using authentic assessments, along with numerous indicators, quantitative and qualitative, or multiple ways of measuring academic standards, and linking this discussion to the current standards movement. The next section expands the discussion of learning and equity, drawing on research in the field. Such a discussion is a necessary precursor to examining whether learning is equitable.

LEARNING AND EQUITY

I have argued thus far that learning is a complex phenomenon; however, in a policy context, learning and student achievement are often viewed as one and the same. Frequently, test scores are perceived as objective indicators of the amount of knowledge students have acquired, or not, in a subject area taught at school. However, this is an overly simplistic view of learning. Learning happens in the mind and it is shaped within a cultural context (Bruner, 1996; Cole et al., 1997). From a cultural–historical perspective, learning happens first on the interpersonal/social plane and then becomes intrapersonal/individual; culture (and cultural context) is not separate or a container; from this perspective, culture mediates learning. Learning has to be understood in its context of development. Moreover, an emerging theory of learning is coming into focus, which could lead to different approaches to the design of curriculum, teaching, and assessment than those in use in schools today (Bransford et al., 1999). According to Bransford and his colleagues, one of the hallmarks of new theories of learning is an emphasis on teaching and learning for understanding. Although understanding is a desired outcome of a quality education, the authors assert, "students often have limited opportunities to understand or make sense of

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topics because many curricula have emphasized memory rather than understanding. Textbooks are filled with facts that students are expected to memorize, and most tests assess students' abilities to remember the facts," (pp. 9–10) rather than understand underlying concepts and ideas on which the facts are premised.

Additionally, the new science of learning described by Bransford et al. (1999) highlights the importance of prior knowledge in the acquisition of new knowledge. Children begin their schooling with a wide range of prior knowledge, skills, and beliefs about how the world works and these inputs can exert heavy influence on what interests and engage them, they attend to and ignore in schools and classrooms, and how they organize and interpret it. This preexisting knowledge, in turn, affects students' ability to remember, reason, solve problems, and acquire new knowledge—which ultimately affects both real learning and standardized achievement.

> A logical extension of the view that new knowledge must be constructed from existing knowledge is that teachers need to pay attention to the incomplete understandings, the false beliefs, and the naive renditions of concepts that learners bring with them to a given subject. Teachers then need to build on these ideas in ways that help each student achieve a more mature understanding. If students' initial ideas and beliefs are ignored, the understandings that they develop can be very different from what the teacher intends. (Bransford et al., 1999, p. 10)

The research of Bransford and his colleagues suggests there may be better, more effective, ways of introducing academic content to students, and similar to scholars cited above, it points to limitations of overreliance on test scores to assess real learning. But schools are more adept at selecting talent than developing it. Notwithstanding its shortcomings, in studying equity, standardized testing cannot be ignored because there is absence of viable alternatives. Paradoxically, although standardized testing may harm teaching and learning (Nichols, 2007), common valid measures of learning and achievement are needed to unveil and correct educational inequity. Numerous studies have attempted to investigate what is learned in school by conducting multivariate analysis of effects on achievement (Lee & Wong, 2004; Lew, 2006; Matsumura et al., 2002; Nichols, 2007; Rumberger & Gándara, 2004; and others).

EQUAL OPPORTUNITY AND EQUITABLE OUTCOMES

Equity in education can be framed in terms of either equality of opportunity or equal outcomes (Nieto, 1999), including the contexts in which students participate in educational experiences and the extent to which those experiences enable their academic growth (de Valenzuela et al., 2006). From a historical perspective, the language of *Brown* situated the equity discourse as a mandate to provide educational opportunities to all students, with the unstated aim to help all children, regardless of racial or ethnic background, to reach the similar educational and career goals. However, NCLB-like assessment systems frame the debate fully in terms of outcomes. But the question remains about whether outcomes and opportunities can be equalized in the same way.

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Let us consider access to high-quality health care as a point of departure, and hospitals as an analog for educational equity. The policy drive toward universal health care is about providing the same access (opportunities) to health care for all citizens, regardless of an individual or family's ability to pay. As in education, the health gap between affluent and poor and between people of color and Whites has persisted for some time. To simplify this complex issue, advocates for health care reform argue that if the American health care system was modified so that costs for the insured were kept low, waste and abuses of the system were removed, new regulations and policies were put in place, and every citizen has access to first-rate care, then social justice in the health care system would be achieved. Further, because health costs drain a staggering amount of capital from corporate interests, if implemented correctly, a reformed health care system would aid our competitiveness in the global economy. Money otherwise spent on health care could be directed to improve efficiency, productivity, and profits. However, health care reform advocates do not suggest strategies for directly equalizing outcomes because health outcomes, such as low mortality and reduced chronic disease, are only partially influenced by health care institutions themselves. Health outcomes, like educational outcomes, are influenced by cultural and family background, and psychosocial forces. For example, regular exercise, diet, rest and mental health, along with a decent health care plan, contribute to a person's overall health status. To obtain equal health outcomes, inputs must first be controlled, but in reality they cannot be. From the vantage point of the health care industry, many important variables are not malleable. Thus, health care providers have greater success in treating patients who already lead generally healthy lives, while they struggle to improve the lives of patients who, because of poverty or other circumstances, have preexisting poor conditions. Similarly, schools have greater success educating students with cultural capital and resource advantages at the starting gate.

In this context, it is not feasible to argue in favor of equalizing health outcomes for all, when there is tremendous diversity of inputs, an uneven playing field. Imagine two hypothetical patients, Patient A and Patient B. Patient A is an African American, middle-aged, diabetic male with hypertension and poor diet and exercise habits. Patient B is a White male of the same age, but he has no preexisting ailments and, in fact, he is an avid jogger and perennial marathoner. To be sure, Patient A poses special challenges for health care providers, and he is likely to have a markedly different outcome from a hospital visit than Patient B, who has a different and higher health baseline. Of course both patients deserve high-quality care. Creating a system that allows access to a high-quality standard of care for each patient is a responsible and attainable goal. However, creating a system where health care outcomes, as measured by quantitative indicators such as the presence of disease, blood pressure, cholesterol levels, and life expectancy for Patient A and Patient B are equalized, is not viable and perhaps not desirable.

These hypothetical patients depict the relationship between health and hospitals and help to draw comparisons between learning and schooling, with the goal of problematizing the definition of equity in the latter. The health profession, to

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reconcile quality and equity in service delivery, focuses on "standards of care," rather than promising equal outcomes for all patients, regardless of preexisting conditions and overall health. The phrase "standards of care" describes a set of treatments or actions that would be expected by a consensus of practitioners in the medical community in a given situation, or reflects how a knowledgeable colleague would act in a certain circumstance (Empey, Carpenter, Jain, & Atzema, 2004). However, according to Empey and his colleagues, precisely defining standards of care in the medical profession is frequently difficult and controversial, and in many cases, no clear predetermined standard will exist. Furthermore, the authors contend involvement in ongoing research activities will help advance the scientific foundation of effective practice, thereby helping to establish clearer practice quality standards and their application in a variety of settings.

"Standards of care" help guide the medical profession by providing general guidelines and rules about quality practice for practitioners. However, because every person has a unique medical history and different baselines of general health condition, "standards" vary from patient to patient. Reasonable practitioners can disagree on a course of action, and both could be right. The main objective of the profession is to improve the quality of health among individuals who are served by the system. Health, like learning, is a dynamic dependent variable that is influenced by numerous factors, both within and beyond organizational control.

TOWARD AN EQUITABLE APPROACH TO MEASURING LEARNING IN DIVERSE EDUCATIONAL SETTINGS

This chapter began by suggesting that the quest for equity has been long, and rooted in a desire to fulfill the promises of *Brown*. Race relations in the United States have evolved to a point where diversity, in many respects, is far more complicated than half a century ago and its implications for educational policy are less clear. Discovering whether an educational system is equitable within the context of a diverse, multiracial, multiethnic, multilingual, and multicultural society, and one where social class powerfully influences one's life chances is problematic. I set out to reexamine equity in education in an effort to push the discourse beyond the debate about strategies to close the achievement gap between White students and students of color. In this regard, I situated the issue of equity within an analysis of broader social forces that cultivate inequality throughout society—in employment, housing, criminal justice, and so forth—so that educational inequality is part and parcel of overarching social ills. Equity was unpacked by first asking a more basic and fundamental question about the ultimate purpose of education. From a policy perspective, if we assume the end game of education is producing student learning, then we should ask whether learning outcomes are distributed randomly across race, ethnicity, and social class. We should question whether NCLB-like assessments or high-stakes tests measure the kind of knowledge necessary for social and economic success, or whether they assess something else, partially related to one's life chances. As I have argued, the

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role of increased accountability via state-based systems as an approach to obtaining equity is hotly debated. Although advocates are many, several of the consequences of high-stakes testing, which are nonobvious and perhaps unintended, have not helped advance the nation toward more equitable schooling.

Without diminishing the need to refine standards of educational equity and excellence within a diverse society, I believe the more important aim is creating a context within which students are nurtured socially and intellectually and given real opportunities to learn high-content, standards-based material. Equity then, could be measured in terms of "quality of care" and rigor, as well as via individual achievement indicators. Perhaps ongoing work to create standards-based assessments in diverse educational settings may hopefully lead to an evolution of the current accountability policy framework.

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