

***The Presence and Performance of Teachers
of Color in the Profession***

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Executive Summary

The purpose of this project was to review research on three issues related to teachers of color: (1) their representation in the professional pipeline and in actual practice; (2) their performance on district, state, and national certification and licensure tests; and (3) their impact on student achievement. These investigations are worthy pursuits given the significance and magnitude of discussions about the need for, declining presence of, and importance of having ethnic and racial diversity in the teaching workforce.

Several different kinds of sources were consulted for information pertinent to this project. They included articles, books, and monographs written by scholars; documents compiled and disseminated by federal agencies, such as the National Center for Educational Statistics; state departments of education; private organizations; ERIC documents; the Statistical Reference Index, and electronic websites. Despite thorough searches and cross-referencing the data pool generated was surprisingly thin and sparse. In addition to not finding a wealth of pertinent data many of the resources located had incomplete information. Frequently, specific data on race and ethnicity were not included in the references at all, or that which was included was incomplete and inconsistent by not addressing all groups of color, or not providing the same kind of information for all groups. Therefore, the content included in the report that follows should be accepted with caution in view of these limitations.

Despite the difficulty in locating a robust body of research, some trends and patterns did emerge that are worthy of note. There are no substantive surprises in these results. For the most part they confirm conventional wisdom and commonly expressed opinions about the plight of teachers of color for those who are in the pipeline, as well as those already in the profession. These trends are summarized briefly according to the major parts of the elaborated report.

The Need for Teachers of Color

There is a high level of agreement among policy makers, teacher educators, members of ethnic communities, and school leaders that the education profession needs more teachers of color. Most often the reasons given for this need are to serve as role models for students of color, and to provide opportunities for mainstream students to learn about ethnic, racial, and cultural diversity. Some other supporters argue that teachers of color will be able to teach diverse students better because of their shared racial, ethnic, and cultural identities. Thus, the need for teachers of color is connected directly to closing the achievement gap of students, although their contributions are viewed more in the social and relational arenas than in the academics.

Presence of Teachers of Color

The data in this report confirms that teachers of color are highly under-represented, as well as providing some insights in how this under-representation is configured. They reveal that

- Both in enrollments in teacher education programs and in employment in practice teachers of color are largely located in settings isolated from each other, and their European American peers. They teach in schools that have large numbers of students from their own ethnic groups.

- Teachers of color come closest to having proportional representation in large urban school districts.

- Most teachers of color are employed in school districts that have 30 percent or more students of color enrollments. For Native Americans these are located in rural areas and small towns rather than urban centers.

- Teachers of color are found in states and regions of the United States where there are large percentages of their ethnic groups in the general population. Thus, the highest percentages of African American teachers are found in the Southeast Region; Latinos are in the West and the Northeast; Native Americans are in the Central and Western Regions; and most Asian Americans teachers are employed in the Western Region. Attendance at colleges and schools of education follows similar patterns.

- With the exception of Hawaii and the District of Columbia no state with a sizable diverse population has a percentage of teachers of color that comes close to approximating its percentage of students of color. This pattern exists even in states with very small percentages of both, even though the range of difference is much smaller.

- The larger the students of color population in states, the greater is the disparity with percentage of teachers. Ironically, these are the settings where more teachers of color are needed.

- There are at least 16 states and the District of Columbia that have percentages of teachers of color that are greater than the national average, and another 5 are within two to three points of it.

- There is about an equal representation within ethnic groups for teachers of color employed in elementary and secondary schools.

- Choice of teacher education disciplines vary somewhat by ethnic groups. The highest percentage of African-Americans are enrolled in early childhood education and vocational education; and more Latinos, Asian, and Native Americans are enrolled in bilingual education preparation programs. About an equal number of Asian Americans choose early childhood, elementary, secondary, special, and vocational education for their specialties. A similar pattern exists among Native Americans, except for vocational education, where the enrollments are higher.

Teachers of Color and Testing

Virtually all states, and many colleges of education, use some form of testing, either for entry into or exit from teacher education programs, and for licensure to teach. Some states use tests that are designed for them by National Education Systems, but at least 38 states use one of the tests in the Praxis I, II,

and III Series created by the Educational Testing Service. These tests cover general knowledge of reading, writing, and mathematics, subject matter content knowledge, and demonstration of pedagogical skills, respectively. Both proponents and opponents of teacher testing point out that a passing score is not a guarantee of high quality teaching; nor does failing the tests assure ineffective teaching. However, the advocates explain with conviction that the tests generate a more academically capable teaching pool. Another area of agreement between supporters and critics is that certification and licensure tests are making the national pool of teachers more homogeneous with respect to the dominance of European American females, because of the high rates of failure across ethnic groups of color. Some more specific trends revealed in the data on testing and teachers of color are:

- In most instances less than 50 percent of African Americans are passing teacher tests. This pattern prevails across time, location, and types of tests.
- African Americans tend to have the lowest pass rates of all groups of color.
- There are positive relationships between SAT and ACT scores, and grade point averages, and performance on teacher tests for all ethnic groups. The higher the one, the higher the other.
- Teacher candidates of color who took the SAT tend to perform better on the Praxis I certification tests than those who took the ACT college entrance exam. The reverse is true for Praxis II for all ethnic groups, except African Americans.
- All teacher candidates of color (i.e., African Americans, Asian Americans, Latino Americans, and Native Americans) who passed both Praxis I and Praxis II scored much higher on the SAT than their ethnic group peers who did not pass, as well as those in the general test-taking populations for these two exams.
- The relationships between Praxis II passing rates and ACT scores by ethnic groups are not as consistent as those for Praxis I. Generally, the test takers who passed Praxis II had higher English scores on the ACT than the national averages for their ethnic groups, but this was not always the case for math scores.
- Except for Asian Americans, the verbal scores on the SAT and the English scores on the ACT were higher than the math scores for the test-takers who passed both Praxis I and Praxis II tests.
- The failure rates on national teacher tests and the corollary negative effects are stronger for students attending historically Black Colleges and Universities (HBCUs) than for those at predominately White institutions (PWIs). Although the overall passing rates are slightly better at PWIs, they are not significantly so.

- Overall more teacher candidates of color pass Praxis II subject matter content tests than Praxis I basic skills tests, and the pass rates on Praxis II are greater for secondary than elementary teachers.
- No specific information on pass rates was available for Praxis III This may be due to the nature of the test, which is demonstration of pedagogical skills in practice in local contexts that is rated by trained evaluators, rather than being a pencil and paper test.
- Although pass rates on Praxis I and Praxis II correlate strongly with grade point averages, with candidates with the highest grades passing the tests at higher rates, two-thirds of students with a 2.0 or “C” grade point average pass state test requirements for licensure.

Teachers’ of Color Effects on Student Achievement

Most of the data available on connections between teachers of color and student achievement are generated from small scale qualitative research involving single or multiple case studies. The results tend to be about achievements other than academic content mastery, grade point averages, and performance on high stakes tests, such as the Iowa Test of Basic Skills and the National Assessment of Education Progress report cards. Instead, they amplify school achievement such as greater attendance records, lower disciplinary referrals, fewer drop-outs, higher overall satisfaction with school, and stronger self-concepts, cultural competence, and sense of efficacy for students. Beyond this body of research, data are extremely sparse on the academic achievement effects of teachers of color. The few studies that were located indicated that:

- Students of color tend to have higher academic, personal, and social performance when taught by teachers from their own ethnic groups.
- A study in Texas showed that in classrooms with multiethnic student populations European American, African American, and Latino American teachers produced similar gains on the state’s norm-referenced assessment tests.
- Another study in North Carolina revealed that for every one percent increase in teachers’ certification test scores there was a three percent decline in the number of students performing below grade level in math and science.
- Several individual teachers from different ethnic groups have demonstrated that when students of color are taught with culturally responsive techniques, and with content and approaches usually reserved for the gifted and talented, their academic performance improves significantly.
- Teachers of color have higher performance expectations for students of color from their respective ethnic groups.

- Students of color in ethnically-specific schools and programs, such as Africentric academies and HBCUs perform better on standardized tests (such as the IBTS and the California Achievement Test), and other measures of school success than their counterparts attending more conventional schools and PWI

Implications for Future Research and Policy Making

The overall paucity of specific, systematic, and consistent data on teachers of color on a large scale points to several critical future needs, both in research and policy. Among these are:

- Conduct much greater quantities of research on all issues related to the presence, preparation, performance, and potential of teachers of color.
- Regularly include more detailed information for all groups of color in research studies, to counter the current tendency of focusing primarily on African Americans.
- Agencies reporting data (such as state departments of education, professional organizations dealing with teacher education, college, schools, and departments of education, and the national government) on teachers and teaching should be much more diligent about maintaining their established cycles of data collection, and reducing the time-lapse between these cycles and between when data are collected and disseminated.
- Variables of race and ethnicity should be kept in the forefront of research, policies, and practices about teacher education and student achievement.
- Legitimize and support multiple forms of research, using different techniques, locations, and populations to examine similar issues and concerns. For example, what are the expressive manifestations of culturally responsive teaching and its achievements for different ethnic groups. There is a growing impressive body of research on these issues involving African Americans and Native Americans, but virtually none for Asian Americans, and that for Latino Americans is restricted largely to language issues.
- Since teacher of color seem to have positive benefits for students of color from their own ethnic groups, researchers of color may be able to generate similar insightful results.. Therefore, more “culturally responsive” and ethnically-directed research in teaching and learning should be conducted.
- Currently, there is very little research about teachers of color working with students from ethnic groups of color other than their own, or with European American students. When cross-group studies do exist, invariably they are about European Americans working with students of color. These voids should be corrected in future research.

- Probably the greatest needs in future research are (1) to exam more carefully claims made about the positive potential of ethnic and racial diversity in the teaching workforce from many different vantage points, and (2) to institute interventions, and study their effects, for improving the performance of teacher candidates from different ethnic groups on various licensure and certification tests and other measures of success.

Without some radical changes in the current situation of teacher testing will continue to exacerbate one problem as it appears to address another. Tests improve the academic quality of the teaching pool while simultaneously making it more racially homogeneous. Reducing the representation of individuals of color in the teaching pipeline and workforce aggravates the shortage problems, and makes it virtually impossible to deal with the growing need for more teachers of color. Somehow we much avoid pitting excellence against equity. This is not to suggest that high quality performance criteria should not be applied in the recruitment, preparation, and employment of teachers of color. Yet, it is very likely that there are many very skillful actual and prospective teachers of color who are unable to pass tests. Somehow future endeavors need to concede these possibilities, and find ways to be less exclusionary to those populations whose inclusion is most imperative. If not, students of color and their achievement will continue to be unduly victimized.

Discussions of teachers and students in the United States quickly evoke several recurrent issues or themes. One is the inverse numerical relationship between who teaches and who is taught. Current statistics and future predictions are quoted about how the school population is becoming more ethnically, racially, and linguistically diverse while teachers remain predominately monoracial, monoethnic, monocultural, and monolingual. It makes no difference whether the point of reference is K-12 schools or colleges and universities, the under-representation of teachers of color, both in overall quantity and status or rank distributions is a source of concern. The percentage of teachers of color (especially African Americans) in elementary and secondary education is declining as the number of students of color is increasing. At the college level professors of color continue to be few in number and clustered in non-tenured or low-level professorial ranks. These representational disparities are even more troubling when they are associated with student achievement.

Teacher Perceptions of and Responses to Student Diversity

Research (Anyon, 1981; Good & Brophy, 1994; Ralph, 1989; Ligon, 1992; Oakes, 1985; Oakes & Guiton, 1995; Zeichner, Melnick, & Gomez, 1996; Ligon, Rosado, & Houston, 1998) has demonstrated that teachers respond differently to racial, ethnic, cultural, and linguistic diversity, and that their responses have direct effects on the learning opportunities provided to students of color. These attitudes and effects are evident among preservice and inservice, novice and experienced, and majority and minority teachers.

Gomez (1996) and Zeichner (1996a; 1996b) summarized research on the perspectives of European American prospective teachers about culturally diverse students and curriculum. They found that most of these individuals are poorly prepared to teach students of color, are reluctant to embrace this challenge, and often exhibit non-constructive attitudes, beliefs, and behaviors. Specifically, in her research review Gomez found differences in student achievement attributions between novice teachers working in inner cities, small towns, and rural areas compared to those in suburban schools. The teachers working with students of color and poverty attributed their learning abilities to influences outside of school, and tended to perceive these influences as detrimental to learning. While they expressed views in support of being kind and considerate to all students, many were not convinced that all students can learn at high levels. Goodlad (1990) reported similar findings. Novice and prospective teachers in suburban and middle class schools attribute student learning opportunities to factors inside of schools, and over which teachers have some control, such as the quality of curriculum and instruction. These results led Gomez (1996) to conclude that “early in their careers, many teachers locate children’s problems of learning and achievement not as outcomes of teachers’ beliefs about and behaviors toward children in school, but as consequences of children’s out of school lives—beyond the purview of teachers, schools, and schooling” (p. 113). Undoubtedly, these perceptions allow some teachers to

absolve themselves from being held accountable for student achievement since the obstacles to it are beyond their control or arenas of influence.

Zeichner's review (1996a; 1996b) produced results comparable to Gomez's, but they are even more graphic and problematic. Most students in teacher education programs expressed preferences for teaching students like themselves, and in communities similar to their own. The problem with this is the under-representation of ethnic and residential diversity among teacher education candidates. According to a study conducted in 1989 by the American Association of College of Teacher Education (AACTE), there are very few teacher candidates of color and from urban areas. Of the preponderance of European American prospective teachers only about 13 percent expressed any interest in teaching in urban schools.

The research summary presented by Zeichner (1996a; 1996b) shows that teacher candidates tend to view racial, cultural, ethnic, linguistic, and social diversity among students as a problem rather than a resource; conceptions of diversity focus on characteristics of individuals such as motivation, and ignore contextual factors like race and ethnicity; are unable to discuss student differences in informed and thoughtful ways; have little knowledge about the cultures, histories, lives, contributions, problems, and participation of different ethnic groups (particularly those of color) in the United States; and often have negative or naive attitudes about ethnic groups other than their own. These conditions must be changed so that teachers are better prepared to work with students of color across ethnic groups in K-12 classrooms. Race, culture, class, context, and inequity must be at the heart of these changes. Other researchers (Paley, 1989; Cochran-Smith & Lytle, 1993; King, Hollins, & Hayman, 1997; Smith, Moallem, & Sherrill, 1997; Dilworth, 1998; Sleeter, 2000-2001; Ladson-Bilings, 2001) have substantiated these findings and conclusions, and demonstrated that teachers can develop positive attitudes toward and effective strategies for teaching ethnically diverse students.

Studies of tracking (Anyon, 1981; Goodlad, 1984; Oakes, 1985; Oakes & Guiton, 1995; Mehan, Hubbard, Villanueva, & Lintz, 1996) provide additional evidence about how cultural and social gaps between students and teachers can affect academic opportunities and outcomes. The teachers in these studies are primarily middle class European Americans. The results indicate that African Americans, Latino Americans, Native Americans, and children of poverty across ethnic groups are assigned to low status, general, special, and vocational education program options much more frequently than their middle class European American counterparts. These classes are often taught by the least qualified and experienced teachers who have lower performance expectations of students. They teach them accordingly, providing less intellectually challenging content, less praises and encouragement, and little if any opportunity to develop complex and higher order critical thinking, analytical, interpretative, and knowledge construction skills. Their learning activities focus, instead, on rote memory of low-level factual information, following instructions, and conforming to rules and regulations established by authority figures. Complicating matters further is the high level of instructional instability present in classes populated by large numbers of students of color due to high rates of

attrition and turn-overs among their teachers. Achievement outcomes reflect these instructional emphases by being low quality, low level, and low status.

Potential of Teachers of Color

Many analysts argue that more teachers of color are needed to counteract the negative effects that some unsympathetic and culturally insensitive mainstream teachers have on the performance of students of color. They believe “ethnic minority teachers bring sociocultural experiences that, in the main, make them more aware of the elements of racism within schooling, more willing to name them, and more willing to enact a socially just agenda for society . . . and schooling” (Quioco & Rios 2000, p. 487). Other scholars associate the benefits of teachers of color most specifically with positive effects on the social, personal, and academic performance of students of color. They are perceived as role models for the educational achievement and career aspirations of minority students; being better able to meet the learning needs of students of color because of shared cultural heritages and orientations; and, if bilingual, helping limited English speaking students overcome language barriers to academic success (King, 1993; Lankard, 1994; Carrasquillo & Rodriguez, 1996; Piercynski, Matranga, & Peltier, 1997; Salinas, 2002; Clewell & Villegas, 1998; Dilworth, 1998; Nygren. 2002; Pickett, 2002).

Former U. S. Secretary of Education, Richard Riley (1998), endorses these arguments. In doing so he explains that

If we are to be responsive to the special demands and great opportunities of our nation’s pluralistic makeup, we should develop a teaching force that is diverse, as well. Many of the increasing numbers of students who will be filling our schools in the next decade will be children of color. Many will be sons and daughters of immigrants. Children need role models—they need to see themselves in the faces of their teachers. We need teachers who can relate to the lives of diverse students, and who can connect those students to larger worlds and greater possibilities. We need teachers from different backgrounds to share different experiences and points of view with colleagues. This sharing enriches and empowers the entire profession and students from all backgrounds (p. 19).

Some educators establish even closer and direct causal relationships between the absence of teachers of color in schools and the low academic performance and high dropout rates of students of color. For example, Martinez (1991) and Nygren (2002) contend that the lack of teachers of color provides little incentives for minority students to persist and advance in school. Salathe (2002, p. 3) adds that

Role models for children of their own race or ethnicity are especially important since, . . . with an all-white teaching force minority students may come to think that they cannot aspire to the same profession or the same academic standards as their mentors. . . Furthermore, students from low-income backgrounds might not have out-of-school opportunities to meet professionals of their own race or

ethnicity. . . Minority teachers also provide an important cultural perspective for both minorities and non-minorities . . . , support and counseling of [students] who have similar cultural backgrounds to affirm their belief in themselves and their traditions, [and] . . . are more likely to have insights into the special problems that minority students face in school as well as into shaping lesson plans or choosing curricula that take cultural differences into account.

In connecting these claims specifically to Native Americans Carol Juneau, who chairs the Montana Indian Education Association, suggests that students need to see Native Americans in leadership roles, not just in service roles such as secretaries and bus drivers; Native American teachers may have more influence with Native American students than teachers from other ethnic groups; and they can counter the stereotypes that others have of Native Americans (Pickett, 2002). After examining the reasons for chronic truancy and dropout rates among Native American students in Missoula, Montana Salathe (2002) concluded that more minority teachers can help to “rectify the feelings of ‘alienation’ and ‘dislike of school’ that Indian students cite as some of their main reasons for dropping out of public schools” (p. 3).

Similar claims are made about the benefits of having African American teachers working with African American students. The research and scholarship on African American teachers reviewed by King (1993) reveals educational philosophies and pedagogical practices that are more inclusive than those of mainstream European Americans. They have higher performance expectations and strong beliefs in the abilities of students to meet them. Achievement is conceived broadly to include moral and character development, cultural competence and continuity, social responsibility, political activism, and ethnic affiliation along with academic knowledge and national citizenship skills. These teachers are much more astute about the need for African American students to be bicultural, and to be prepared to be activists in the construction of a non-racist, socially just, and genuinely egalitarian society. Haynes and Comer (1990) credit much of the academic and career success of prominent African American individuals to African American teachers who took a personal interest in them, made broad-based performance demands upon them, offered unequivocal support to ensure and facilitate their school success, and demonstrated concern and caring for them as persons and as students. Graduates of historical Black colleges and universities (HBCUs) point to these teaching habits as one of the major reasons why attending these institutions were so personally rewarding and academically successful for them (Fleming 1991; Allen, 1992; Ross, 1998).

Many of the teaching strategies that are successful with students of color are different from the “best practices” promoted by mainstream scholars and practitioners. Nelson-Barber and Mitchell (1992) explain why this is so, and the negative consequences that are possible if teachers are not available who can create and use “culturally responsive best teaching practices” for ethnically diverse students, such as those mentioned above. According to them what works in diverse classroom is “second nature” to teachers of color because of:

their shared cultural identity or experience with students. What

comes out in their teaching is the notion that a priori conceptions of subject matter often do not work unless they are conveyed and organized within the context of local values and expectations about teaching and learning. The teachers in question have highly specialized skill in tailoring content, using local vernacular, and building relationships with students—a skill that can be the most critical element in a teacher’s success in diverse settings. The absence of teachers who bring these special perspectives and sensitivities to the classroom can only intensify the failure of many school districts to educate their growing populations of minority students (p. 231).

Riley (1998) extends the benefits of having teachers of color to all students in all ethnic groups. He proposes that,

All girls and boys need role models that reflect the diversity of our country. Otherwise, children can be left with the subtle but enduring message that people of color are not capable of being teachers or holding other important positions in society. If we want to end these poisonous stereotypes, our teachers should look like America” (p. 20).

He is joined by other scholars in advocating for the value added potential of teachers of color as role models to all students, including European Americans. For instance, a news bulletin (November 15, 2002) from the Burlington North Carolina School District notes, “The intrinsic value of being taught by qualified and competent teachers who are culturally and racially diverse benefits the whole student population “ (p. 1). Donnelly (1999) contends that if all students are to receive a high quality education they need to be exposed to culturally diverse perspectives and experiences. Teachers from different ethnic, racial, and linguistic backgrounds are needed to help facilitate this learning. Quiocho and Rios (2000) summed up this potential well with the observation that, “The lives of students will be enriched beyond measure by experiencing teachers from minority groups. Students can benefit from broadening perspectives of culture and the sense of social justice that is nurtured by spending time in classrooms with teachers from minority groups” (p. 524).

Research Validation of Benefits Teachers of Color Offer

There is a growing body of research that substantiates claims about the benefits of teachers of color working with students of color. Although every group of color (e.g., Latino, Native, and Asian Americans, Native Hawaiians, Alaskan Natives) has been represented in these studies most of the research deals with African Americans. It involves small samples, uses a variety of qualitative methods, and has been conducted in different locations. It also has examined teachers in both historical and contemporary times; in elementary, secondary, and college classrooms; in public and private schools; and from the perspectives of retired individuals and those who are still actively engaged in the

profession. Scholars contributing to this body of research include Siddle Walker (1996), Ladson-Billings (1990; 1992, 1994), Foster (1989, 1991, 1997, Kleinfeld (1975), Henry (1992), Irvine and Foster (1996), Au (1993), King (1993); Tharp and Gallimore (1988), Howard (1998), and Lipka, Mohatt, and the Ciulistet Group (1998). The results are highly consensual across the studies, thus increasing the level of confidence in them.

In general, these studies show teachers using an expansive, inclusive, and culturally responsive pedagogy (Gay, 2000), in which their own and their students' personal lives inform teaching and learning practices. Students are taught rigorous academics; to fight racial oppression and act as social change agents; engage in critical analyses and evaluations of social realities; understand the personal, collective, and political consequences of choosing academic success; participate in determining their own education; connect school learning to their cultural backgrounds and social living; and experience intellectual, social, emotional, and cultural growth, simultaneously. Joyce King (1991) refers to this style of teaching as *emancipatory pedagogy*, and Judy Kleinfeld (1975) calls these teachers "warm demanders."

Henry (1992), Foster (1997), and Howard (1998) found that African American teachers build communities of learners and learning environments among African American students that exhibit a family ethos, with them acting as "other mothers"—that is, treating Black children in their classrooms and communities as extensions of their own families. Cultural references, community experiences, cultural communication styles, and moral edicts are sprinkled liberally throughout their instructional interactions. Foster (1995) summarizes the "pedagogy of effective African American teachers" (p. 578) as follows:

These teachers express cultural solidarity, affiliation, and connectedness with the African American community. . . this solidarity is manifest in the way teachers characterize their relationship to students; the responsibility they take for educating the whole child by teaching values, skills, and knowledge that enable school success and participation in the larger society; and their demonstrated competence in the norms of the African American community. Excellent African American teachers draw on community patterns and norms in structuring their classrooms. They link classroom activities to students' out-of-school experiences and incorporate familiar cultural and communicative patterns into their classroom practices, routines, and activities (p. 578).

A study of retired African American teachers in Washington, DC that was conducted by Mitchell (1998) is illustrative of the venue of research available on patterns and trends in culturally responsive pedagogy by teachers of color for students of color. The participants were eight (5 females and 2 males) secondary teachers who retired from the District of Columbia Public Schools between 1990 and 1995. They were between 60 and 75 years old, each had a successful career of teaching for 25-30 years, and all had well-established reputations as effective in facilitating the academic achievement and social

development of students. These teachers revealed that they had to address affective issues to engage students in academic learning tasks. In the process of teaching they played three major roles—cultural mediators, activists, and supporters of students growth and development.

As cultural mediators the teachers recognized that students wanted to learn but many environmental hazards (such as violence, unemployment, and substance abuse) had to be dealt with before the desire could be realized. This understanding enabled them to be sensitive to their students' attitudes and behaviors, and help them better negotiate the competing demands of home, community, and school. In the role of activists the teachers advocated for the rights of students with school administrators, other teachers, and parents. They considered their teaching as having practical and immediate implications for both inside and outside of the classroom. Consequently, they invested personal time beyond official school hours on behalf of their students, such as attending school board meetings and participating in community functions. In supporting student growth and development these teachers were sensitive to their students academic self-concepts and fragile egos; facilitated social, emotional, political, and moral development, along with intellectual learning; taught students how to critically analyze and interpret personal and political implications of situations that happened in their schools and communities; challenged students about their social decisions and moral choices; talked openly with students about social concerns such as crime, violence, substance abuse, and teen parenting; developed critical personal, social, and political consciousness; and created classroom climates where students were comfortable, cared for, and nurtured.

Based on these findings Mitchell (1998) concludes that the teachers in her study

demonstrated a sophisticated understanding of how students' economic and social backgrounds often created barriers to academic achievement. The teachers also demonstrated a deeply felt belief that the students could achieve in spite of these barriers. They strike an interesting balance between acknowledging social forces that contribute to student attitudes and behaviors and recognizing students as actors who, through individual agency and with the proper guidance, can make independent choices based on a logical assessment of the rewards and consequences of their decisions. A large part of the teachers' role was helping students understand these rewards and consequences. . . the teachers in this study provided the protective factors that helped students overcome risks and develop both academically and socially. In other words, the teachers encouraged student resilience . . . valued each child's ability to learn, . . . considered teaching much more than transferring academic knowledge, . . . [and] had high levels of commitment and caring that propelled them to struggle with and on behalf of their students, even in the face of significant constraints (pp. 116, 118).

These theoretical claims and research findings about the power of the presence of teachers of color (Quiocho & Rios, 2000) in classrooms with students of color are persuasive. But, two critical questions remain unanswered. One is whether there are enough teachers of color in the profession now (and will be in the future) to constitute a critical mass so that their contributions will have a *felt* presence in the educational experiences of significant numbers of students of color and European Americans. The second question is what research evidence exists that makes explicit connections between teachers of color and specific dimensions of student achievement. We turn next to an examination of the research on these issues.

Data Sources

If projections about the U. S. student and teacher populations are realized current disparities will grow in the future, and the need for more teachers of color will exacerbate. Both total number of students (from 56.2 million in 1995 to 79.6 million in 2050) and the percentage of students of color (from one-third to over 50 percent) will increase significantly. Between now and the end of the decade of 2010 U. S. public schools will need 2 million new teachers (National Center of Education Statistics, 1997; U. S. Department of Commerce, 1995). These projections do not explicate the status and needed representation of teachers of color. However, their representation probably will not keep pace proportionally with the increase in students of color. This poses a major recruitment challenge for policy-makers, recruiters, and program designers in teacher education and Pre K-12 school employment. The challenge is especially daunting given the current under-representation of teachers of color and the positive benefits their presence in the profession offers for improving the achievement levels of students of color, and enriching the learning experiences of all students.

Dealing with the under-representation of teachers of color should begin with a clear understanding of the problem. There are two critical points of entry to this understanding. The first is disaggregating the data on individuals of color in the teaching workforce, *on multiple levels*. The most commonly available information on this issue is statistics about national averages. While important these are not as useful as they could be for locating and crystallizing the most critical need for teachers of color across the United States. Specific and localized statistics are more helpful. The second important point of analysis for understanding and dealing with the shortages of teachers of color is induction practices that may facilitate or obstruct their entry into the profession, such as certification licensure testing. These two issues are discussed in detail.

Finding a rich and robust body of research information on the three aspects of this project—representation in the profession, performance on teacher certification and licensure tests, and effects of teachers of color on the achievement of students of color—was challenging, and the results were disappointing. Before undertaking the search we had assumed that information would be readily available. This was not the case. In spite of thoroughly checking, rechecking, and cross-checking a variety of sources, little useful information emerged. Much is written about teachers of color, but most of it is not

research-based. Instead, it tends to be speculative, prescriptive, impressionistic, and based on scholarly argument. While valuable and informative this body of scholarship is largely beyond the purview of this project whose focus is “research review.”

In trying to locate relevant information we explored several types of resources. One was national governmental data-bases, including the statistical reports produced by the National Center of Educational Statistics, such as the Common Core of Data, and School and Staffing Survey (SASS), the Bureau of Labor Statistics, and the Census Bureau. A second source of potential information consulted was the 50 state departments of education. A third source was local school districts. In choosing these we focused on the ones that have high percentages of students of color. The underlying assumption was that these districts would also have higher representations of teachers of color and rich pools of information since the issue of minority student achievement is so pressing. We used information from the 100 largest school districts to assist these efforts.

A fourth information source consulted was academic organizations, policy-making bodies, and private agencies that have declared interests in the recruitment, retention, and performance of teachers of color at both the preservice and inservice levels. Among these agencies were the Great City Colleges of Education (GCCE); the Council of Chief State School Officers (CCSSO); schools, colleges, and departments of education (SCDEs) at big universities that produce large numbers of teacher education candidates; the American Association of Colleges of Teacher Education (AACTE); Recruiting New Teachers, Inc; the National Commission on Teachers and America’s Future; and the National Education Association (NEA). The final source of information was research by individual scholars and specific intervention projects. In these categories were initiatives such as The Rough Rock Demonstration School, the Kamehameha Early Education Program (KEEP), and Afrocentric schools. In trying to locate information from all sources we combined electronic with manual searches, and consulted governmental collections, ERIC documents, computer websites, the Statistical Reference Index, and published articles, books, monographs, and technical reports.

In addition to the data bases being sparse, there is little consistency across the little research that does exist, and similar kinds of gaps in the information are apparent across all data sources. This is due, in part, to the fact that many agencies use the same data bases. For example, many of the statistics presented by NCES are derived from information reported to the U. S. Department of Education by the states, and many documents that are commonly consulted for national profiles of education in the U. S. (such as The Condition of Education, the Statistical Abstract of the U. S., and the Educational Digest of the U. S.) are compiled from information collected by NCES or the Office of Educational Research and Improvement (OERI). Thus, their baseline data are virtually identical, and vary only in degrees of elaboration.

Two other characteristics of the data sources that were problematic for this project are the cycles of data collection, and the infrequency with which information on race and ethnicity is presented. Probably the most thorough

national data sets on K-12 schools, is the Common Core of Data produced by the NCES. The most recent report available is for 1993-94, which means the data are almost ten years old. This timing is compensated somewhat by state data reported in the Statistical Reference Index, some are as recent as 2002. However, these data files are not as complete or consistent as those included in the Common Core of Data. While the patterns and trends that were apparent ten years ago may still exist, the specific details embedded in them may have changed. A similar situation exists with statistical analyses of teacher education candidates. Since 1987-88 the AACTE has conducted four Teacher Education Pipeline Studies of colleges of teacher education. They are the best information available nationally on prospective teachers. But, the most recent report is based on data collected in 1995.

Complicating the situation further is the fact that all data sources do not provide information about the race and ethnicity of teachers. When it is included it is not necessarily the same type. For example, in their annual reports some state departments of education provide a single composite statistic on teachers of color for the entire state, while others specify percentages by ethnic groups, including European Americans, Native American/Alaska Natives, Asian Americans/Pacific Islanders, Latino Americans, and Africans Americans. Even more rarely is data presented by specific groups within these categories, such as Chinese, Japanese, and Filipino Americans within the Asian American category. On a few occasions information on Latinos is separated by Cuban, Puerto Rican, and Mexican American, and Native Americans and Native Alaskans are treated independently.

One of the biggest disappointment for us is that no data on the race and ethnicity of teachers *by specific groups* is included in reports on the 100 largest school districts in the U. S. This seems like a tremendous oversight, given the arguments made about the need for students of color to have more teachers of color, and the high percentages of both teachers and students color in these districts. The large city schools have the greatest needs, and offer some of the best opportunities and challenges for teachers. Our decision to collect information from the Great City Colleges of Education was driven by similar reasoning. Because they are located in or near large urban centers we assumed that there would be higher percentages of students of color enrolled in their teacher education programs, and their subsequent production of teachers of color would be greater than some other institutions. These assertions could not be verified by the nature of the data that are available.

Where are Teachers of Color

Both within and across sources, the quantity of data about teachers of color is surprisingly thin, and often sporadic. A case in point is the information from state departments of education. The combined exploration of NCES Common Core of Data, websites of the 50 state departments of education, the Statistical Reference Index, articles, and books revealed information on teachers of color for only 27 states. The kind of information varies widely from state to state. For example, Colorado, California, New Jersey, and New York provide the

most detailed information by identifying the percentage of teachers of color employed in all counties and districts within the state. New York gives composite percentages for all ethnic groups of color. Consequently, there is no way of knowing which ethnic groups account for the 66 percent minority teachers in the Hempstead School District within Nassau County. Colorado and New Jersey provide data by the specific ethnic groups of African Americans, Latino Americans, Asian/Pacific Islander Americans, and Native Americans/Alaskan Natives. Other states, such as Indiana, Iowa, Maryland, Michigan, Connecticut, Massachusetts, and Pennsylvania report a single statistic on the percentage of teachers of color for the entire state. Twelve of the 27 states for which data are available present statistics on their teachers of color by all four ethnic groups, as well as European Americans. Among these are Wisconsin, Washington, Texas, South Carolina, Georgia, and New Mexico. There are so few teachers of color in Utah, South Dakota, and Idaho that they are reported as actual numbers, rather than percentages. Some states that might be expected to have significant representations of teachers of color do not provide any information. Among these are Alabama, Arizona, Arkansas, Mississippi, Missouri, Tennessee, and Virginia.

As could be expected, the percentage of teachers of color among the states reporting this information varies significantly. They range from a low of 1.8 percent in Iowa to a high of 76.8 percent in Hawaii and 87.2 percent in Washington, DC. While some states reported both actual numbers and percentages for teachers of color, Idaho, South Dakota, and Utah presented only numbers in their 2001 and 2002 calculations. South Dakota had only 38.6 FTE (full-time equivalent) teachers of color, Idaho had 302 of a total 15,393, and Utah had 649 of its teaching workforce of 24,513. Other states with very low percentages (5% or less) of teachers of color are Oregon (3.0%), Michigan (3.1%), Wisconsin (4.4%), and Indiana (4.8%). Five states have between five and seven percent. These are Colorado (6.3%), Connecticut (7.0%), Oklahoma (5.5%), Pennsylvania (6.2%), and Washington (6.6%). Five other states have between 12 and 20 percent teachers of color. They are New Jersey (12.6%), Delaware (12.9%), Illinois (15%), South Carolina (16.3%), and North Carolina (14.1%).

In the other seven states for which data are available for the 2001-2002 school year between 21 and 32 percent of all their teachers are minorities. These are Georgia with 21.6 percent, New York, 22.6; California, 26.1; Texas 27; Louisiana 27; Maryland, 30.9; and Florida, 32. Even though the percentages of teachers of color in these seven states, plus three others (South Carolina, Illinois, North Carolina) surpass the percentage (14%) for the United States as a whole, none is comparable to or greater than the percentage of students of color (36%) nationally, or in their own jurisdictions. For example, Illinois has 40 percent students of color, Texas has 58 percent, and South Carolina has 44.5 percent. All of these data for 1993-94 and 2000-2002 are summarized in Table 1.

According to data compiled by the AACTE (1999) from the Teacher Pipeline Survey IV conducted in 1995 and the 1993-94 Schools and Staffing Survey (U. S. Department of Education, 1994) Hawaii and the District of

Columbia (DC) are exceptions to these disparities in the representation of teachers and students of color in the same states (See Table 1). They are the only places with large numbers of minority students where teachers of color are an overwhelming majority (76.8 % for Hawaii and 87.2% for DC), far exceed the national average, and come close to matching the percentage of students of color (78.4% for Hawaii and 98.5% for DC). Disparities in the representation of students and teachers of color in Hawaii and DC are 1.6 and 11.3 percent, respectively. The 1993-94 SASS data also show that in the 12 other states with minority student populations greater than the national representation (36%), and five others that are approaching it (with 30 percent or more students of color) the number of teachers of color are significantly lower. These differences in representation range from a low of 15.8 percent in Arizona to 33.6 percent in New Mexico (See Table 1).

The data presented in Table 2 suggest three other important trends in the representation of teachers of color across the states. The first is that most teachers of color are employed in states that have large general populations of color, and students in schools. The large school districts also are located in these states. Thirty-three states have at least one of the 100 large school districts, but eleven states have almost three-fourth (74) of them. They are Texas with 15 of the largest school districts, Florida (13), California (12), Georgia (6), Maryland (5), Ohio (3), and 4 each

Table 1: Percent of Students and Teachers of Color in States by Order of Magnitude, 1993-94 and 2000-2002

State	Minority Students	1993-94 Minority Teachers	% S/T Difference	2000-02 Minority Teachers	Nati
onal	36.0	14.0	22.0		
DC	98.5	87.2	11.3		
Hawaii	78.4	76.8	1.6		
New Mexico	60.1	26.5	33.6		
California	54.2	20.7	33.5	26.1	
Mississippi	51.0	23.9	27.1		
Texas	49.4	18.9	30.5	27.0	
Louisiana	48.8	24.5	24.3	27.9	
South Carolina	44.1	18.3	25.8	16.3	
New York	42.1	15.3	26.8	22.6	
Maryland	41.3	17.5	23.8		
Florida	40.8	22.9	17.9	32.0	
Georgia	40.6	24.8	15.8	21.6	
Arizona	40.1	15.9	24.2		
Alabama	37.0	19.2	17.8		
New Jersey	34.3	9.8	24.5	12.6	
North Carolina	34.2	16.9	17.3	14.1	
Delaware	34.1	11.8	22.3	12.9	

Alaska		34.0		10.7		23.3	
Illinois	32.2		13.4		18.8		15.0
Virginia	29.8		16.3		13.5		
Nevada	29.0		12.6		16.4		
Oklahoma	28.4		11.9		6.5		5.5
Arkansas	26.2		12.4		13.8		
Colorado	25.7		10.3		15.4		6.3
Tennessee	25.0		15.8		9.2		
Connecticut	24.3		5.3		19.0		7.0
Massachusetts	21.3		7.4		13.9		6.0
Michigan	20.8		9.9		10.9		
Rhode Island	20.7		3.2		17.2		
Washington	20.3		5.1		15.2		6.6
Pennsylvania		20.1		7.6		12.5	6.2
Missouri	18.1		8.4		9.7		
Wisconsin	17.8		2.7		15.1		
Ohio	15.8		6.7		9.1		
Kansas	15.4		3.3		12.1		
Indiana	14.1		4.5		9.6		4.8
Oregon	13.7		4.3		9.4		3.0
Montana	13.5		3.8		9.7		
South Dakota		12.2		1.4		10.8	
Minnesota	11.3		2.3		9.0		
Wyoming	10.1		4.0		6.1		4.4
Idaho	9.4		2.4		7.0		
Kentucky	9.1		5.7		3.4		
Utah	8.9		4.1		4.8		
North Dakota	8.6		2.0		6.5		
Iowa	7.4		2.2		5.2		1.8
Nebraska	7.2		0.6		6.6		
West Virginia		4.4		2.2		2.2	
New Hampshire	3.2		1.6		1.6		
Vermont	3.2		2.3		0.9		
Maine	2.3		0.5		1.8		

Sources: Compilation of Data from the U. S. Department of Education, Center for Education Statistics, SASS by State; 1993-94 Schools and Staffing Survey: Selected State Results; AACTE (1999) Teacher Education Pipeline IV

Table 2: High Percentages of Teachers by Ethnic Groups and States within Geographic Regions

Region/States	Ethnic Groups			
	A-A	L-A	A/PA	AI/AN

Northeast				
DC	65.4			
MD	12.9			
NY		7.2		
Southeast				
AL	15.4			
AR	10.5			
FL	12.6	7.9		
GA	21.1			
LA	20.2			
MS	19.5			
NC	11.9			
SC	15.3			
TN	13.2			
VA	13.4			
Central				
IL	10.4			
Western				
AK				5.0
AZ	10.5			3.0
CA		10.2	4.0	
CO		6.9		
HI			61.1	
NM		21.1		
OK				6.6
TX		12.7		

Sources: 1993-94 Schools and Staffing Survey, Teacher Questionnaire; AACTE (1999) Teacher Education Pipeline IV Survey; 1999 Common Core of Data, NCES.

in Louisiana, North Carolina, Tennessee, Utah, and Virginia. When the states with one or two large school districts are added to this list (such as Hawaii, New York, Maryland, DC, Pennsylvania, and New Mexico) they represent locations where

the highest percentages of teachers of color are employed. Undoubtedly, large school districts account for these distributions, although the data are not usually included in their profiles (nces.ed.gov/pubs2001/100largesr/districts.Asp#2).

The second trend gleaned from the data in Table 2 is that the distribution of teacher of color follows the residential patterns of the general population of ethnic groups within the U. S., and corresponding student populations. Thus, the highest percentage of the 1.1 percent of Asian American/Pacific Islander teachers in the U. S. are located in Hawaii, (61%) and California (4.0%). The total number of Native Americans and Alaskan Native teachers is very small (less than 1.0 %). Their strongest representation is in the Western Region states of Oklahoma (6.6 %), Alaska (5.5%), and Arizona (3.0%). Latino American teachers, who comprise 3.6 percent of the national workforce, also are found

mostly in the Western Region states, but they do have some presence in the Northeastern and Southeastern Regions as well. They are most populous in New Mexico (21.1%), Texas (12.7%), California (10.2%), Florida (7.9%), and New York (7.2%). Individuals of Mexican ancestry probably account for most of the Latino teachers in the Southwest, Puerto Ricans in the Northeast, and Cubans in the Southeast, given the regional distribution of these ethnic groups in the national population at large.

African American teachers, who are 7.6 percent of the national totals, are present in all four regions of the United States, but most densely and widespread in the Southeast, as is the general African American population. In 10 of the 12 states that comprise this region (e.g., Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia) there are sizable representations of African American teachers, from 10.5 percent in Arkansas to 21.1 percent in Georgia. In the Northeast, Washington DC has the overall highest percentages (65.4) of African Americans, followed by 12.9 percent in Maryland; Illinois in the Central Region has 10.4 percent; and Arizona in the Western Region has 10.5 percent. These data and other details that are presented in Table 2, are derived from the 1993-94 SASS, the AACTE (1999) Teacher Education Pipeline IV Survey conducted in 1995, and the 1997 Common Core of Data produced by NCES.

The third consistent pattern evident in data on geographic distributions among teachers and students of color is apparent in large school districts. Again, the highest representations of teachers of color are in districts with the highest numbers of students of color. Ironically, disparities between the representations also are highest in these districts. This trend in the distribution of teachers of color is substantiated by Quijano and Rios (2000) in their review of research on their experiences in preparation programs and professional practice. They found high positive correlations between the ethnic identity of teachers, and the students enrolled in the schools where they taught. Thus, African American and Latino teachers were assigned to schools with primarily African American and Latino students, respectively.

The best available information on the 100 largest school districts is the Common Core of Data (CCD). While the data are more current than the SASS report on states, they are not as detailed for teachers of color. According to reports for 1999-2000 on the 100 school districts with enrollments of 45,000 or more, 68 percent of their enrollments is students of color. In 33 percent of these districts students of color comprised 75 percent of the enrollments. When analyzed by specific ethnic groups the numbers are equally daunting. In 18 of the 100 largest school districts 50 percent or more of their students is African Americans; in 13 the majority student populations are Latino Americans, and in 2 (Hawaii and San Francisco) Asian/Pacific Islander students are the largest group. Forty-four of the largest school districts have 50 percent or more European American students (nces.ed.gov). When these representations are converted to percentages, of the 6.8 million students served by the 100 largest school districts in 2001-2002, 38.8 percent is African Americans, 31.2 percent is Latino Americans, 6.4 percent is Asian/Pacific Islander Americans, 0.7 percent is

Native American/Alaskan Natives, and 22.8 percent is European Americans (www.cgcs.org).

Unfortunately, the data sources do not identify the specific ethnic group distributions of the 408,766 teachers in these districts. For example, the Council of Great City Schools conducted a survey of its 54 members in 2000. Responses were received from 40 districts. These data indicated that 69 percent of their 5.5 million enrollments were students of color, and teachers of color comprised 36 percent of the total 325,000 (www.rnt.org/quick/press.html). The 1993-94 SASS and 1995 AACTE Teacher Education Pipeline reports reveal that, except for Washington, DC and Hawaii (which have only one school district), the percentage of teachers of color in none of these large school districts come close to matching the percentage of students of color, given their overall representations at the state level (see Table 1).

Data from the latest (1999-2000) SASS compensate somewhat for the absence of specific information about the race and ethnicity of teachers in descriptions of the 100 largest urban school districts. The full report has not been released yet, but preliminary results confirm earlier conclusions that teachers of color, except Native Americans, are most highly represented in center cities and school districts with high numbers of students of color (30% or more). These data are presented in Table 3. Several other patterns within them confirm other reports about where teachers of color are located:

Table 3: Percentage Distribution of Teachers of Color, School Level, and Minority Student Enrollments, 1999-2000

School/Community Type	% Teachers of Color				School/Community Type
	AA*	LA*	A/PI*	NA*	All
Schools					
Central city		14.9	10.2	2.8	
Urban fringe/large town	5.0	4.7	1.5	0.7	
Rural/small town	4.5	2.3	0.5	1.3	
Minority Enrollment					
Less than 30%	1.3	1.0	0.5	0.7	
30% or more	15.9	10.6	3.1	1.0	

Elementary Schools					
Central city		15.0	10.6	3.1	
Urban fringe/large town	5.4	4.9	1.5	0.6	
Rural/small town	4.7	2.3	0.5	1.2	
Minority Enrollment					
Less than 30%	1.2	1.8	0.5	0.6	
30% or more	16.2	11.0	3.3	1.0	

---Secondary Schools				
Central city		14.3	9.6	2.1
0.9				
Urban fringe/large town	4.1	4.3	1.5	0.8
Rural/small town	4.1	2.4	0.5	1.4
Minority Enrollment				
Less than 30%	1.4	2.0	0.6	0.9
30% or more	15.0	10.2	2.2	1.1

*AA = African Americans; LA = Latino Americans; A/PI = Asian American/Pacific Islanders; NA = Native American/Alaskan Natives

Source: U. S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1999-2000; "Public school Teacher Questionnaire" and "Public Charter School Teacher Questionnaire"

- The overwhelming major of all groups of color, except Native Americans, are concentrated in center cities and school districts with large percentages of students of color.

- Native American teachers are more represented in small towns and rural areas. Undoubtedly, this is a function of where Native American populations are concentrated and the locations of their lands.

- The distribution of teachers of color across elementary and secondary schools is comparable, but the percentages in elementary schools are slightly higher for African, Latino, and Asian Americans. The reverse is true for Native Americans.

- When the distributions of Latino, African, and Asian American teachers in the central city and urban fringe are combined, their representation is five to eight times greater than in rural areas and small towns. The number of Native American teachers in rural small towns is higher than in cities but the differential in their teaching placements is not nearly as great as the other ethnic groups.

Disparities between percentages of students and teachers of color in large city school schools and state enrollments, and the variance across jurisdictions are better indicators of the declining presence of teachers of color than the actual numbers. Increases in the numbers of students of color far outpace teachers of color, even though there have been some small increases in some locations in the last few years for some ethnic groups, but declines for others. The information in Table 1 shows that for the 18 states (for which data are available)with 34 percent or more students of color in 2002 there was an increase in teachers of color in seven and a decline in three between 1993-94 and 2000-2002. Increases occurred in California, Texas, Louisiana, New York, Florida, New Jersey, and Delaware. The percentage of teachers of color declined in South Carolina, Georgia, and North Carolina. Unfortunately, the prospect that teacher candidates in the professional pipeline will counter these disparities in student-teacher representation is not very encouraging. Much of

the reason for this stems from mandatory testing for certification and licensure, and the negative effects it is having on the supply of teacher candidates of color.

Teacher Candidates of Color in Preparation Programs

The most comprehensive data on college students enrolled in teacher education programs are provided by the AACTE Pipeline studies. Five of them have been conducted since 1987-88. The latest report was conducted in 1999-2000, but the data from it that are pertinent to this review have not been released. Thus, the data reported here are from the 1995 Teacher Education Pipeline Survey. AACTE (1999) characterizes this survey as providing “useful data to discern the discipline [teaching] areas of greatest need, as well as state and regional productivity of prospective teachers and students” (p. 13) relative to ethnic and racial diversity. It was designed to determine the representation of race, ethnicity, and gender among students in teacher education programs. Member institutions of the American Association of Colleges for Teacher Education (AACTE) and the National Association of State Directors of Education (NASDE) were asked to identify schools, colleges, and departments of education (SCDEs) to be surveyed. Questionnaires were mailed to 1,974 institutions and 1,026 (52.1%) useable ones were returned.

The portion of the survey of relevance here collected information on total enrollment in undergraduate and post-baccalaureate degree teacher education programs by gender, race and ethnicity, discipline (early childhood, elementary, secondary, special, bilingual, and vocational education), and specialty (teaching, counseling, and administration). Information also was compiled on the race and ethnicity of students enrolled in doctorate degree programs in colleges of education. Selected data related to teacher education enrollments are summarized in Table 4 by race/ethnicity and discipline, and in Table 5 by race/ethnicity and type of degree program.

Table 4: Total Percentage Enrollments in Teacher Education Programs by Race/Ethnicity and Disciplines, 1995

Discipline	% of Ethnic Groups			
	AA*	LA*	A/PI*	NA*
Early Childhood Educ.	12.0	2.0	1.2	0.6
Elementary Education	8.4	4.3	1.4	0.8
Secondary Education	8.4	4.8	1.4	0.8
Special Education	8.9	3.8	1.3	0.7
Bilingual Education	2.4	45.9	2.2	2.0
Vocational Education	13.6	4.8	1.3	
	1.5			

*AA = American Americans; LA = Latino Americans; A/PI = Asian/Pacific Islanders; NA/AN = Native Americans/Alaskan Natives
 Source: AACTE (1999), Teacher Education Pipeline IV.

More African Americans are enrolled in vocational (13.6 %) and early childhood (12.0%) teacher education programs. By comparison, the highest enrollments of Latinos, Asian/ Pacific Islanders, and Native Americans/Alaskan Natives are in bilingual education. Almost half (45.9 %) of all Latino teacher education students who participated in the 1995 AACTE Pipeline IV Survey are enrolled in bilingual education. Although the actual numbers are significantly smaller, percentage of Native Americans / Alaskan Natives representation in this area, as well as vocational education, also is disproportional high. Enrollments in elementary, secondary, and special education programs are similar across ethnic groups. There are fewer Latino Americans (2.0%) being prepared to be early childhood education teachers, while the lowest discipline enrollment for African Americans (2.4%) is bilingual education.

With respect to ethnic representation in degree plans, there are higher percentages of individuals of color enrolled in doctorate programs in education than in undergraduate and post-baccalaureate teacher education programs (See Table 5). Native American/Alaskan Natives diverge from this pattern. Their enrollment in undergraduate teacher education programs is slightly higher than the other two degree options. However, their actual numbers are so small that a very few individuals can significantly affect the overall percentages.

Table 5: Total Percent of Enrollments in Teacher Education Program Type by Race/Ethnicity

Ethnic Group	Program Type			Total
	Pre-B.A.*	Post-B.A.*	Doc.*	
African Americans	8.8	8.0	10.2	9.0
Latino Americans	4.9	4.0	5.2	4.7
Asian/Pacific Islanders	1.4	1.0	2.5	1.7
Native Americans/ Alaska Natives	0.8	0.5	0.6	0.7

*Pre-B. A. = Undergraduate; Post-B. A. = Post-baccalaureate; Doc. = Doctorate
 Source: AACTE (1999), Teacher Education Pipeline IV.

Geographically, where are students of color attending colleges of education? The data in Table 6 show that, for the most part, their patterns of

college enrollment are similar to those of teachers of color who are employed in Pre K-12 public schools. Teacher education students of color are attending colleges in regions of the U. S. where their ethnic groups are most populous. Native Americans are in the Central and Western Regions. In 1995 their enrollments were highest in Oklahoma (8.0%), Arizona (5.7%), and Montana (4.6%). Asian Americans comprise 59.4 percent of all the students enrolled in colleges of education in Hawaii. The next highest percentages are 5.0 and 4.1 in Wyoming and California, respectively. Prospective Latino American teachers are attending colleges in the Western Region

Table 6: High Percent Enrollment in Undergraduate Teacher Education Programs by Race/Ethnicity, Region, and State. (8.0+ % for AA*; 5.0% for LA; 2.0+ % for A/PI; 1.0+ % for NA),1995.

Region/States	AA*	Ethnic Groups		
		LA*	A/PI*	NA*
Northeast				
MD	23.1		2.5	
DC		5.7	2.8	
NJ		6.0		
NY		5.8		
Southeast				
AL	30.8			
AR	14.0			
FL	11.0	8.8		
GA	16.7			
LA	21.1			
MS	26.6			
NC	21.2			
SC	34.4			
TN	12.7			
VA	37.7			
Central				
IL	13.3	5.1		
KS				1.0
MN				1.1
ND				1.4
SD				1.5
Western				
AL**				
AK				
AZ		13.9		5.7
CA		23.0	4.1	
CO		9.0	2.2	
HI			59.4	

MT			4.6
NV	5.4	3.4	1.0
NM	42.0		1.6
OK			8.0
OR		2.0	1.0
TX	13.9		
WA		5.0	2.7
WY**			

*AA = American Americans; LA = Latino Americans; A/PI = Asian/Pacific Islanders; NA = Native Americans/Alaskan Natives

**Data unreadable in source

Source: AACTE (1999) Teacher Education Pipeline IV.

and, to a smaller degree, the Northeast. Their highest enrollments are in New Mexico (42.0%), California (23.0%) Arizona (13.9 %), and Texas (13.9%).

African American college students are enrolled in teacher education programs in significantly higher numbers in the Southeast Region than any other. This is not surprising given the demographic patterns of the U. S. population at large. Of the 12 states that comprise this region African Americans make up 10 percent or more of all teacher education students in 10 of them, as well as Maryland (23.1%) in the Northeast, and Illinois (13.3%) in the Central Region (See Table 6). The percentage is 25 or above in four of these states—Mississippi (26.6%); Alabama (30.8%), South Carolina (34.4%), and Virginia (37.7 %). Another reason that helps to explain this pattern of representation is the large number of Historically Black Colleges and Universities (HBCUs) in the Southeast, and the fact that many African American teachers receive their preservice preparation in them. Approximately 34 percent of African American in all of the SCDEs that participated in 1995 Teacher Education Pipeline Study attended HBCUs (AACTE, 1999).

The data presented in Table 6 also indicate that there is not much cross-ethnic group mixture within teacher education programs. Students of color are enrolled largely in preparation programs where most of the little ethnic diversity present is provided by their own group members. Consequently, teacher education candidates of color from different ethnic groups are isolated and separated from each other. Latino teacher education students in New Mexico have little opportunity to interact with African American peers, and African American prospective teachers in Virginia and Alabama have virtually not interactions with their Asian, Native, and Latino American counterparts, simply because these groups are not in the same locations. If these students follow well-established patterns of teachers seeking employment in the same or nearby locations where they attended college, this *regional isolation* will be transferred to teachers in classrooms. As a result, the location of teachers of color in the teaching profession will continue to mirror what already exists in student enrollments. That is, many students of color attend schools where most of the

population is comprised of others from the same ethnic, racial, and economic backgrounds. Similar patterns of disparity in and clustering of performance along ethnic lines are apparent in teacher tests for certification and licensure. All of these dimensions of the presence of individuals of color in the professional pipeline have strong implications for the recruitment and assignment of both teacher education students and classroom teachers.

Testing and Teachers of Color: Opportunities or Obstacles

The debate over teachers having to pass tests to complete their preservice preparation programs, and to be certified and licensed to teach in Pre K-12 classrooms continues to be very heated. It centers around the functions and effects of the tests, for whom, and questions of equity and fairness for teachers from different ethnic, racial, cultural, and linguistic backgrounds. For policy-makers and advocates who are spearheading the movement teacher testing is a means for improving instruction, student achievement, and the overall quality of schooling. To support their arguments they evoke the need to close the achievement gap for students of color and of poverty; research that shows students who are taught by certified teachers perform better than those taught by non-certified ones; students who view teachers as being of high quality feel they better preparation for success; and individuals with high mastery of subject matter content are better teachers (www.metlife.com/Companyinfo/Community/Found/Docs/2001ats.pdf). In other words, testing teachers is presented as an opportunity to improve instructional quality and effectiveness.

For opponents and skeptics, teacher testing is a major obstacle (and sometimes even an impenetrable one) to individuals of color entering the profession, or maintaining their jobs after they begin teaching, since some tests involve both preservice and inservice teachers. They point out the disparities in the pass rates of test-takers from majority and minority ethnic groups. The high rates of failure among individuals of color has a radical negative effect on an already small, underrepresented pool of potential and actual teachers. This is happening at the same time that the need for more teachers of color is being touted. Testing, then, is seen by many as effectively nullifying efforts to respond to this need. These critics point to some compelling evidence to support their claims, including the fact that in virtually every state and SCDE that use testing, the performance of people of color on them is significantly lower than their European American counterparts (Latham, Gitomer, & Ziomek, 2002; Smith, 1987).

The dilemma surrounding these test performance patterns and their effects on the supply of teachers of color are addressed vividly by Latham, Gitomer, and Ziomek (2002). They point out that:

By design, testing requirements restrict supply; desperate to fill vacancies, many states have circumvented such requirements by granting emergency licenses. Moreover, minority candidates have traditionally scored less well than their white peers on

standardized tests, leading to fears that teacher testing will deny a disproportionate number of minority candidates access to the profession. Some view the situation as one in which states must decide between raising academic standards or increasing supply and diversity, with the decision in favor of one necessarily coming at the expense of the other (p. 2).

G. Pritchey Smith (1987) goes a step further in declaring that testing effectively erases minorities from the teaching profession. How is this possible? The quick answer is if teacher candidates and employees of color do not pass the tests, they will not be hired, or be able to maintain the jobs they have.

These are ominous prognoses. They require thorough analysis to understand the specific nature of the problem, as well as claims that teacher testing is a solution to education quality issues. One way to begin this analysis is by reviewing the research that currently exists on the status of testing among teachers of color. Given the raging debates about teacher testing one would think that there would be a massive body of robust research data. This is not the case. The research is surprisingly thin and sparse. That which does exist suffers from many of the same shortcomings as the information on the demographics of teachers of color, with frequent absences of specific details, inconsistencies across states and schools, colleges, and departments of education.

Often, the data on teacher testing do not explicate variables of race and ethnicity. For example, the National Council on Teacher Quality (NCTQ) did a compilation of “recent developments” and “places to watch” on issues of teacher testing (www.nctq.org/issues/testing.html) that appeared in the Teacher Quality Bulletin between 2000 and 2002. Developments in several states, associations, cities, and issues are summarized. The states include New York, Texas, Pennsylvania, Rhode Island, Massachusetts, Illinois, California, Oklahoma, Connecticut, Virginia, New Jersey, Nevada, Ohio, Georgia, and North Carolina. The cities addressed are the District of Columbia, Chicago, Philadelphia, and Boston. Organizations and associations included in the summary are the U. S. Department of Education, the National Council for the Accreditation of Teacher Education (NCATE), the Educational Policy Analysis Archives (EPAA), the National Education Association (NEA), and the Education Trust. The issues of contention are debates over whether to test or not to test, the low passing rates, how passing standards should be established, and what tests should be used and designed by whom. However, no information is provided about the ethnic distribution of the test-takers and their performance. Other reports do provide some information on the test performance of teachers of color, but it is not as useful as it needs to be.

Although different forms of tests are used in the licensure processes across states and teacher education schools, colleges and departments (SDCE's), the types of knowledge and skills tested are similar, as are the patterns of performance among different ethnic groups. Some of these tests are designed for specific states by the National Evaluation Systems (NES). Twelve states use teacher tests designed by NES. Among these are the MECT

(Massachusetts Education Certification Test), CBEST (California Basic Education Skills Test), the ICTS (Illinois Certification Testing System), the TASP (Texas Academic Skills Program), and the WEST-B (Washington Education Skills Test-Basic). They assess competency in basic skills as well as content knowledge and pedagogical abilities.

Most states use the national teacher tests designed by the Educational Testing Service (ETS). ETS produces three different sets of tests—the Praxis I, Praxis II, and Praxis III—that are used to make decisions about admission into teacher preparation programs and induction into classroom practice. The tests in the first series (Praxis I) assess general academic knowledge, while the Praxis II series examine subject matter content. ETS describes these two types of tests as including “sophisticated multiple-choice questions and candidate-constructed responses that measure both breadth and depth of knowledge.” Praxis III tests focus on pedagogical knowledge and skills applied in practice. They include essays, oral response tasks, listening tasks, portfolio reviews, video stimuli, and in-class observations (www.ets.org/search97cgi/s97_cgi). According to ETS these tests are “grounded in current research, including a complete job analysis of the most important tasks and skills required of beginning teachers and extensive survey to confirm test validity” (www.ets.org/Praxis/prxtest.html). By January 2002 at least one test from either the Praxis I or Praxis II Series was in use in 37 states and the District of Columbia (Latham, Gitomer, & Ziomek, 2002). They also are being used by colleges and universities as part of the qualification for entry into or exit from teacher education programs, and by some professional associations and organizations.

Thus, the Praxis Test series impact prospective teachers at several different points in their early career development— at admission to teacher preparation programs, graduating from college, entry into the profession, and during the first year of teaching. Praxis I (sometimes referred to as the PPST—Pre-Professional Skills Test) assess general reading, writing, and mathematics skills. The Praxis II series is composed of three different kind of tests. The Subject Assessment/Specialty Area Tests measure general and subject-specific content knowledge and pedagogical skills. The Multiple Subjects Assessment for Teachers (MSAT) is designed specifically to meet the California teacher education organizational structure. The Principles of Learning and Teaching (PLT) Tests use case studies to assess general pedagogical knowledge for elementary, middle, and high school levels of teaching and learning. Yet, according to Gitomer and Latham (1999, p. 13) the

Praxis tests are not designed to predict teacher effectiveness. As program entrance and licensure tests, they measure knowledge considered essential to effective pedagogy, but do not attempt to measure the full breadth of skills that go into being an accomplished teacher. Therefore, passing a Praxis test does not guarantee an individual will become a satisfactory teacher. It does, however, warrant that the individual has acquired a level of knowledge that is adequate for a beginning teacher.

There are approximately 147 specific tests, representing 50 general skills, subject matter content, and pedagogical knowledge areas in the Praxis I and Praxis II Series. Individuals, colleges, and states select from the list those tests that are compatible with the admission, graduation, certification, and licensure requirements where they are attending school, planning to work, or currently employed. The cost to take these tests range from \$25 to \$110 per test, but for most it is \$70. There is no restriction on how many times one can take the tests if a passing score is not achieved on the first try (<ftp://ftp.ets.org/pub/tandl/01361.pdf>; www.ets.org/praxis/download.html). Since the Praxis III Tests focus on classroom performance, they are conducted in the actual sites where new teachers (usually in their first year) are functioning. They are administered by trained local observers who use a set of nationally validated criteria to assess the quality of instruction.

Many scholars, school practitioners, and policy-makers agree that teachers of color are failing these tests at a disproportionately high rate compared to their European Americans peers. However, specific data on which ethnic groups are performing at what levels on which tests are lacking. The little data that do exist are categorical rather than test-specific. That is, reports are more likely to be made to the effect that teachers of color perform even lower on the subject matter tests (Praxis II) than the basic skills (Praxis I), but the specific subject matter tests are not identified by the ethnicity and race of the test-takers. Furthermore, performance specificity in one or a few states or cities, instead of national profiles, is reported to illustrate the problems

For example, Flippo and Canniff (2000) examined the performance rates of minorities on the Massachusetts Education Certification Test (MECT). The State Department of Education supplied the necessary data for the first administration of the test in April and July 1998, but denied access to the information for 1998-1999 and 1999-2000. Their study focused on tests in reading, writing, and elementary education. The number of teachers of color taking the tests was very small. Of the total 6849 candidates who took the tests there were 6331 European Americans, 205 Latino Americans, 157 Asian Americans, and 156 African Americans. A further analysis of these numbers revealed that the pass rate percentages for ethnic groups on the tests were very similar, which implies that many of the same individuals were not passing all three tests. Thus, rather than there being 205 different Latino American test-takers there were probably considerably fewer. Of this total number 79 passed the reading, 80 writing, and 26 the subject test for elementary education. These numbers represented 56, 46, and 50 percent, respectively. The performance of Asian/Pacific Islander Americans was almost comparable to European Americans. Their passing rates were 77 percent for reading, 69 percent for writing, and 71 percent for elementary education. By comparison the European American percentages were 81, 77, and 66, respectively. The passing rates for African Americans were the lowest of all ethnic groups. Only 46 percent passed the reading test, 39 percent for writing, and a mere 21 percent for elementary education.

Flippo and Cannitt also tried to collect data on the teacher tests passing rates of students of color enrolled in public and private colleges in the state of Massachusetts. Their efforts were severely constrained by difficulty in acquiring information. Only eight colleges and universities responded to their requests. According to Flippo and Cannitt (2000) the difficulties they encountered in collecting data from colleges were indicative of the problems the colleges themselves were having. They explained further that:

Some could not provide the information because the numbers of minorities in teacher education programs are so small that the individuals would be easily identified, others could not because their student databases are not set up to track minority candidates. Regrettably, the universities with the highest numbers of minority students in their education programs cannot easily determine the ethnicity of their students who have taken the tests, since students don't have to indicate their ethnicity (pp. 30-31).

Additional complications stem from the fact that the colleges had no way of determining if the students taking tests from one administration cycle to the next were the same or different individuals. Similar challenges may exist in other states, and may explain why both national and state level *actual* data on the performance of candidates of color on various teacher tests are so very sparse.

Despite the difficulties they encountered in collecting their data, and the resulting limitations Flippo and Cannitt reached some conclusions about the testing situation in Massachusetts that may apply to other states and national testing situations. Among these are (1) more systematic and thorough data need to be *routinely* compiled on the race and ethnicity of teacher candidates, test-takers, and their participation in different cycles of test administration; (2) teacher candidates of color are at the greatest risk of being denied certification to teach because of failure to pass teacher tests; (3) as the use of tests for certification increases the number of individuals of color enrolled in teacher education programs and the teaching profession will decrease if the current testing situation continues; (4) colleges and schools of education may reduce their already small number of minority admissions in order to increase their test passing rates; and (5) individuals will be certified who do not represent the ethnic, racial, and linguistic diversity of the students they must teach. Flippo and Cannitt (2000) reasoned that, unfortunately, neither their findings, nor their predictions are surprising or unreasonable because, "Consistent evidence suggests that high-stakes tests like the MECT adversely affect underrepresented minorities and second-language learners" (p. 28).

In 1996 Education Week on Web (www.edweek.org/ew/vol-16/04chest.h16) reported that since its initiation in 1983 more than 50,000 minorities have failed the CBEST in California. This figure may be somewhat deceptive because there is no way of knowing how many of these individuals were repeat test-takers, or how many times they had taken the test. Therefore, it is very likely that the 50,000 represent the number of test failures, rather than the number of people who failed. Hill (1996) cites examples that support this

assertion. Still, teachers of color do not perform well on the CBEST. In 1992 a class action lawsuit was filed against it in the U. S. District Court of San Francisco alleging that this test was racially discriminatory and prevented qualified minorities from becoming certified teachers. The suit pointed out that 80 percent of European Americans who took the CBEST passed, while the passing rates for Asian Americans, Latino Americans, and African Americans were only 59, 51, and 35 percent, respectively. Although it supports the CBEST the California Teachers Association filed a friend of the court brief in 1993 supporting the teachers' lawsuit. It declared that the test is an impediment to achieving ethnic and cultural diversity among the teachers and in schools. The attorney defending the state countered with the argument that the test should not be blamed for the low performance of individuals of color. Rather, their performance on it reflects the cycle of inadequate education provided to students of color that begins in K-12 schools, and is repeated in college and teacher education programs (Hill, 1996).

Another study that is illustrative of the kind of research needed (but too rarely done) on how teachers of color fair in testing for certification and licensure was conducted by Garcia and Truber (1999). They studied the performance of teacher candidates of color with provisional certificates in New York City, and at Long Island University. To obtain a provisional teaching certificate that is good for five years individuals have to pass two New York State Teacher Certification Exams (NYSTCE). These are the Liberal Arts and Science Test (LAST), and the Assessment of Teaching Skills-Written (ATS-W). According to Garcia and Truber (1999), the LAST is the most "problematic for urban minority students, mostly immigrants unfamiliar with the ways in which these tests approach problem-solving skills, as well as ignorant of ways of writing culturally appropriate academic essays in standard English" (p. 1). In 1996-97 over a third of teacher candidates in New York City failed the certification tests, compared to one-sixth statewide. The pass rates for different ethnic groups in the city were 92 percent for European Americans, 50 percent for African Americans, and 47 percent for Latino Americans. No data were provided for Asian and Native Americans. A multiple regression analysis of 270 students from Long Island University who took these tests in 1997-98 showed that only 40 percent passed the LAST. Asian Americans performed worse than Latinos and African Americans. Their test scores were 45 percent lower than European Americans, while those of Latinos were 41 percent, and African Americans were 25 percent less. Garcia and Truber (1999) attribute this low performance to the non-traditional nature of the students at Long Island University, who are "practicing teachers on temporary licenses, minorities and speakers of other languages, and students who are older" (p. 3).

The response of the Long Island University/Brooklyn Campus to these test results is instructive for other institutions in similar situations, which is virtually every teacher training, licensing, and employing institution in the U. S. It is "transforming its teacher education program to respond to the State's higher standards and to the City's greater need for teachers, but also to meet the different needs of the linguistically and culturally diverse student body it serves" (Garcia & Truber 1999, p. 3). The curriculum and pedagogical transformation

undertaken focuses on developing critical, intensive and analytical reading skills using difficult materials; intensive writing instruction and metalinguistic tools students need to analyze their own and others' written texts; inquiry-based and problem-solving approaches to teaching; and diagnostic assessments of students' strengths and weaknesses using multiple techniques, some of which approximate the formats of certification tests. All of these skills will be developed by instructors who are culturally informed and responsive in their teaching, and who provide close guidance and support for students (Garcia & Truber, 1999).

The teacher testing situation is exacerbated further by the recent federal stipulation (a part of the No Child Left Behind regulations) that if 80 percent of teacher candidates do not pass required certification tests, the programs and colleges of education they attend risk being closed. This is especially problematic for African Americans since 50 percent of them receive their teacher education at Historically Black Colleges and Universities (Smith, 1987). A numerical concentration of students who are at risk of meeting performance standards, whether in K-12 schools or in colleges of education increases the likelihood that there will be corresponding high rates of failure on measures of these standards.

Only two studies were located that provide comprehensive and detailed national data on the performance of candidates of color on teacher competency tests. One was conducted by G. Pritchey Smith, and was completed in 1987. It was sponsored by the National Education Association (NEA) and the Council of Chief State School Officers (CSSO). The other was authored by Gitomer and Latham (1999), with a follow-up analysis by Latham, Gitomer, and Ziomek (2002), for the Educational Testing Service (ETS). Because of their rarity, yet significance, they are discussed in detail.

Smith surveyed the 50 Chief State Schools Officers to collect information on the impact of teacher competency testing on the national pool of teachers of color between 1981-1986 in Predominately White Institutions (PWIs) and HBCUs. Specifically, the CSSOs were asked to provide information on the numbers and percentages of test-takers in their states by race and ethnicity, and who passed tests for admission to teacher education programs, initial licensure, continuing certification, and beginning performance evaluations. They also were to submit the passing rates of retakes on the teacher competency tests. Smith included state-by-state profiles from the data compiled, as well as an in-depth case study of Florida. Even though 35 CSSOs agreed to participate in study, and efforts were made to combine information from secondary sources with responses to the survey useable data were received for only 19 states. The states that participated in the study are identified in Table 7, along with the test passing rates by ethnic group and the kind of tests taken.

Three messages are readily apparent from these data: (1) there is a lot of variances in passing rates across states; (2) more states consistently report data for African Americans than any other ethnic groups; and (3) overall, African Americans (especially those in the deep southern states) and Latino American have lower teacher competency tests pass rates than Asian and Native Americans. Smith's data reveal several other significant results. These include:

- The first-time passing rates of European Americans on teacher education program admission and certification tests ranged from 71 to 96 percent, compared to 15 to 50 percent for African Americans, 39 to 65 percent for Latino Americans, 37 to 77 percent for Asian Americans, and 20 to 70 percent for Native Americans.

- The passing rates of African American teacher candidates were below 50 percent in 16 of the 19 states. The way the data were reported for the other three states (New Jersey, New Mexico, and Tennessee) it was not possible to make accurate assessments about their test effects.

- Based on the data reported, in the six-year period between 1981 and 1986 a total of 37,717 potential teachers of color were excluded from the professional pipeline because of failure to pass either teacher education entry, exit, or licensure tests. This number included 21,515 African Americans, 10,142 Latinos, 1,626 Asian Americans, 716 Native Americans, and 3,718 other minorities. In three

Table 7: Percent Teacher Competency Text Passing Rates by States, Ethnic Groups of Color, and Tests for the Participants in the Smith (1987) Study

State	A/PI	AA	LA	NA	Test	
Alabama		43			AITCT	
Arizona	37	31	40	20	ATPE	
Arkansas		33			NTE	
California	50	26	39/40./38*	67	CBEST	
Connecticut	42	31	30	75	CoNNCEPT	
Florida		55	37	53	70	FTCE
Georgia		35			CRTCT	
Louisiana		15			NTE	
Mississippi		33			COMP	
New Jersey		(Minorities Combines, 53)			NTE	
New Mexico						
Admissions			51		Vary	
Comm.		82	83	55	NTE	
Gen. Know.		65	72	52		
Prof. Know.		98	97	91		
New York						
Comm.	40	49	75/42/49*	69	NTE	
Gen. Know.	59	42	33/36/42*	77		
Prof. Know.	64	60	83/51/50*			
North Carolina						
Prof. Know.		36			NTE	
Oklahoma	77	47	65	67	OTCT	
Oregon	74	34	45/83/668	64	CBEST	
South Carolina		18			SCEEE	
Tennessee		94			NTE	
Texas	57**`	32	47	57**	PPST	

A/PI = Asian Americans /Pacific Islanders; AA = African Americans; LA = Latino Americans; NA = Native Americans.

*Mexican Americans, Puerto Ricans, and Other Latinos sequentially.

**Asian and Native Americans, and other minorities reported in a combined "Others" category.

Source: Smith (1987).

years Texas and California accounted for more than two-thirds (7,668) of the Latino Americans who did not pass the tests (Smith 1987, p. 137).

- The negative impact of state-mandated teacher competency testing has been especially grievous on HBCUs. Fewer of their graduates are successful in passing the tests, and enrollments in teacher education programs are declining. Two other policy decisions aggravated this dilemma, and forced some HBCUs to close their teacher education programs. One requires minimum cutoff scores on undergraduate admission and certification tests. The other policy establishes a certain percentage (60 or 80 %) of the graduates of a college or department of education to pass certification tests for the institution to maintain its state approval or accreditation.

- There is no convincing evidence that predominately White institutions (PWIs) are compensating for declining enrollments of African Americans in teacher education at HBCUs by increasing their enrollments. Nor are even the PWIs with overall high pass rates any more successful in raising the success levels of African Americans.

These findings led Smith (1987) to the devastating conclusion that even with inadequate reporting systems and a lack of consistent, comprehensive data from state to state,

there is clear evidence that disproportionate numbers of minority candidates are being screened from the teaching profession. This exclusionary trend is evident regardless of the state and regardless of the type of examination—admission or exit; standardized or customized; basic skills, general knowledge, subject matter, or professional knowledge. In no state was a trend to the contrary found (p. 134).

This dismal picture that was painted in the mid-to-late 1980s, has not changed much over the last decade or so. Recent studies conducted by Gitomer and Latham (1999), and Latham, Gitomer, and Ziomek (2002) validate this observation. They studied Praxis I and Praxis II results between 1994 and 1997, and related them to corresponding scores on the SAT and ACT, and to grade point averages. In the first study the data files for Praxis I included 55,034 individuals with ACT scores and 33,864 with SAT scores. There were 112,207 Praxis II test-takers with ACT scores, and 159,857 with SAT scores. The second study selected from the original data file only those approximately

194,000 individuals who had taken the SAT. The ethnic distribution of the study population approximated the percentages of students enrolled in teacher education programs and teachers employed in the profession. For the Praxis I, 81 percent of the test-takers was European Americans, 11 percent was African Americans, 4 percent was Asian Americans, and 2 percent was Latino Americans. The ethnic divide on the Praxis II was wider, with European Americans accounting for 85 percent of the candidates, and African Americans 7 percent.

The gap in the passing rates on Praxis I for candidates who took the SAT for college admission was 36 percentage points between European Americans (82%) and African Americans (46%). The differences were not quite as extreme for Asian Americans (76%), Latino Americans (69%) and Native Americans (64%) (Gitomer & Latham, 1999; Latham, Gitomer, & Ziomek, 2002). Teacher candidates who took the ACT as part of their college admission requirements passed the Praxis I test at rates significantly higher than those who took the SAT. This was true for all ethnic groups except Asian Americans whose pass rates were almost identical for the SAT and ACT (76% and 77%, respectively). The Praxis I pass rate for African American ACT takers was 63 percent, 83 percent for Latino Americans, and 81 percent for Native Americans. For all ethnic groups the SAT and ACT scores of those who passed the Praxis I were much higher than those who did not. For example, Asian Americans who passed Praxis I had scores of 542-math and 517-verbal on the SAT, and 21.7-math and 21.1-English on the SAT. In comparisons, those who did not pass had SAT scores of 440-math and 406 verbal, and ACT scores of 17.4-math and 18.8-English. (Gitomer & Latham, 1999).

The pattern of performance on the Praxis II across ethnic groups and correlations with SAT and ACT scores was similar as with Praxis I, but with four notable differences. First, except for Latino Americans (59 % for the SAT and 81% for the ACT) the differences in the pass rates by type of college admission test was much smaller. Second, while there was 17 points difference between the Praxis I pass rate of African American SAT- and ACT-takers (46% v. 63%) in favor of the ACT, the difference was only 8 point on the Praxis II (69 % v. 61 %), and in favor of the SAT. The percentage differences for Native Americans (80 and 81%) and European Americans (91 and 93%) were almost the same, and for Asian American the difference was 7 points (75% for the SAT compared to 82% for the ACT). Third, for all ethnic groups except African Americans students who took the ACT had higher pass rates on Praxis II than those who took the SAT. The fourth variation in well-established ethnic group patterns on teacher tests is African Americans was not the lowest performers of all groups on Praxis II. The percentages (69%) of those who passed the test that had taken the SAT were higher than Latinos (59 %) in the same category by 10 points (Gitomer & Latham, 1999).

Another piece of useful information emerged from the Latham, Gitomer, and Ziomek, and Gitomer and Latham studies. They compared the SAT and ACT scores of test takers who passed the Praxis I with baseline numbers for college bound seniors in 1997, and the Praxis II with college graduates in general and by ethnicity. The motivation for these analysis was the predictability

of the SAT for academic success, and the positive relationship between the verbal ability of teachers (as indicated by standardized test scores) and the test scores of their students. These analysis revealed that teacher candidates of color who passed both Praxis I and Praxis II had scores much higher than the average scores of their ethnic groups in the entire SAT and ACT populations. For example, the average SAT verbal score for African Americans was 434 and mathematics was 423, while for those who passed Praxis I they were 474-verbal and 456-math. For Praxis II their SAT scores were 441-verbal and 463-math. The corresponding SAT scores for Latino Americans who passed Praxis I were 490-math and 506-verbal, and 486-math and 503-verbal on Praxis II, compared to national averages of 434-math and 432-verbal for their ethnic group (Gitomer & Latham, 1999).

The pattern of performance on the Praxis series correlated with ACT scores were not as consistent as with SAT scores. Some teacher candidates of color who passed Praxis II had English and math scores lower than the national averages for their ethnic groups, and for others the scores were higher. For example, Latinos who passed Praxis II had an ACT math score of 18.8 and an English score of 20.1, compared to the national averages for their group of 20.2-math and 19.5-English. Native Americans followed a similar pattern by those who passed Praxis II having a higher ACT English score (20.4) than their group's national average (19.5), but a lower math score (18.6 compare to 20.0). African Americans who passed Praxis II had the lowest ACT scores of all ethnic groups, and their math performance (17.4) was slightly lower than the national average for their ethnic group (17.8). Except for Asian American the verbal scores were higher than the math for all groups on both the SAT and ACT

Gitomer and Latham (1999) found a consistent positive relationship between pass rates on licensure tests and grade point averages (GPA). As one goes up or down so does the other one. Their data revealed that 95 percent of students with a GPA of 3.5 or above almost always passed the licensure tests. Yet, two-thirds of the students with a 2.0 GPA met state licensure requirements. These findings did not include the race and ethnicity of the students. Another indicator of quality of preparation of teacher education students is their pattern of performance on subject matter and specialty tests. Gitomer and Latham (1999) provided total and gender statistics on pass rates for math, science, social studies, physical education, English, foreign languages, art and music, elementary education, and special education. However, these data were not disaggregated by ethnicity.

Based on the results of their studies Gitomer and Latham (1999), and Latham, Gitomer, and Ziomek (2002) concluded that (1) Praxis passing rates differ substantially by race and ethnicity; (2) the relationship between SAT/ACT scores, grade point averages, and passing rates on the Praxis tests are fairly consistent; (3) across ethnic groups candidates who have higher college admission tests and grades in course work pass licensure tests at a higher rate; and (4) candidates from all ethnic groups who pass Praxis tests have higher SAT and ACT scores than those who do not. They added the caveat that while the Praxis tests appear to have a significant impact on raising the academic level of the pool of teacher candidates, this is being accomplished at the price of

limiting the supply of teachers in general and racial/ethnic diversity in specific. Since individuals of color fail the tests at disproportionately high rates, “the result is that a pool of teacher candidates that is overwhelming White prior to licensure testing becomes even more homogeneous after testing” (Gitomer & Latham 1999, p. 22). Furthermore,

these data suggest that though testing with higher standards holds greater promise for ensuring that teachers are academically able, if not used judiciously, such testing can also exacerbate already daunting problems with the supply and diversity of potential teachers ((p. 39).

These studies, findings, and conclusions are helpful, but there are still some critical oversights. The authors did not provide any information on where the test-takers were located geographically, by school levels, and which Praxis II content areas were passed by which ethnic groups. It has been six years since the data used in the Gitomer and Latham study were compiled. No follow-up or additional research of a similar kind has been conducted on the performance of teachers of color on certification and licensure tests. These ambiguities, voids, and lags in data on performance of individuals of color on national and state tests must be resolved. Otherwise, the information that teacher educators, school leaders, and policy-makers need to design better interventions to improve the performance of candidates of color on these tests will not be available. This need is imperative to increase the supply of teacher candidates of color, for as G. Pritchey Smith (1987) explains:

The problem is not that a 95% white teaching force cannot teach minority children, but that the traditional informal interactions between the teacher and the community will be severed. Historically, minority teachers who have lived where they worked have had a powerful presence and encouraged, even exhorted, children and parents alike to attend to the business of school achievement. With a 95% white teaching force, interaction outside the school between most teachers and minority parents and their children through social institutions—churches, clubs, community organizations—will no longer be occurring. . . . It is naive to assume that white teachers will live in the minority communities where they will be teaching. Instead, they will drive in and out of these communities each day. No passing word of encouragement on the street or at the church will transpire. No affirmation of the minority child’s worth outside the school day is likely to come from the absentee white teacher (pp. 166-167).

Thus, a critical link in the connection between teachers of color modeling and mentoring, and students’ improved academic achievement is broken. If they are not present in schools, their potential positive influences cannot be actualized.

Effects of Teachers of Color on Student Achievement

There is a rich and growing body of research on teachers of color, and the inclinations of many of them to embed culturally responsive nuances into their teaching styles, especially when teaching students from their own ethnic groups (i. e., Trueba, Guthrie, & Au, 1981; Boggs, Watson-Gegeo, & McMillen, 1985; King, 1993; Hollins, King, & Hayman, 1994; Ladson-Billings, 1994; Foster, 1997; Moll, Mitchell, 1998; Quijano & Rios, 2002; Lipka, Mohatt, & the Ciulistet Group, 1998; McCarty, 2002). However, this research does not suggest that European Americans cannot be effective teachers of students of color, that teachers of color cannot teach students from ethnic groups other than their own, or that all teachers of color will be effective with students from their own ethnic groups.

Although important in its own right, three features of this research make it of limited value to the current project. First, the studies tend to involve small numbers of participants, and are undertaken by a few individuals, rather than being sponsored by larger organizations or governmental agencies. Second, the research methods used are qualitative and in-depth analyses of single or a few multiple case studies. Thus, they do not have the power of generalizability that derives from quantitative analyses of large data sets. Third, much of the existing research on teachers of color in classrooms focuses on their instructional behaviors and how they exemplify certain theoretical principles (such as culturally sensitive, congruent, relevant, or responsive teaching), or particular programmatic features (such as direct instruction, cooperative learning, or teaching reading through literature and writing). The effects of their actions on students achievement (especially as determined by specific standardized measures) is not the usual unit of analysis, even though some attention is given to general student performance indicators, such as improved interest in learning, positive self-concepts, and feelings of academic interest and efficacy. Since this body of research is tangential to the primary purpose of the present review it is not included in further discussions.

Beyond this exclusion there is little available research that deals explicitly with the effects of teachers of color on the academic achievement of students of color. Logically, it makes sense to explore this relationship in standardized measures of achievement, such as the National Assessment of Educational Progress (NAEP) report cards, and state and school district tests of essential learnings or academic competencies for students, since similar indicators are used to assess teacher competency. This logic was not confirmed through the search for pertinent research. We found no studies of direct relationships between the performance of teachers of color on national or state certification tests and student achievements. And, only a few were located that examined the impact of teachers of color on specific student achievements. Even in those, the substantive details were lacking, and information about teachers and students were rather ambiguous.

One of these studies examined the effects of student diversity and teacher capacity on student achievement in Texas (Lopez, 1996). The components of the larger study that are relevant here was an analysis of covariance of the performance data for almost 6000 fourth grade students on the 1992 Norm-referenced Assessment Program of Texas (NAPT), with fourth grade teachers' scores on the state-mandated Examination for the Certification of Educators in Texas (ExCET). The findings of the study indicated

- No difference in student performance on the NAPT existed between ExCET certified and non-certified teachers. This finding suggested that “ *the ExCET exam was not an effective indicator of teacher quality in the classroom*” (Lopez 1996, p. 3).

- Latino and African American students who were taught by teachers from their own ethnic groups produced the greatest gains in NAPT. By gender, students who had female teachers scored higher on the NAPT than those with male teachers. However, these results were not separated by gender within ethnic groups.

- In classrooms where the student population was multiethnic—that is, included European, African, and Latino Americans, but neither group was 50 percent or more of the total—teachers from all three major ethnic groups produced similar gains in student performance of the NAPT.

- Teachers from all three major ethnic groups (European, African, and Latino Americans) achieved the best results with respect to students' performance in classrooms where 51 percent or more of the students were European Americans.

- Although no difference occurred in performance on the NAPT for students of certified and non-certified teachers in bilingual education and English as a second language (ESL), Latino teachers achieved higher gains in Latino dominant classrooms than European and African American teachers.

Another study analyzed data from 900 schools districts in Texas to assess relationships between teacher quality and the math achievement of students in grades 3-5. Ron Ferguson from Harvard University found that teacher quality, as measured by test scores, level of education, and experience, accounted for 43 percent of the difference in students' math scores. Robert Strauss from Carnegie-Mellon University conducted a similar study in North Carolina, and found similar results. For every one percent increase in a teacher's certification test scores there was a corresponding 3 percent decline in the number of students performing below grade level in math and science (Chaika, 1999). Unfortunately, the details of these studies were unavailable. The results, although encouraging, also are of limited value here because they do not specify the race and ethnicity of either the teachers or the students. These oversights are recurrent problems with discussions about teacher ethnicity and its effects on student achievement.

Thomas Dee (2001) examined the Project STAR (Student Teacher Achievement Ratio) Public Access Data files to determine if there was a relationship between the race and ethnicity of teachers and the achievement of students of color. The project began in 1985 as part of the small-class size initiative mandated by Tennessee. Data were collected on 11,600 kindergarten

through third grade students in 79 schools over a four-year period. The participating schools were located in urban, large metropolitan, rural, suburban, and small town communities. Dee analyzed the achievement of European American and African American students assigned to same-race teachers. Asian, Latino, and Native Americans were excluded from the study because so few of them were involved in Project STAR. The results showed statistically significant improvements on the Stanford Achievement Test for students from both ethnic groups who had been taught by same-race teachers for at least one year of the Project. Math scores increased an average of 3.8 percentage points, and reading improved by 3.1. The increases were somewhat larger for students from low socioeconomic backgrounds, and for African Americans in the most segregated schools. Other analyses led Dee to conclude that the achievement benefit of students being taught by teachers from their own ethnic groups is cumulative. Each additional year of this relationship would generate increases of 2 to 4 percentage points in math and reading test scores.

More information about the effects of teachers of color on student achievement comes from studies of individuals and specific interventions. Some of these are high profile, such as Jaime Escalante (a Latino) who achieved impressive improvements in the academic performance of students considered by many teachers as virtually unteachable. He taught advanced placement (AP) calculus to high school Latino students in south central Los Angeles, who were failing and at high-risk of dropping out of school entirely (Mathews, 1988). Sheets, a Latina teacher in the Seattle, Washington public schools, produced similar success in teaching AP Spanish language and literature to a group of Latino under-achieving students. She used shared ethnicity, language, and culture to inform her teaching, and succeeded in getting 20 of 29 students to pass the AP Spanish Language and Literature tests with scores high enough to receive college credit (Sheets, 1995). Foster (1989) and Lee (1993; 2001) conducted separate single case studies of the effects of African American teachers using culturally informed instructional strategies and points of reference on the comprehension, verbal expression, and interpretative abilities of African American students. In both cases the results were positive with respect to students' mastery of content knowledge and high order thinking skills. Foster did her research with a community college teacher of business education, and Lee studied a high school teacher of American Literature.

Another promising source of data on the positive effects of teachers of color on the academic achievement of students of color is Afrocentric schools. While these data sets are still emerging, those that do exist show that students in these schools perform better than their counterparts in other schools. Most of this research does not specifically identify the ethnicity of the teachers. But, given where these schools are located and their expressed mission of African American cultural immersion teaching, there is a strong likelihood that many, if not most, of the teachers are African Americans. The performance of students is consistently positive across several different standardized measures, including the Iowa Test of Basic Skills (ITBS), the California Achievement Test (CAT), and the Comprehensive Test of Basic Skills (CTBS) (Gay, 2000).

A case in point is the Malcolm X Academy in Detroit, Michigan that was studied by Watson and Smitherman (1996). They found that students in grades K-6 performed better than average for the Detroit schools as a whole on the CAT. So did the seventh graders on the Michigan Assessment of Educational Progress (MAEP) tests. Other indicators of school achievement, such as higher daily attendance records, fewer disciplinary referrals, and a higher satisfaction with school from students and parents, also are better in Afrocentric schools than schools in general (Gay 2000). Extending these efforts to the college level reveal that HBCUs have a long history of producing levels of academic and career success for students that exceed their counterparts who attend PWIs (Predominantly White Institutions). Even though this may not be true with teacher certification tests, it certainly is in other disciplines, such as medicine, dentistry, engineering, law, pharmacy, business, and military leaders. HBCUs also continue to produce almost 40 percent of all African American teachers (Wintergreen/Orchard House, 1995). Students who attend these institutions attribute their success to the fact that almost all of their teachers were African Americans, and how they perform their teaching roles in culturally relevant ways. (Smith, 1987; Fleming, 1991; Allen, 1992; Ross, 1998).

The memories of a graduate of Superman College in Atlanta, Georgia are illustrative of how many others credit HBCUs for their academic and career success. She recalled that students knew:

they would receive automatic and unequivocal support; that there were always someone to talk to who knew your cultural dynamics; . . . that teachers knew you and cared about you, and demanded that you account for your actions . . . ; that you didn't have to worry about whether you could trust your counselors to do right by you because these people had your best interests at heart—everyone was vested in you and your success. There were lots of anchors to hold on to among people of your own kind, and you just knew you weren't going to fall through the cracks or get lost. Everyone expected everyone to succeed, and you just knew you could do it (Personal Interview).

Another HBCU alumnae added that his academic success was facilitated by being among people who:

looked like me, thought like me, had aspirations like me, had the same tenacity like me, and were models the kind of knowledge and success I wanted to be. Being immersed in this environment of success was fundamental to my high academic, social, and personal achievement. Morehouse also was a moral, cultural, political, and social consciousness and commitment training ground for me (Personal Interview).

Other ethnic-specific programs and teachers are producing encouraging results on the academic achievement of students. One of the best examples of

these efforts is the Kamehameha Early Education Program (KEEP) for Native Hawaiian students. It combined indigenous teachers, and cultural content and features in creating a language arts program to improve the reading performance of students in grades K-3 (Jordan, 1985). The results were phenomenal. The goal was to increase the mean scores of the students on standardized measures of reading achievement from the 13th percentile where they were at the beginning of the program to at least the 50th percentile. A few years after KEEP began this goal was reached for grades 1 and 2, and approached for grade 3, and these levels of performance were maintained thereafter. After 15 years of existence the mean scores of the first graders in KEEP across time was 55.7 compared to 31.7 for students in other schools. The average scores of the second graders was 52.2, and 47.8 for third graders, compared, respectively, to 28.8 and 25.5 for their peers who were not a part of the project. The KEEP students also demonstrated 85 percent engaged time on academic tasks, which was 20 percent higher than students in other classrooms (Tharp & Gallimore, 1988). Ironically, this very successful program was aborted after 24 years because the funding ended.

McCarty (2002) analyzed the transformation of the K-3 bilingual/bicultural program at the Rough Rock Demonstration School on the Navajo Reservation into a culturally authentic project, led by indigenous teachers. The primary focus of the study is on the process Navajo teachers went through to take control of their own program, incorporate Navajo culture into basic academic skills, and, simultaneously, develop students' competency in the Navajo language and culture. To meet Title VII (the project's funding source) stipulation data were collected on student performance on locally developed and standardized achievement measures. In four years the students' mean scores on the Comprehensive Test of Basic Skills (CTBS) increased from 58 to 91 percent. Scores on the reading subtests declined at first but improved steadily thereafter, as did the math scores. Even though both sets of scores remained below the national averages, the students in the RREN LAP (Rough Rock English-Navajo Language Arts Program) consistently performed better than a comparison group who did not participate in any consistent bicultural/bilingual instruction. Their mastery of the Navajo language was also higher. McCarty (2002), one of the researchers who followed the development of this curricular and instructional transformation, concluded:

Our data showed that bilingual students who had the benefit of cumulative, uninterrupted initial literacy experiences in Navajo made the greatest gains on both local and national measures of achievement (p. 161).

Some analysts may dismiss these studies as idiosyncratic and insignificant because they deal with such small numbers, and are not "empirical" in that they employ quantitative methods, use random sampling, and comparison control groups. But, these critics, themselves, are not producing the kind of research they deem worthy. Separately, small-scale studies have some serious limitations, but when taken together their results are insightful and instructive. Across ethnic groups and particular studies this research confirms the general

claims and the few quantitative analyses which show that teachers of color have positive impacts on the academic achievement of students from their own ethnic groups. These studies also provide some explanations about the dynamics of instruction that account for academic improvements for students of color—a benefit that is usually beyond the scope of quantitative studies. They also provide precedents and procedures for other researchers to follow and to extend.

Implications for Future Research, Policy, and Practice

This review revealed several limitations in the existing research that need to be corrected in the future. The fact that the same kind of limitations exist across different data sources and sets, and across topics pertinent to the presence, preparation, and performance of teachers of color make these needs even more imperative. One of the first needs is for a much greater quantity of research, of all kinds. There simply is not enough research on teachers of color in the professional trajectory—an issue that has been deemed to be of utmost importance. Most policy-makers, researchers, and practitioners agree that teachers of color play a critical role in the educational enterprise for all children, not just students of color. But, the paucity of research on what exactly this role is seems to contradict its claimed significance. This may be due, in part, to the continuing reluctance of educators and citizens of the U. S. to deal *explicitly and routinely* with race and ethnicity in schools and society. Thus, they shy away from them in research as well.

Irregularity, currency, and completeness are other problems with data sources about teachers of color preparing to enter the workforce, as well as those already in it. Scheduled data collection cycles are often interrupted or delayed, and the same kinds of data may not be collected across cycles. Nor are they always organized and presented in the same way. As a result, there are long time-lags between one data cycle and another, as well as between when raw data are collected, analyzed, and prepared for public consumption, or released in written format. This means that users often have to depend on data that are already several years old by the time they are ready for consumer use. Variances in how data are collected across cycles also makes it difficult to compare information from one data set with another. Some information compiled in one data-gathering cycle may not be carried over to the next. This inconsistency further complicates problems created by the paucity of research.

Another factor that may contribute to why there is so little actual research on teachers of color, especially their impact on the academic achievement of students of color, is how their potential influence is construed. Many people agree that more teachers of color are needed to serve as role models for students, and because they may be able to neutralize some of the negative consequences of racial prejudices on students. Their effects on students' academic achievement is conspicuously absent from these declarations. In some ways, then, it is not surprising that these analyses do not show up in the research. If certain individuals are not considered important to particular endeavors, they will not be included in discussions about them.

Excluding explicit analyses of race and ethnicity from large-scale studies of the effects of teachers on student achievement is a tremendous oversight, and loss of valuable data for building teaching capacity and improving students' performance. There are some single and multiple case studies of teachers of color that indicate their influence can be profound. But, many policy-makers dismiss these studies as mere impressionistic stories instead of serious research. Yet, these successful individuals may offer insights and strategies that can reverse the under-achievement among students of color. Their experiences should be studied more thoroughly and broadly, across ethnic groups, school levels, and subjects taught. Compilations of their "best practices" can be used as criteria to guide the preparation and performance assessments of teacher candidates in the pipeline and in early career development for teaching ethnically diverse students.

The data voids we found in this review need to be corrected in the future by conducting more systematic, thorough, and frequent studies on how teachers from different ethnic groups affect the academic achievement of different students of color. More studies are needed that focus on teachers with students who are members of their own ethnic group, as well as with other ethnic groups. Currently, when across-ethnic group studies do occur, they are almost always about European American teachers with students of color, or teachers of color with students from their own ethnic groups. Virtually no research exists on the influence of teachers of color on European American students, or with students of color from ethnic groups other than their own. For example, there are not analyses of African American teachers working with Latino American students, or Latino American teachers with Asian American students. Another ethnic imbalance in current research on general education is that most of it deals with African Americans. Latino and Native American teachers appear primarily in the research and scholarship about bilingual education. Asian Americans are virtually absent entirely. Further research needs to attend conscientiously and deliberately to these oversights and distortions.

Much more systematic data on the status of teachers of color in the profession also is needed. These should be collected in several ways for several reasons. First, states, school districts, and colleges of education should provide similar kinds of information on a more regular basis about the participation and performances of different groups of color. These data will produce more complete and dependable profiles of the ethnic distribution of teachers in preparation and practice, and thus improve the ability to locate and characterize problems of under-representation. Some states provide detailed demographic information on teachers by race and ethnicity at regular intervals, but many do not. We were able to locate information about the race and ethnicity of teachers for only about half of the states, and even less for the largest school districts. Other indicators suggest that many more of these have significant percentages of teachers of color. But without confirming data we are left to merely speculate.

The under-representation of teacher of color is too important an issue for it to depend upon speculation, and its resolution certainly cannot be accomplished in the absence of rich data to characterize the nature and magnitude of the problem. The absence of data on teachers of color at the state

level is magnified further by an even more extensive void for the 100 largest school districts, which account for almost 40 percent of all students of color in the U. S. While some rich data are typically presented about these districts, none includes any specific statistics about teachers of color who are employed in them. This should be information that is routinely reported, and available to policy-makers, educational leaders, and school reformers.

Another research need that will contribute further to improving the quality of information about teachers of color is to disaggregate composite data on “minorities,” and report it both by ethnic categories, and specific groups within these categories. For example, it would be helpful to know who accounts for the Latino American teachers. Are they of Mexican, Puerto Rican, Cuban, or some other Latin American ancestry. An even bigger need is to know where teachers from different ethnic groups are located in districts within states, and even in schools within districts. Without this information it is impossible to know whether teachers of color in these various jurisdictions are actually employed in the schools where students of color attend. A related issue of equal importance is what are the subjects and grade levels where teachers of color are teaching, and the quality of their performance. Some of these analyses are being done with areas of performance on certification tests, but they are not as thorough and consistent as they need to be. If we cannot make these determinations, then we cannot know whether teachers of color are positioned professionally to directly affect the achievement of students of color. This is a mammoth, but imperative, undertaking. It will provide valuable information to verify some common claims about the positive effect potential of teachers of color.

There is an implicit assumption in much of the discourse about the value of having more teachers of color in the work force with regards to affecting student achievement. It is that this benefit will be accrued to teachers and students from the same ethnic groups. The significance of this need is unquestionable, but pushed to extremes, it will contribute to further aggravating the existing situation where students attend schools in largely segregated settings. Some of the data unveiled in this review suggest that teachers of color are in similar situations. The question is, Should the employment and assignment of teachers reinforce these situations? This issue needs to be carefully examined by policy-makers and school leaders. The other side of this question is the need to explore the potential of teachers of color working in schools and communities with ethnic populations different from their own. Undoubtedly, some of this work is already going on in many school districts, but there is too little of it with respect to teacher capacity within and across ethnic groups, instructional effectiveness, and student achievement.

When questions about student achievement are raised, academic performance (and often scores on standardized and criterion-referenced tests) is evoked as the most compelling indicator. While this is unquestionably important, academic performance (especially on high stakes tests) should not be the only measure of success for students and teachers. Other measures that go beyond academics are important as well. These include average daily attendance, fewer disciplinary referrals, higher persistence and lower dropout rates, and stronger student self-concepts, school satisfaction, and sense of efficacy. All of these are

connected to academic achievement. Other more social indicators of achievement include personal, racial, ethnic and gender perceptions, cultural competence, and activism for equality and social justice. Worthy researchable questions related to these are: Do teachers from different ethnic groups influence the performance of students of color on these achievement indicators? If so, how? How do these areas of achievement correlate with academic achievement for both students and teachers? Both quantitative and qualitative studies should be conducted to explore these questions. Robust documentations and characterizations may better facilitate the transferability of these skills and their effects across students, teachers, and learning situations.

The dismal performance of teacher candidates of color on national, state and district certification tests is consistent over time, task, and location. African Americans and Latino Americans score much lower than other ethnic groups, and their failure is epidemic. The net effect is that these tests are making the situation of too few individuals of color in the teaching profession pipeline even worse. There are no states or teacher education institutions that departs from this pattern. And, it is a pattern that has been in place since teacher competency testing became widespread in the early 1980s. Most analysts (even the agencies that make the requirements for testing, and those that design the tests being used) agree that a passing score is not a guarantee of high teaching capability. Nor are failing scores a certainty of the inability to be an effective teacher. Furthermore, many advocates agree that certification testing has disproportional deleterious effects on teacher candidates of color, especially African Americans. Yet, they continue to endorse them, arguing that at least the tests improve the academic quality of the teaching pool. This is a troubling dilemma that needs to be resolved.

Continuing testing will not solve the problem of the under-representation of teachers of color. Even having no restrictions of how many times one can take the tests offer no real promise of breaking the cycle since performance on retakes is not significantly better. Many colleges and state departments of education have initiated programs to help teacher candidates and prospective teacher education students better prepare for entrance, exit, and induction standardized tests. These are hopeful signs and they need to be carefully researched to determine which ones are most effective, why, and how their success can be transferred to other locations. But, this is not enough. Some equal-status alternatives to standardized testing need to be provided, and carefully researched to determine their feasibility and effectiveness.

For example, can rigorous portfolio assessments be viable alternatives to the Praxis II tests, if not for Praxis I? What if the agencies that insist on having teacher performance assessments focus on Praxis III instead of Praxis I and II? Could passing criterion-referenced content tests that are designed by faculties of the institutions where students are attending, and taken while they are enrolled in subject matter content courses, be a reasonable alternatives to Praxis II? What about having teachers demonstrate competencies specific to teaching ethnically, racially, culturally, and linguistically diverse students, and in urban contexts? These options would give credence to the fact that teachers, like students, have multiple intelligences, and different styles of learning and

demonstrating knowledge and skills. If such alternatives were allowed, then the performance of teachers from different ethnic groups on them should be carefully tracked, and the results compared to the performance of matched samples on certification tests. The results of these comparisons would be helpful in teasing out whether some of the failure of teachers of color on certification and licensure tests is due to the performance modality, rather than their academic knowledge, subject matter content, and pedagogical skills.

Conversely, if only testing continues to be used it is likely to have an exponentially negative effect on teachers of color in the profession, and in the teacher education pipeline. In addition to those who fail the tests, others may leave education before testing for fear of failing, and still others may not even consider education as a viable career option because of the negative press generated by high failure rates among individuals of color.

Conclusion

Many teachers of color in the pipeline and in actual practice are burdened down and operating under ominous shadows of doubt, uncertainty, and insecurity. Passing tests to progress through the grades in K-12 schools, to graduate from high school, to enter college and teacher education programs, to exit from professional programs, to join the workforce, and to maintain their employment once they enter practice is a menacing presence in their lives. They wonder if they will pass, and wonder what will happen to them if they do not. There seems to be no recourse around or past testing. Looming large in the background of their minds are the records of past test performance of other members of their ethnic groups. For many, tests are impenetrable obstacles blocking their career aspirations. It is doubtful that individuals of color who do not pass view teacher tests as opportunities to improve their academic quality.

Where do they turn for relief from these burdens—their colleges of education; their employing institutions; their professional unions? Or, do they seek personal dignity and professional success elsewhere by leaving the educational arena entirely? The first scenario is not very encouraging since, to date, none of these avenues has offered any hopeful signs of counter the high failure rates on certification tests among most groups of color. The other option—leaving or not entering the education profession—is a more appealing and likely one that many of educational leaders and policy-makers do not want to acknowledge. People will not continue to be bombarded with endless failure before taking some action to stop the associated pain. We may see this happen soon with more individuals of color abandoning teaching for more accessible careers. Some of this is already happening with African Americans. Latinos and other ethnic groups who are having difficulty passing certification tests may follow suit. And, all of this will happen at a time when the need for more teachers of color is galvanizing, and likely to become even more pressing in the future.

It is often said that one person's promise may be another's pain. This seems to be the case with testing for teacher certification and licensure for many prospective and actual teachers of color. What many policy-makers see as the solution to improving teacher quality, and by extension student achievement, has

become a major obstacle to individuals of color entering the teaching profession. Testing certainly is a recruitment dis-incentive for teacher candidates of color who are needed the most. That is, teacher education students who, themselves, lived in urban communities, and have experiences urban schools. With appropriate subject matter content knowledge and pedagogical skills they may be in a better position to teach students from similar backgrounds than individuals who meet the typical profile of most current and future teachers—European American, middle class, female, English only, and suburban or small town residents.

For too many teacher candidates of color, testing is repeatedly blocking their pathways of entrance into the profession. How can we solve this dilemma? This question poses a major challenge to policy-makers and educational leaders. If it is not addressed forthrightly, there is not doubt that testing for certification will further exacerbate the problem it purports to solve with respect to teachers of color. While the academic quality of the overall teaching pool may be increasing, and the demand for teachers of color is soaring, their actual supply is plummeting. Surely there must be a way to have both high quality and greater diversity among teachers at the same time. To achieve these goals will require imaginative designs and bold strategies. Are policy makers ready and willing to make a leap into uncharted terrains of possibility to find solutions to these dilemmas? If they are not, the current under-representation of teachers of color is certain to get worst in the future.

References

- Allen, W. (1992). The color of success: African-American college student outcomes at predominately White and historically Black public colleges and universities. Harvard Educational Review, 62 (1), 26-44.
- American Association of Colleges for Teacher Education (1989). Teaching teachers: Facts and figures. Washington, DC: Author.
- American Association of College for Teacher Education (1990). A Metropolitan Life survey of teacher education students. Washington, DC: Author.
- American Association of Colleges for Teacher Education (1999). Teacher education pipeline IV: Schools, colleges, and departments of education enrollments by race, ethnicity, and gender. Washington, DC: Author.
- Anyon, J. (1981). Social class and school achievement. Curriculum Inquiry, 11 (1), 3-42.
- Au, K. H. (1993). Literacy instruction in multicultural settings. New York: Harcourt Brace.
- Boggs, S. T., Watson-Gegeo, K., & McMillen, G. (1985). Speaking, relating, and learning: A study of Hawaiian children at home and at school. Norwood, NJ: Ablex.
- Carrasquillo, A. L., & Rodriguez, V. (1996). Language minority students in the mainstream classroom. Bristol, PA: Multicultural Matters.
- Chaika, G. (1999). Teachers tackle testing: The scoop on teacher assessment. www.education-world.com/a_admin/admin109.shtml.
- Characteristics of great city schools (2002). www.cgcs.org. Retrieved 1/5/03.
- Clewell, B. C., & Villegas, A. M. (1998). Introduction. Education and Urban Society, 31 (1), 3-17.
- Cochran-Smith, M., & Lytle, S. L. (Ed.). (1993). Inside/outside: Teacher research and knowledge. New York: Teachers College Press.
- Dee, T. S. (August 2001). Teachers, race and student achievement in a randomized experiment. National Bureau of Economic Research. <http://papers.nber.org/papers/w8432.pdf>.
- Dilworth, M. E. (Ed.). (1998). Being responsive to cultural differences: How teachers learn. Thousand Oaks, CA: Corwin
- Dinges, B. (1990, April). Excellence or inequality: Teacher tests tripping up minorities. The Chicago reporter. www.chicagoreporter.com. Retrieved 12/04/02
- Donnelly, M. (1999). Training and recruiting minority teachers-Research. ERIC Digest Publication, EA29.
- FairTest Examiner (1989, Winter). Tests keep thousands of minorities out of teaching. www.fairtest.org/examarts/winter89/smithtt.htm. Retrieved 12/4/02.
- Fleming, J. (1991). Blacks in college: A comparative study of students' success in Black and White institutions. San Francisco: Jossey-Bass
- Flippo, R. F., & Canniff, J. G. (Fall 2000). Teacher competency whitewash: How one high-stakes test eliminates diversity from the teaching force. Connection, 28-31.

- Foster, M. (1989). It's cooking now: A performance analysis of the speech events of a Black teacher in an urban community college. Language in Society, 18 (1), 1-29.
- Foster, M. (1991). Just got to find a way: Case studies of the lives and practice of exemplary Black high school teachers. In M. Foster (Ed.), Readings on equal education: Vol. 11. Qualitative investigations into schools and schooling (pp. 273-309). New York: AMS Press.
- Foster, M. (1995). African American teachers and culturally relevant pedagogy. In J. A. Banks & C. A. M. Banks (Eds.), Handbook of research on multicultural education (pp. 570-581). New York: Macmillan.
- Foster, M. (1997). Black teachers on teaching. New York: New Press.
- Garcia, O., & Truber, J. (1999). Where have all the urban minority educators gone and when will they ever learn? Educators for Urban Minorities, 1, 1-8.
- Gay, G. (2000). Culturally responsive teaching: Theory, research, & practice. New York: Teachers College Press.
- Gitomer, D. H., & Latham, A. S. (1999). The academic quality of prospective teachers: The impact of admission and licensure testing. Princeton, NJ: Education Testing Service. Also located at <ftp://ftp.ets.org/pub/tandl/225033.pdf>.
- Good, T. L., & Brophy, J. E. (1994). Looking into classrooms (6th ed.). New York: HarperCollins.
- Goodlad, J. I. (1984). A place called school: Prospects for the future. New York: McGraw-Hill.
- Goodlad, J. (1990). Teachers for our nation's schools. San Francisco: Jossey-Bass.
- Gomez, M. L. (1996). Prospective teachers' perspectives on teaching "other people's children." In K. Zeichner, S., & M. L. Gomez (Eds.), Currents of reform in preservice teacher education (pp. 109-132). New York: Teachers College Press
- Haynes, N. M., & Comer, J. (1990). Helping Black children succeed: The significance of some social factors. In K. Lomotey (Ed.), Going to school: The African American experience (pp. 103-113). Albany: State University of New York Press.
- Henry, A. (1992). African-Canadian women teachers' activism: Recreating communities of caring and resistance. Journal of Negro Education, 61 (3), 392-404
- Hill, D. (1996). Taking on the test. www.edweek.org/ew/vol-15/33cbest.h15. Retrieved 1/28/03.
- Hollins, E. R., King, J. E., & Hayman, W. C. (Eds.). (1994). Teaching diverse populations: Formulating a knowledge base. Albany: State University of New York Press.
- Howard, T. C. (1998). Pedagogical practices and ideological constructions of effective teachers of African American students. Unpublished doctoral dissertation, University of Washington, Seattle.
- Irvine, J. J., & Foster, M. (Eds.). (1996). Growing up African American in Catholic schools. New York: Teachers College Press.

- Jordan, C. (1985). Translating culture: From ethnographic information to educational reform. Anthropology & Education, 16 (2), 105-123.
- Kleinfeld, J. (1975). Effective teachers of Eskimo and Indian students. School Review, 83 (2), 301-344.
- King, J. E. (1991). Unfinished business: Black student alienation and Black teachers' emancipatory pedagogy. In M. Foster (Ed.), Readings on equal education: Vol. 11. Qualitative investigations into schools and schooling (pp. 245-271). New York: AMS Press.
- King, J. E., Hollins, E. R., & Hayman, W. C. (Eds.). (1997). Preparing teachers for cultural diversity. New York: Teachers College Press.
- King, S. H. (1993). The limited presence of African American teachers. Review of Educational Research, 63 (2), 115-149.
- Ladson-Billings, G. (1990). Like lightning in a bottle: Attempting to capture the pedagogical excellence of successful teachers of Black students. International Journal of Qualitative Studies in Education, 3, 335-344.
- Ladson-Billings, G. (1992). Liberatory consequences of literacy: A case of culturally relevant instruction for African American students. Journal of Negro Education, 61 (3), 378-391.
- Ladson-Billings, G. (1994). The dreamkeepers: Successful teachers for African-American children. San Francisco: Jossey-Bass.
- Ladson-Billings, G. (2001). Crossing over to Canaan: The journey of new teachers in diverse classrooms. San Francisco: Jossey-Bass.
- Lankard, B. A. (1994). Recruitment and retention of minority teachers in vocational education. ERIC Digest No. 144.
www.ed.gov/databases/ERIC_Digests/ed368889.html. Retrieved 12/10/2002.
- Latham, A. S., Gitomer, D., & Ziomek, R. (2002). Teaching and learning: What the tests tell us about new teachers. Princeton, NJ: Educational Testing Service.
- Lee, C. (1993) Signifying as a scaffold to literary interpretation: The pedagogical implications of a form of African American discourse. (NCTE Research Report No. 26). Urbana: National Council of Teachers of English.
- Lee, C. (2001). Is October Brown Chinese: A cultural modeling activity system for understanding students. American Educational Research Journal, 38 (1), 97-141.
- Ligons, C. M. (1992). Producing high academic yields in urban schools: Philosophies, policies, and practices. Texas Southern University Research Journal, 3 (1), 71-97.
- Ligons, C. M., Rosado, L. A., & Houston, W. R. (1998). Culturally literate teachers: Preparation for 21st century schools. In M. E. Dilworth (Ed.). Being responsive to cultural differences: How teachers learn (pp. 129-142). Thousand Oaks, CA: Corwin
- Lipka, J., Mohatt, G. V., & the Ciulistet Group (1998). Transforming the culture of schools: Yup'ik Eskimo examples. Mahwah, NJ: Lawrence Erlbaum.
- Lopez, O. S. (1996). The effect of the relationship between classroom student diversity and teacher capacity on student performance. ERIC Document, ED 386 423.

- Martinez, R. L., Jr. (1991). A crisis in the profession: Minority role models in critically short supply. Vocational Educational Journal, 66 (4), 24-25, 46.
- Mathews, J. (1988). Escalante: The best teacher in America. New York: Henry Holt & Company.
- McCarty, T. L. (2002). A place to be Navajo: Rough Rock and the struggle for self-determination in indigenous schooling. Mahwah, NJ: Lawrence Erlbaum.
- Mehan, H., Hubbard, L, Villanueva, L, & Lintz, A. (1996). Constructing school success: The consequences of untracking low-achieving students. New York: Cambridge University Press.
- Mitchell, A. (1998). African American teachers: Unique roles and universal lessons. Education and Urban Society, 31 (1), 104-122.
- National Center for Educational Statistics (1997). Projections of educational statistics to 2007 (NCES 97-382). Washington, DC: U. S. Government Printing Office.
- Nelson-Barber, S. S., & Mitchell, J. (1992). Restructuring for diversity: Five regional portraits. In M. E. Dilworth (Ed.), Diversity in teacher education: New expectations (pp. 229-262). San Francisco: Jossey-Bass.
- Oakes, J. (1985). Keeping tracks: How schools structure inequality. New Haven, CT: Yale University Press.
- Oakes, J., & Guiton, G. (1995). Matchmaking: The dynamics of high school tracking decisions. American Educational Research Journal, 32 (1), 148-153.
- Paley, V. (1989). White teacher. Cambridge, MA: Harvard University Press.
- Pickett, M. (2002). The search for Native American teachers. www.billingsgazett.com. Retrieved 12/2/2002.
- Piercynski, M., Matranga, M., & Peltier, G. (1997). Legislative appropriation for minority teacher recruitment: Did it really matter? The Clearing House, 70, 205-206. Praxis registration bulletin (2002-03). (<ftp://ftp.ets.org/pub/tandl/01361.pdf>). Retrieved 1/28/03.
- Praxis series. www.ets.org/Praxis/prxtest.html. Retrieved 1/26/03.
- Quiocho, A., & Rios, F. (2000). The power of their presence: Minority group teachers and schooling. Review of Educational Research, 70 (4), 485-528.
- Ralph, J. (1989). Improving education for the disadvantaged. Do we know whom to help? Phi Delta Kappan, 70 (5), 395-401.
- Recruitment of minority teachers (November 15, 2002). Burlington, NC: Alamance-Burlington School System. www.abss.k12/nc.us/sysmainrep/closegap/rec4schools.htm. Retrieved 12/10/02.
- Riley, R. W. (1998). Our teachers should be excellent, and they should look like America. Education and Urban Society, 31 (1), 18-29.
- Ross, M. J. (1998). Success factors of young African-American males at a historically Black college. Westport, CT: Bergin & Garvey.
- Salathe, J. P. (2002). Recruitment and hiring of minority teachers to provide a better learning environment for all children. www.arc.org/gripp/researchPublications/publications/recruitment.pdf.

- Salinas, J. P. (2002). The effectiveness of minority teachers on minority student success. ERIC Document, ED 455 235.
- Sheets, R. H. (1995). From remedial to gifted: Effects of culturally centered pedagogy . Theory Into Practice, 34 (3), 186-193.
- Siddle Walker, V. (1996). Their highest potential: An African American school community in the segregated South. Chapel Hill: University of North Carolina Press.
- Sleeter, C. E. (2000-2001). Epistemological diversity in research on preservice teacher preparation for historically underserved children. In W. G. Secada (Ed.), Review of research in education, Vol. 25 (pp. 209-250). Washington, DC: American Educational Research Association.
- Smith, G. P. (December 1987). The effects of competency testing on the supply of minority teachers. ERIC Documents, ED 308 521.
- Smith, R., Moallem, M., & Sherrill, D. (1997). How preservice teachers think about cultural diversity. Educational Foundations, 11, 41-62.
- Tharp, R. G., & Gallimore, R. (1988). Rousing minds to life: Teaching, learning, and schooling in social context. Cambridge, England: Cambridge University Press.
- The MetLife Survey of the American teacher of 2001: Key elements of quality schools. www.metlife.com/Companyinfo/Community/Found/Docs/2001ats.pdf. Retrieved 1/17/03.
- The Praxis Series: Professional assessments for beginning teachers' documents. www.ets.org/praxis/download.html. Retrieved 1/28/03.
- Trueba, H. T., Guthrie, G. P., & Au, K. H. P. (Eds.). (1981). Culture and the bilingual classroom: Studies in classroom ethnography. Rowley, MA: Newbury House.
- Urban teacher shortage most severe in areas critical to raising student performance (January 19, 2000). www.rnt.org/quick/press.html. Retrieved 1/11/03.
- U. S. Department of Commerce (1996). Current population reports: Population projections of the United States by age, sex, race, and Hispanic origin: 1995- 2050. Washington, DC: U. S. Government Printing Office.
- Zeichner, K. (1996a). Educating teachers for cultural diversity. In K. Zeichner, S. Melnick, & M. L. Gomez (Eds.), Currents of reform in preservice teacher education (pp. 133-175). New York: Teachers College Press
- Zeichner, K. (1996b). Educating teachers for cultural diversity in the United States. In M. Craft (Ed.), Teacher education in pluralistic societies: An international review (pp. 141-148). London: Falmer Press.
- Zeichner, K., Melnick, S., & Gomez, M. L. (Eds.). (1996). Currents of reform in preservice teacher education. New York: Teachers College Press.