Diversifying the Special Education Workforce

Prepared for the Center on Personnel Studies in Special Education

by
Naomi Tyler
Zina Yzquierdo
Vanderbilt University

Norma Lopez-Reyna
University of Illinois – Chicago

Susan Flippin
Vanderbilt University

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COPSSE research is focused on the preparation of special education professionals and its impact on beginning teacher quality and student outcomes. Our research is intended to inform scholars and policymakers about advantages and disadvantages of preparation alternatives and the effective use of public funds in addressing personnel shortages.

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COPSSE Project
P.O. Box 117050
University of Florida
Gainesville, FL 32611
352-392-0701
352-392-2655 (Fax)

CONTENTS

ABSTRACT

The need for teachers from culturally and linguistically diverse (CLD) backgrounds has become a national concern. The majority of school districts nationwide list the recruitment and retention of teachers of color as a priority. Many cite difficulties finding adequate personnel, particularly with the added challenge of severe special education teacher shortages. This paper synthesizes research findings on the current demographics of diverse teachers and the impact on student outcomes. A summary of challenges faced by students of color who aspire to become teachers is detailed. Qualities of teacher preparation programs that successfully prepare teachers of color are summarized under the following themes: recruitment, curriculum considerations, funding, interpersonal support, multisystems support, alternative certification, and attrition. Recommendations for future research are provided.

DIVERSIFYING THE WORKFORCE

> "It's as if you took the whole human race and threw it up in the air and everyone ended up here." Mel Riddile, principal of J. E. B. Stuart High School in Fairfax County, Virginia, describing the remarkable diversity of his school's students.[1]

The diversity of the United States as a nation is undeniable. According to the U. S. Census, the percentage of White Americans dropped from 75.6% in 1990 to 69% in 2000. In the year 2020 this number is projected to fall to 63% because Asian and Pacific Americans will comprise 6% of the population; Latinos, 17%; African Americans, 13%; and American Indians, 1%. There is evidence that the country will continue to diversify even further within these groups. Dual or multiple ethnicities (e.g., both Latino and African American) are now reported by 4.6 million individuals (1.6% of the population). These data were not collected for censuses before 2000, and some experts believe that reported numbers are low, because many multiracial individuals report only their primary ethnicity (Artiles, Harry, Reschly, & Chinn, 2001).

This paper summarizes issues related to diversifying the special education workforce, particularly issues that arose in the last decade. We will provide a brief historical perspective of changes in the employment of teachers from diverse backgrounds and will identify the demographics of current special educators in relation to public school enrollment and students in the teacher preparation pipeline. Arguments for diversity in the current literature will be discussed, and empirical studies that support or refute these arguments will be examined.

Strategies for increasing the number of culturally and linguistically diverse (CLD)[2] special educators through increased recruitment and retention efforts at colleges and universities are described. The impact of alternative certification procedures is also discussed. Finally, we provide research questions for future study.

Demographics of the Special Education Workforce

Historically, teaching has been a profession of opportunity for many from underrepresented groups. However, the advent of the civil rights movement, the women's movement, and affirmative action during the 1960s and 1970s provided occupational opportunities in fields previously unavailable to people of color and women. During this period, desegregation of public schools eliminated jobs for over 38,000 African American teachers (Hill, Carjuzaa, Aramburo, & Baca, 1993; King, 1993; Michael-Bandele, 1993). As opportunities for African

[1]Quoted in "Changing America" by J. L. Swerdlow, *National Geographic*, September 2001.

[2]The authors recognize terms used to refer to different racial, ethnic, and cultural groups are continuously changing, and that the term minority itself is often questioned, as culturally and linguistically diverse (CLD) students often represent the majority of students enrolled in many schools and districts. Terminology used in this paper reflects that used in the various reports and studies cited.

Americans increased, Historically Black Colleges and Universities (HBCUs), which had produced the largest numbers of African American teachers, saw sharp declines in teacher education enrollments (Michael-Bandele, 1993). These declines subsequently reduced the number of minority teacher education graduates. From 1977 to 1989, percentages of bachelors degrees in education earned nationwide by African Americans dropped from 22.1% to 7.3% and by Hispanics from 16.3% to 7.7% (Michael-Bandele, 1993).

As reflected in Table 1, the demographics of the children in America's classrooms are increasingly diverse, evidence of a marked transformation in enrollment that some predict will continue to change (Smith-Davis & Billingsley, 1993). School districts grapple with the challenges of educating students with multiple primary languages, diverse backgrounds, and varied histories of formal schooling in other countries (Goodwin, 2002). Students from diverse backgrounds comprise 37.7% of the nation's special education students and 38.1% of all public school students (www.ideadata.org, 2000). Although these percentages are nearly identical, one troubling difference is that students from CLD backgrounds are often overrepresented in programs for students with mental retardation, specific learning disabilities, and emotional or behavioral disturbances as well as underrepresented in gifted and talented programs (Artiles, Harry, Reschly, & Chinn, 2002; Harry & Anderson, 1994).

Table 1: Demographic Comparisons

Ethnicity**	American Population	America's Teachers	Public School Students	America's Special Education Teachers	Special Education Students
White	69.1%	87.0%	61.9%	86.0%	62.3%
African American	12.1%	7.0%	16.5%	10.0%	20.1%
Hispanic	12.5%	4.0%	16.2%	2.0%	14.5%
Asian American*	3.7%	1.0%	5.5% combined	2.0% combined	1.8%
American Indian/Alaska Native	0.7%	<1.0%			1.3%

* Includes Asian and Native Hawaiian and Other Pacific Islanders.
** Excludes data for "other race" and "two or more races" that are collected by U.S. Census but not available for teachers or public school students.

Districts nationwide report teacher shortages that are more severe in special education and particularly acute for teachers from historically underrepresented backgrounds. Current data indicate approximately 39,140 special education positions in the U. S. are filled by teachers who do not have appropriate special education credentials (U. S. Department of Education, 2001), while 98% of school districts report overall special education teacher shortages (ERIC Clearinghouse on Disabilities and Gifted Education, 2001; Recruiting New Teachers, 2000).

The number of special education teachers from CLD backgrounds is small and declining (Olson, 2000). For example, in 1978, 12% of America's teachers were African American; in 1993 that number declined to 9% despite increased college enrollment of African American students (Shipp, 1999). As recently as 1996, over 40% of the nation's schools had no teachers of color on their faculties (Riley, 1998). Today, only 14% of special education classroom teachers are from historically underrepresented groups (Crutchfield, 1997), compared to approximately 38% of the students in those classrooms. For some underrepresented groups, the disparity is even greater. For example, African American males comprise only 0.4% of the elementary special education teachers and 2.2% of secondary special education teachers (Nettles & Perna, 1997). If current trends continue, Olson (2000) predicts that 40% of public school students but only 12% of teachers will be from diverse backgrounds by the year 2009. Clearly, the diversity of special education teachers matches neither the general population nor the students with whom they work.

The situation is no better within the teacher pipeline (students currently enrolled in undergraduate or graduate teacher preparation programs). Olson and Jerald (1998) state that only 20% of undergraduates in teacher education programs in 1998 were members of historically underrepresented groups. The Council for Exceptional Children (2001) reports that this number is even lower (14%) for students in special education teacher preparation programs. According to the American Association for Employment in Education (AAEE, 1999), 64.7% of colleges and universities anticipated no change in the number of minority teacher candidates produced by their programs; therefore, an increase in the diversity of the teaching force in the near future is unlikely.

In conclusion, there is a shortage of CLD individuals in the special education workforce, and the percentage of diverse teachers does not reflect the demographics of the student population. The intense push to hire teachers from diverse backgrounds is driven by the belief that diversity is important.

The Importance of Diversification

There are three reasons typically listed to justify diversifying the nation's teachers. The first reason for advocating diversity is that it is the equitably correct thing to do (Ehrenberg, Goldhaber, & Brewer, 1995). Former U. S. Secretary of Education Richard Riley summarized this issue well when he wrote, "Our teachers should be excellent, and they should look like America" (1998, p. 18). Because schools are a microcosm of our civilization, they should reflect the overall make-up of our society. American society is diverse, and public school students are diverse. Consequently, the teaching force should reflect that diversity. Particular attempts should be made to include groups that have historically been marginalized or excluded (Goodwin, 2002; Riley, 1998).

The second reason for increasing diversity is specific to the field of special education. The overrepresentation of students from CLD backgrounds in special education has been of concern for decades (Artiles et al., 2001, 2002; Chinn & Hughes, 1987; Dunn, 1968; Patton, 1998; Donovan & Cross, 2002). Most of the referrals for special education come from general

education teachers. Since most of those teachers are European American, monolingual, and middle class (Goodwin, 2002), a cultural mismatch between teaching style and learning style has been proposed as a possible factor that affects disproportional placement (Artiles et al., 2002). Many reasonably assume that the presence in general education of minority teachers who are aware of these cultural differences would reduce the overrepresentation of minority students in special education. By this logic, a diverse special education teaching force would be more likely to recognize and address inappropriate referrals and placements of minority students.

The third reason for a diverse teaching force is related to the impact on student learning. Dee (2001) reports that it is now conventional wisdom in education that minority students will succeed academically when paired with teachers who match their race or ethnicity. In the literature on diversity, this theory appears to be common knowledge, possibly considered fact. However, the few studies that actually examined the impact of teacher diversity on student learning found conflicting results. In the following section, we discuss the justifications for diversity that have achieved general consensus in the literature and make comparisons with what research actually shows.

The General Consensus on Diversity in Teaching

For students from underrepresented groups, the benefits of a diverse teaching population are great. Having a teacher who has a similar racial or ethnic background or speaks their language may have a profound impact on their educational comfort level. This increased comfort level is what Dee (2001) calls a "passive teacher effect," making it easier for students to approach a teacher or ask for additional help or support (Andrews & Martin, 1998; Dandy, 1998). Next, teachers from diverse racial backgrounds are role models (Alliance Project, 2000; Riley, 1998). When these role models mirror the ethnicities in the classrooms, then students can recognize that their own differences are not liabilities but strengths to be built on (Michael-Bandele, 1993; Villegas & Clewell, 1998).

Teachers who reflect the racial or cultural make-up of a community also act as liaisons between that community and the school. These teachers may act as cultural translators for their students, introducing them to a school's "invisible" culture that is largely based on a White, middle-class perspective (Mitchell, 1998). They share the experiences and perspectives of students and from different communities with school colleagues. Mitchell (1998) states that CLD teachers often act as cultural mediators, activists for student rights, and advocates for student growth and development. They strengthen the academic foundation on which the schools build by engaging families in the educational process in order to connect students to greater opportunities (Dandy, 1998; Genzuk & Baca, 1998; Riley, 1998; Villegas & Clewell, 1998).

Limited English proficiency is a key barrier to learning for many students. The presence of personnel who speak the languages of English Language Learners (ELL) in the schools is an obvious necessity given the multilingual make-up of many schools. Recommendations on effective schooling for ELL students, who often require specialized educational services, have identified key characteristics for improving student outcomes, including hiring bilingual staff with cultural backgrounds similar to those of the students (Genzuk & Baca, 1998).

An assumption of diversity proponents is that CLD teachers can increase academic achievement for students of color (Villegas & Clewell, 1998), thus altering the negative cycle of lowered expectations experienced by many students (Riley, 1998). Researchers have discovered unmistakable differences in cognitive and learning styles among children from various racial and ethnic groups (Au & Kawakami, 1991; Ladson-Billings, 1994; Townsend, 2000; Voltz, 1998). Teachers who use this knowledge to reduce the incongruence between teaching and learning styles create better outcomes for their students.

Another assumption is that teachers from diverse backgrounds enhance the educational experiences of all children, regardless of race, ethnicity, or primary language. Their presence in the classroom modifies existing biases and racial attitudes of school children (Villegas & Clewell, 1998). Students from all racial groups must be taught by individuals representing a variety of races, cultures, and backgrounds (Riley, 1998). When students are educationally limited to teachers whose racial or ethnic backgrounds are the same as their own, they are denied access to different perspectives as well as prevented from developing intercultural understanding and multicultural communication skills necessary in the society of the new millennium (Michael-Bandele, 1993). Children sheltered from diversity risk being interculturally incompetent in the 21st century (Kea & Utley, 1998).

Research on Teacher Diversity and Student Impact

In order to verify the assumptions listed above, research on the impact of minority teachers on minority student achievement was reviewed. The focus of this paper is to summarize information for the last decade; however, in order to gain an historical perspective on this issue, studies from as far back as the early 1970s are included. The desegregation of the nation's schools, coupled with the passage of P.L. 94-142, resulted in a group of studies that investigated the impact of race and referral for special education. The timing of these studies also coincided with rising concerns in the field about the overrepresentation of students of color in classes for students with mental retardation.

To find information on the impact of teacher diversity on student outcomes, keyword searches of electronic databases (e.g., ERIC) were conducted. Respected researchers in the field of diversity, representatives from the Council for Exceptional Children, and experts on overrepresentation issues were contacted for referrals to relevant studies. Very few data-driven studies were identified, and most experts agreed that there was little research in this area. Only three studies were located; one was not included, because it was a draft report that had not been peer-reviewed. We then expanded our search to include any studies that investigated race/ethnicity in relation to teacher perceptions and referrals. Once studies were obtained, references listed in those articles were also used to track down further studies.

With the exception of three reports, the studies described here came from papers published in peer-reviewed journals or books.[3] We did not include papers presented at professional

[3]The three exceptions are: Dee's (2001) report on teachers, race, and student achievement, a report published by the National Bureau of Economic Research; the National Academy Press

conferences, Master's theses, or dissertations. We also did not report on a study by Ehrenberg & Brewer (1995) that reanalyzed data from the Coleman Report, Equality of Educational Opportunities (Coleman, Campbell, Hobson, McPartland, Mood, Winfeld, et al., 1966). These data on schools in the 1960s were of little relevance to contemporary issues. Although there is a plethora of subjective writings on the importance of diversity, it is surprising that few studies have attempted to show direct correlations between student-teacher racial pairings and academic outcomes. Because so little information was available in the area of special education, we broadened our search slightly to include information from general education. In the end, we reviewed 14 studies conducted in the 1970s and 1980s and 11 studies conducted in the 1990s. These studies fell into four groups: Studies that analyzed teachers' perceptions, studies that evaluated teacher behavior, studies that analyzed actual teacher ratings and referrals for special education, and studies that looked at relationships between race and teaching behavior.

Teachers' perceptions. A number of studies conducted in the 1970s and early 1980s examined the impact of race on educators' initial perceptions of students (Aloia, Maxwell, & Aloia, 1981; DeMeis & Turner, 1978; Prieto & Zucker, 1981; Tobias, Cole, Zibrin, & Bodlakova, 1982; Tobias, Zibrin, & Menell, 1983; Zucker & Prieto, 1977; Zucker, Prieto, & Rutherford, 1979). Most used hypothetical case studies that manipulated characteristics such as race, ethnicity, gender, educational label (e.g., educable mentally retarded or EMR), or perceived physical attractiveness of subjects to determine if bias was a factor in initial teacher perceptions on possible referral decisions. All of the studies found race to be a significant factor. Zucker and his colleagues (Prieto & Zucker, 1981; Zucker & Prieto, 1977; Zucker et al., 1979) found that teachers indicated special education placement as more appropriate for Mexican American children than for White children. Aloia et al. (1981) also found that the race of the child significantly influenced teachers' perceptions and that the label of EMR had less negative effect on teachers' perceptions of White children than of Black or Mexican American students. DeMeis & Turner (1978) found that Black students, students who spoke Black English, and less attractive students were rated lower by their teachers.

Because the subjects of the previous studies were all predominantly White teachers, no cross-race comparisons could be made to determine if the perceptions of diverse teachers would be more positive toward CLD students than those of the European American teachers. Tobias and his colleagues (Tobias et al., 1982, 1983) utilized a diverse teacher subject pool in two subsequent studies. Their 1982 study found that general education teachers were more likely to recommend students for referral to special education from ethnic groups other than their own. Since the majority of the nation's teachers are European American, this could have lent some credence to the theory that teacher bias leads to overrepresentation in special education. However, their subsequent 1983 study failed to replicate those findings. Instead, the 1983 study found that recommendations for special education referral were influenced by teacher ethnicity and teaching level. White teachers referred students more frequently than Black or Hispanic teachers, with no significant differences found for student ethnicity, and secondary teachers

report on minority students in special and gifted education (Donovan & Cross, 2002); and the final report for Project SEARCH by Harry, Klingner, & Sturges (2002).

referred less often than elementary teachers or special educators. In addition, both Black and White teachers referred more males, while Hispanic teachers referred more females.

In the studies described above, one limitation is the use of simulated case studies (Shinn, Tindal, & Spira, 1987). Teacher perception of behavior toward actual students could be different from that of hypothetical students (Bahr, Fuchs, Stecker, & Fuchs, 1991). A second limitation is that most investigators (with the exception of the Tobias 1982 and 1983 studies) examined suspected bias without controlling for the race of both student and teacher (Bahr et al., 1991). The studies, which showed that bias existed in the perceptions of White teachers, failed to show the reverse effect, because minority teachers were not included in subject pools.

Teacher behaviors. Student learning is impacted by many teacher behaviors, including questioning techniques and reinforcement frequency and type. Several studies examined teacher interactions with students from CLD backgrounds (Buriel, 1983; Jackson & Cosca, 1974; Laosa, 1979). Results were contradictory. Jackson and Cosca (1974) found that teachers praised, encouraged, directed questions to, and accepted and used student ideas more for Anglo students than for Chicano students. These results were corroborated by Buriel (1983). However, Jackson and Cosca also found that the disparity between response rates increased for Mexican-American teachers. The amount of positive praise and feedback given by Mexican American teachers was 139% higher for Anglos than for Mexican Americans. Laosa (1979) found that teachers' disapproving behavior was significantly influenced by the students' dominant language, rather than by specific ethnic group.

Methodological problems with these studies include: (a) No Mexican American teachers were included as a comparison group for a study focused on teacher behavior and Mexican American students (Buriel, 1983); (b) a vague definition of "teacher" included classroom aide, parent volunteer, and cross-age tutor (Laosa, 1979); and (c) teacher interactions were coded at the classroom level rather than at the student level (Jackson & Cosca, 1974). The design of these studies does not make it possible to draw any conclusions regarding the effectiveness of CLD teachers with CLD students.

Actual teacher ratings. Studies in the 1980s examined more realistic situations to discern teacher bias, often combining several sources of data collection (e.g., teacher data and academic achievement). In a study of teachers and reading groupings, Haller (1985) failed to uncover evidence of racial bias, either conscious or unconscious, even though Black students were more likely to be placed in the lowest reading groups. Shinn et al. (1987) conducted curriculum-based assessment (CBA) on students referred due to reading difficulties. Significantly more males and Black students were referred, leading to the conclusion that teacher referrals were biased. However, the referred students performed significantly lower on CBA measures than the normed population at their schools, leading the researchers to conclude that the teacher referrals were accurate. Keller (1988) investigated ratings of adaptive behavior for 154 Black, Hispanic, and White students. He found differences by ethnic group: Teachers scored White students higher than they scored Hispanic or Black students. Parent ratings and teacher ratings were not highly correlated, confirming the need for multiple sources of information in referral decisions. Elliott, Barnard, & Gresham (1989) corroborated these findings in a study of teacher ratings of social behaviors for 212 preschool children. Both parents and teachers gave Black students lower

ratings than White students on the Social Skills Rating Scales (SSRS), yet correlations between parent and teacher ratings were moderately low. The researchers reinforced the notion that ratings from two adult samples provide unique information about the social behavior of the child.

Although more methodologically sound than earlier research, these studies still failed to compare ratings by teacher ethnicity. The hypothesis that greater numbers of CLD students would avoid referral to special education for either academic or adaptive behavior concerns if there were more CLD teachers cannot be confirmed by the research discussed above.

Research in the last decade. Research methodology has improved significantly during the last decade. Researchers not only measured several variables to determine the presence of bias, but also determined similarities and differences between teacher racial groups. In addition to studies of referral rates, researchers have now begun to assess the impact of teacher race on student academic performance, in particular, the effects that teachers from underrepresented backgrounds have on students and families from both same and different racial and ethnic backgrounds. There were no studies conducted specifically on special education teachers and students. Eleven studies of general education teachers and students are discussed in greater detail below.[4]

Two studies (Feng & Cartledge, 1996; Powless & Elliott, 1993) researched the social ratings given by teachers to students from different racial backgrounds. Powless & Elliott (1993) used the SSRS-T and SSRS-P to assess the social skills of Native American and White preschoolers from Head Start classrooms. Native American teachers and parents rated the Native American students lower in all areas except Interfering Behaviors. Similar to previous studies, there was a low correlation between the White parent and teacher ratings; however, Native American parent and teacher ratings showed moderate agreement. The authors hypothesized that the teachers and the parents, coming from the same small community, shared cultural commonalities and traditional values that were reflected in their student ratings. Further evidence was provided that the social skills rated were not necessarily skills valued or used in the Native American community. Feng & Cartledge (1996) had similar findings in their study of SSRS-T and SSRS-S ratings of Asian American, African American, and European American 5th graders. The most significant differences were between Asian American and African American teacher and student ratings. African Americans, although rated higher by their peers than their European American classmates, gave themselves the lowest ratings of the three groups, while giving out the highest ratings as a group. Feng and Cartledge hypothesized that African American students' low self-reports reflected their comfort levels in the classroom.

Bahr and his colleagues (1991) asked general education teachers (70% White and 30% Black) to identify a non-handicapped child as a difficult-to-teach (DTT) student who was also at risk for referral and special education placement. Information was gathered via teacher interviews, teacher ratings of students through informal behavior rating scales, the Revised Behavior Problem Checklist (RBPC), two individually administered subtests of the Woodcock Reading Master Tests, and two 20-minute classroom observations for each DTT student to observe target

[4] A recent RAND study, Klein, Le, and Hamilton (2001) was excluded from this synthesis because it is still in unrestricted draft format and has not yet been formally reviewed or edited.

behaviors. Results showed that Black and White teachers rated Black DTT students as significantly more appropriate for referral to special education than White students. Teacher ratings of student behavior did not distinguish differences between groups. Classroom observations confirmed DTT students target behaviors were equally discrepant from their non-referred classmates. The evidence suggested that the higher rate of "appropriate for referral" ratings was due to poorer academic achievement (substantiated by the Woodcock scores), which was significantly lower for Blacks than for Whites.

Ehrenberg et al. (1995) analyzed data from the National Educational Longitudinal Study (NELS) to determine the impact of teacher's race, gender, and ethnicity on student outcomes. During the initial NELS survey in 1988, data were gathered from 24,599 8th-grade students, their teachers, school administrators, and parents. The tests included academic achievement tests and teacher surveys in two subject areas. A second survey was conducted with the same students in the 10th grade in 1990 (18,221 students with attrition). The researchers concluded overall that these variables did not play an important role in student academic gains: subject areas (e.g., history, reading, math, science); student types (e.g., Black females, Hispanic males); and teachers' race, gender, or ethnicity (RGE). However, a few statistically significant relationships were found. In comparison to White male teachers, Black male teachers were associated with higher gain scores in history for Black and White male and White female students, but lower reading scores for Hispanic male students. Black female teachers were associated with lower reading and history gain scores for Hispanic male students but with higher science gain scores for Hispanic females.

Additionally, teachers' RGE was a significant determinant of their subjective evaluations of students (e.g., yes/no questions about expectations of college attendance, student as hard worker). For example, Black male teachers gave higher subjective evaluations to Black male students in science and reading and to Black female students in math and science than their White male teacher counterparts. Hispanic male and female teachers gave higher subjective evaluations than White male teachers to male and female Hispanic math students.

MacMillan, Gresham, Lopez, & Bocian (1996) monitored children nominated to Student Study Teams (SST) for pre-referral interventions. Students were assessed using the Wechsler Intelligence Scale for Children-III (WISC-III) and the Wide Range Achievement Test-Revised (WRAT-R). A School Archival Record Search was conducted for each student. Teachers completed the Social Skills Rating System-Teacher (SSRS-T), the Conners Teacher Rating Scale-28 (CTRS-28), and the Critical Events Index (CEI) for each student. The results did not reveal a significant interaction between gender and ethnicity on any of the dependent variables. Moreover, referred students performed significantly lower in reading than their peers (approximately 2 standard deviations below the mean), and referred Black and Hispanic students scored significantly lower than their White referred peers. Significant differences were found between Black and Hispanic students on the CTRS-28; Black students scored significantly higher on both the conduct problem and hyperactivity subscales. The authors suggested that teachers may be hesitant to refer Black and Hispanic students due to an increased sensitivity to multicultural issues, so those students must exhibit substantially lower academic skills in order to be referred. One weakness of this study was that the ethnicity of the referring teachers and students was not matched.

In another study of teacher referrals, Andrews, Wisniewski, & Mulick (1997) investigated variables that influenced teachers' decisions to refer children. Analyzing students referred for developmental handicap (DH) or severe behavior handicap (SBH), they found that African Americans had significantly higher referral rates than Caucasian Americans. An interesting finding was that students who were taller or heavier than average were also referred at significantly higher rates, leading credence to the authors' argument that teachers cannot be used as "valid tests" of student academic achievement.

In a study reminiscent of those performed in the mid-1980s, Casteel (1998) examined the classroom interactions of 16 Caucasian American female teachers and 417 African American and Caucasian American students to determine if racial bias still affected teacher/student interactions. As in previous studies, Casteel found that African American students were the recipients of more negative interactions from teachers than their Caucasian American peers. The Caucasian American students received more praise and positive feedback and were given more clues for answers to questions. Similar to the earlier teacher interaction studies, minority teachers were absent from this study; therefore, differences in interactions with minority students could not be evaluated. One contribution of this study is in revealing that biases still appear among Caucasian American teachers. This is a decade after previous studies showed teacher biases in student interactions and led to an increased awareness of bias in the field.

Dee (2001) evaluated student test score data from the Tennessee Project STAR class-size experiment on 11,600 students to investigate the effects of teacher and student race on student achievement. The original intent of the study was to determine the effects of class-size on student achievement. Dee found that a one-year assignment to a teacher of the same race significantly increased both math and reading achievement by Black and White students. Assignment to an own-race teacher was associated for math scores with a 4-5 percentile increase by White students and a 3-5 percentile increase by Black students and for reading with a 4 percentile increase by White males and a 3-6 percentile increase by Black males and females.

The National Academy of Sciences recently released a report (Donovan & Cross, 2002) written by the Division of Behavioral and Social Sciences and Education Committee on Minority Representation in Special Education. The comprehensive, congressionally mandated study of minority children in special education and gifted and talented programs included influences on cognitive and behavioral development, early intervention programs, general education factors, the legal context of special education and its referral process, and alternative approaches to assessment. The report acknowledged the role of general education teachers in the special education process, particularly as the primary source of referral, and made recommendations for general education and state and federal policy. After a comprehensive review of studies investigating referral of historically underrepresented populations of students, the committee wrote the following:

> The available evidence suggests that referrals occur because of significant problems with school achievement, often complicated by social skills and behavior difficulties in the classroom. There is no evidence to support the idea that some of the children referred to special education are normal achievers who have no classroom learning or behavior problems. (pp. 6-17).

The report had excellent summaries and recommendations regarding assessment and other factors typically included in disproportionality discussions. Due to the primary focus of this paper on diversity in the workforce, those issues are not summarized here.

Hosp & Reschly (in press) conducted a meta-analysis of 10 studies that examined the referral rates for intervention (i.e., pre-referral intervention) or assessment of Caucasian, African American and Hispanic students. The study focused specifically on the number of students referred relative to the school population. The results of this meta-analysis indicated that referral rates for different racial groups vary significantly. When compared to referral rates for Caucasian students, the referral rates for African American and Hispanic students were not significantly influenced by which racial group was predominant in the school population. However, a significant discrepancy in referral rates of African American and Caucasian students was determined in analysis of the overall effect, and referral rates for Hispanic and Caucasian students were found to be similar. As the authors noted, so few research studies included population data in their reports that definite answers to discrepant referral rates could not be obtained. Most of the effect sizes used were derived from one specific study within the ten studies included. As a result, the authors also noted that a larger and more diverse set of studies would be required to make appropriate comparisons if other factors accounted for some of the variability among the effect sizes.

In a 3-year ethnographic study of overrepresentation issues in the Miami Dade County Public Schools, Harry, Klingner, & Sturges (2002) found that the greatest bias in minority student outcomes was institutional in nature, a result of policies and practices loaded against poor schools. Intensive case studies of 12 students (including 272 open-ended individual interviews with students, parents, and school and district personnel; 84 informal conversations; 627 classroom observations; 42 child study team meetings; 5 psychological evaluations; 29 IEP or other meetings) revealed no evident pattern of over- or under-referrals according to teacher ethnicity.

In summary, there seems to be consensus among researchers that there is a significant effect of the race or ethnicity of students whom teachers determine are difficult to teach or who require additional support, with students of color included at higher proportions. However, researchers also concur that students from diverse backgrounds in these groups have substantially lower academic functioning than their peers. This could account for the higher rates of referral. A discussion of the low academic achievement of students of color is included later in this paper. Teacher ratings of behavior also vary by racial group, with ratings of CLD students lower than their non-minority peers. The only two studies to investigate the impact of teacher race/ethnicity on student outcomes had conflicting results.

Summary and Recommendations

Reasons of equity. The arguments for diversity based on equity are that it is "the right thing to do," that certain groups formerly excluded should be included, and that teachers should reflect the diversity of the students. There has been no empirical research conducted in this area. Because this topic is somewhat theoretical and not easily addressed empirically, questions are posed here that may be answered in the future. What level of diversity is considered appropriate? Should teachers reflect the national, regional, state, or local diversity proportions? It is easier for teachers in Los Angeles or Miami to reflect the diversity of the local community as well as the nation; however, not all communities are so diverse.

Is it problematic for students in an all-White community in a rural area to have all European American teachers? Is it appropriate for students from the Navajo Nation to have all Navajo teachers? What if the small, rural community were able to diversify 30% of its teaching staff to match the national demographics, but that meant it would have to find seven CLD teachers willing to move into an otherwise European American community? Would these teachers experience social isolation in this community? Issues of discomfort, intercultural communication, and cultural competence would surely need to be addressed for teachers, students, and the community as a whole. Some would say that the diversity of the teaching force should mirror the community and that non-minority teachers would not be necessary in this case. Others would argue that these students would then grow up culturally ignorant and subsequently deprived, possibly without the ability to function effectively in a more diverse world as adults. Research regarding issues of equity should be conducted in the future.

Reduction of disproportionate representation in special education. Research results in this area are inconclusive. Although research has shown conclusively that CLD students are overrepresented in both referrals and placements in particular categories within special education, the research also consistently shows that these referred students have significantly lower academic skills, validating the accuracy of teacher referrals for academic reasons. However, it must not be assumed that low academic achievement necessarily correlates with disability, and further attention to the underachievement of students of color is warranted. The research shows that White teacher ratings of adaptive behavior vary across racial/ethnic student groups with lower ratings given to Hispanic and African American children. Teacher ratings also show low correlations with parent ratings, reinforcing the need to obtain and consider multiple sources of information in referral decisions, particularly when parent ratings indicate the behaviors are not as highly valued or as necessary in the home culture as in the school. The findings on teacher perceptions are especially troubling in light of recent research showing that minority students are particularly vulnerable to negative perceptions and self-fulfilling prophecies, which result in decreased academic success (Jussim, Eccles, & Madon, 1996). Furthermore, although the role of the CLD teacher as a community liaison has been consistently included in the literature as a benefit of diversity, current research challenges this claim. Harry, Allen, & McLaughlin (1995) found that while CLD teachers expressed sympathy and concern for the families of their students, they put forth little effort to increase their involvement or understanding of the special education process. Harry et al. (2002) discovered that perceptions of CLD families were often based on factors such as family history or negative assumptions regardless of the teachers' ethnicity. Finally, research on the perceptions of

minority teachers and their rates of referral for CLD students is almost nonexistent. Further research is needed to assess CLD teachers' perceptions of behavior and academic ability and to compare referrals of CLD students and majority counterparts to evaluate any subsequent effects on disproportionality.

Student achievement. Findings in this area are mixed. Studies of teacher classroom behaviors show definite bias in interactions with CLD students, yet findings of own-race teacher and student outcomes are contradictory. Although specific teacher behaviors (i.e., amount of positive reinforcement, questioning techniques) have been shown to lead to better student outcomes, we assume that the absence of these behaviors has a deleterious effect on student learning. There is ample evidence that European American teachers in general education have markedly different teaching and interactional styles with students of color, yet there are no comparison data in those same studies to show that the teaching of CLD teachers is any different. In fact, dated research by Jackson & Cosca (1974) showed that CLD teachers were more biased in their interactions.

Studies have shown that own-race teachers both do and do not have a positive impact on student learning. Several of these studies were not conducted solely for the purpose of determining the impact of teacher/student race on academic outcomes, but analyzed data sets collected for other purposes (e.g., class size effects or national longitudinal data). Due to the nature of the work, a variety of research methodologies are needed. Quantitative data are necessary to provide definitive answers to student achievement questions, but qualitative data are also necessary to determine if many of the widely publicized benefits of a diverse workforce (e.g., increased student comfort levels, availability of role models) are, in fact, accurate. Finally, all of the studies on own-race teachers and students focused on general education teachers and students. There are no empirical studies that assess the impact of CLD teachers on students from both similar and other backgrounds in special education. Specifically designed research is needed: (a) to determine the short- and long-term effects of teacher race on behavioral and academic outcome, (b) to evaluate effects on students with disabilities from all races, and (3) to separate the impact of teacher race from culturally relevant instructional practices.

TEACHER PREPARATION PROGRAMS

> "Teaching is the essential profession, the one that makes all other professions possible," according to David Hazelkorn, president of Recruiting New Teachers. (Haselkorn, 1997.)

The majority of teachers in the workforce are trained within the infrastructure of 4-year colleges and universities. This section of the paper synthesizes the training of CLD students in these settings. Since researched-based studies are not available, the review primarily contains information from program descriptions of federally and privately funded projects whose goals were to support students of color in special education teacher training (Dandy, 1998; Fenwick, 2001; Guillory, 2000; McCarty & Gallegos, 2000; Michael-Bandele, 1993; Monteith, 2000; Nettles & Perna; 1997; Villegas & Clewell, 1998; Wald, 1998; Wright-Harp & Muñoz, 2000). ERIC and PsycINFO searches were conducted using key terms (e.g., minority teacher training, special education teacher training, minority student teaching, alternative certification). Also included were internet searches, reference lists from published articles, and documents from the Alliance Project Product List (a federally funded technical assistance project with the primary objective of increasing personnel preparation funding for special education programs at minority institutions of higher education).

Factors that reduce the number of people of color entering the teaching workforce are discussed first and followed by recruitment strategies. Strategies are provided in five main areas: curriculum support, funding and interpersonal support, multisystem support, and alternative certification. (These empirically based studies on students of color within the university system do not include specific data on special education majors.) The intention is to use the extant data in ways that may increase the supply of people of color to the special education field. Finally, future research suggestions are given.

Challenges to Entering the Workforce

Poverty. Over 80% of people living in poverty are from ethnically diverse backgrounds (U.S. Census Bureau, 1999). The relationship between a parent's education/income level and student achievement is well documented (Kaiser, Hancock, Cai, Foster, & Hester, 2000; Nettles & Perna, 1997). For many children, living in poverty adversely affects education, precludes entry into academia, and subsequently limits the pool of ethnic and racial minority people available to institutions of higher education (Hill et al., 1993). College enrollments and graduation rates for CLD students have increased over the last decade; however, their representation in institutions of higher education remains below the percentage of the general population (Nettles & Perna, 1997; Wilds, 2000).

Su (1996) stated that students of color reported a lack of financial assistance as a major deterrent to entrance into teacher education programs. Poor African Americans, Hispanics and other ethnic minority high school graduates who are encouraged to continue their education rely heavily on federal assistance to support themselves through college (Hill et al., 1993). Since the federal support for colleges has shifted from grants to loans (Pitsch, 1991; Nettles & Perna,

1997), higher tuition costs coupled with fewer available grants have perpetuated the lack of opportunity for minority students who want a college education and reduced the pool of available minority teachers (Hill et al., 1993) in the field of special education.

About half of ethnically diverse students who continue their higher education do so within the walls of community colleges. This method is less expensive, admissions standards are attainable, and larger numbers of same-race and ethnic groups are visible, leading to a more supportive atmosphere. Only half of this group will transfer to 4-year institutions and receive baccalaureate degrees. Transfers to 4-year institutions are declining, with the highest decline occurring among minority students (Rendon & Nora, 1989), in part due to financial considerations.

Poor academic preparation. Our nation's neediest communities—those with high rates of poverty and often large minority populations—suffer most from shortages of qualified teachers. Although wealthy suburban districts often have a flood of applicants for every job opening, many urban and disadvantaged rural districts find it difficult to attract and retain qualified teachers (U.S. Department of Education, 1996). Faced with shortages of qualified teachers, these high poverty communities often hire teachers with minimal qualifications (Artiles et al., 2002; Riley, 1998).

Although not specific to students of color or special education, students attending predominantly minority schools and/or high poverty schools are: (a) five times more likely to be taught by inexperienced teachers (those with 0-3 years of classroom teaching), (b) more likely to be taught by teachers who are not certified in the subjects they teach, (c) more likely to be taught by teachers who do not hold a college major or minor in the subjects they teach, (d) more likely to be taught by teachers who do not encourage them "to do their best" or "to do homework," and (5) ten times more likely to be taught by teachers who do not respond to the individual needs of the student (National Center for Educational Statistics, 1991).

As early as elementary school, self-fulfilling prophecies, tracking, and other environmental factors reduce the number of potential special education student-teachers who are CLD. Many of the poor begin in urban elementary schools. If their education continues, they are often enrolled in secondary schools where they are assigned to low-level, non-college preparatory courses and often overrepresented in special education classes (Hill et al., 1993). Reduced educational expectations negatively impact aspirations of continuing postsecondary education, thus perpetuating the cycle of poverty and its debilitating effects (Baca & Cervantes, 1989). Addressing the declining number of teachers of color requires consideration of the effects of inadequate education on the academic preparation of students of color. When students of color are not adequately prepared in the elementary and/or secondary grades, they are less likely to attend college (Michael-Bandele, 1993).

Test requirements. Another challenge students of color encounter before entering the walls of academia is poor performance on entrance examinations. As Table 2 indicates, African Americans continue to achieve lower scores than their White peers across the entire range of college admission testing programs. Some colleges and universities have initiated alternative entry requirements, but with mixed results. For example, the University of Wisconsin agreed to

provide full-time tuition to all graduating high school students of color who wanted to become teachers and who held at least a 2.0 grade point average. Reflecting the earlier discussion on poor academic preparation, less than 13% of the students of color had grade point averages higher than 2.0 (Haberman, 1989). Some institutions have admitted older students (i.e., school paraprofessionals) under a "fresh start" policy. This policy allowed returning students to drop low grades during the first and second years of their first college matriculation (Fenwick, 2001).

Table 2: Comparisons of ACT and SAT Scores by Race and Ethnicity

	SAT (of 1,600)	ACT (of 36)
Asian American	1,056	21.7
White American	1,052	21.7
American Indian	950	19.0
Hispanic American	934	19.0
Mexican American	909	18.8
Puerto Rican	901	-
African American	857	17.1

[Selingo & Fiore, 1997]

The same challenges are present in admission to graduate programs. African Americans are denied admission to graduate school at higher rates than Whites (20% vs. 11.5%) (Nettles & Perna, 1997), often due to low GRE scores. Smith (as cited in Bell & Morsink, 1986) stated that in programs that require a GRE score of 1,000 as the minimum baseline necessary for entrance into graduate school, the average score of Black students applying would not be adequate for admission.

Certification exams also impact the special education pipeline. Smith (as cited in Michael-Bandele, 1993) reported that disproportionate numbers of prospective teachers of color were screened from the profession. Teacher testing results for 19 states estimate that examinations, such as National Teachers Examination (NTE) and the Pre-Professional Skills Test (PPST), have eliminated at least 37,717 prospective candidates and teachers of color. In Louisiana, the pass rate for prospective African American teachers is 15% and for White teachers is 78%. In Georgia, 87% of White prospective teachers pass the exam, yet only 34% of the Black graduates pass. It is reasonable to suspect that many students of color interested in the teaching profession are deterred as a result of the failure rate (Michael-Bandele, 1993).

Recruitment

Our earlier discussion illustrated that students from low-income backgrounds have additional academic challenges that prevent them from entering higher education or from doing well once they are enrolled. However, middle- and upper-income students from CLD backgrounds would be less likely to face these same academic challenges and would thus be prime candidates for recruitment into teacher education programs. Yet, Cartledge, Gardner, & Tillman (1995) report there is less enthusiasm for teaching among middle-income African American families today, even among teachers themselves.

Garibaldi (as cited in Ford, Grantham, & Harris, 1997) found that 20% of minority teachers reported they would envision their daughters teaching and that only 16% envisioned teaching as a career for their sons. Su (1996) investigated the reasons that students from various racial and ethnic backgrounds chose to enter the teaching profession. White students reported that their parents were supportive of their decision to embark on an education career. In contrast, the students of color experienced strong resistance or outright protest from family members and friends, reporting that family expectations were for more lucrative and prestigious careers. Indeed, as the benefits of diversity have become increasingly appreciated by other professions (Mangan, 2002), CLD students are aggressively recruited by disciplines that are considered more prestigious and offer greater financial incentives (Dilworth, 1990; Ford et al., 1997). These aggressive recruitment programs have been successful; a teaching career is viewed less favorably than other professions (King, 1993). Despite the increase in high school graduation rates for CLD students, most are not choosing education as a college major (Wald, 1996). Evidence from the American Council on Education (Wilds, 2000) verifies this trend. Nearly 20% of all bachelors degrees awarded in 1997 were earned by CLD individuals. However, individuals from minority backgrounds earned only 13.5% of all education degrees that year, compared to 20.7% of all degrees in business, 21.9% in the social sciences, 17.3% in the health professions, 25.2% in the biological and life sciences, and 21.6% in engineering.

Potential candidates. Historically, teachers from minority backgrounds were often the first members of their families to graduate from college (National Education Association, 1997). They became teachers because they held a special belief in education as the greatest factor in improving their quality of life (Nettles & Perna, 1997). They frequently began thinking seriously about going to college as early as 8th grade.

Su (1996) found that White students reported fewer obstacles than students of color prior to their acceptance into the educational program. As a result of career counseling, White students were able to obtain more information about teacher education programs, were given more contacts, and had an easier time communicating with teachers and professors. The same opportunities must be made available for CLD students. Several methods for recruiting students early, when their initial interest is strong, have been developed. Fenwick (2001) described a residential summer program designed to prepare 11th - and 12th-grade students from the Future Teachers Club for college success and to introduce them to college teacher education programs[MSOffice1]. Students enrolled in a core of enrichment courses in math, language arts, and computer literacy along with content and methodology courses in teacher education. Organizations such as the Future Teachers Club also target middle school and high school

students (Fenwick, 2001). High school student members of these organizations serve as tutors in after-school programs in elementary schools and Saturday programs, thus encouraging their interest in the teaching profession.

Recruitment strategies. Faculty have documented that the best method for recruiting minority students into teaching special education is by word-of-mouth, often with the help of colleagues and other professionals (Guillory, 2000; Wright-Harp & Muñoz, 2000). Armstrong, James, & Stallings (1995) reported that campus visits for students and parents, a toll-free phone number, exposure to college of education programs, faculty and local educators of color, and a 1-year scholarship of $1,000 dependent upon the student's admission to the university have been successful practices for recruiting education majors from diverse backgrounds.

Other effective recruiting methods included using students of color within existing programs as recruiters (Dillard, 1994); media campaigns directed to potential students from specific geographic areas and specific groups, such as retired military and paraprofessionals (Whitworth, 2000), publishing success stories highlighting minority graduates as part of recruitment literature for recruiting minority students (Alliance Project, 1998); and using professional recruitment videos, brochures, and posters on special education. Speakers Bureaus made up of college students, faculty, special education teachers, support personnel, and parents of children with disabilities have been developed for middle and high school students as a recruiting technique. High school courses were offered for college credit to high school seniors as a means of piquing an initial interest in college attendance. Other means included: (a) passes/tickets to college activities and resources such as computer lab usage and student union access; (b) invitations to students enrolled in 2-year institutions for organized activities on 4-year campuses (Alliance Project, 1998; Wright-Harp & Muñoz, 2000); (c) special invitations to sports and cultural events; (d) promotion of campus features, such as minority student associations; and (e) curricula that reflect diversity (Alliance Project, 1998; Guillory, 2000; Villegas & Clewell, 1998; Whitworth, 2000).

Curriculum Considerations

Academic support. A study by Zea, Reisen, Beil, & Caplan (1997) found a significant relationship between remaining in the university and academic success for students of color. This same relationship was not found when testing the impact of academic success and commitment to the university for the White sample in the study. Strategies used to assist students in special education teaching programs include study skills seminars, assistantships, student advising and tutorial programs, student monitoring, special labs, study and test-taking workshops, social support, family supports, professional experiences, and supportive faculty (Armstrong et al., 1995; Dandy, 1998; Francis, Kelly, & Bell, 1993; Good, Halpin, & Halpin, 2000; Trent & Artiles, 1998; Villegas & Clewell, 1998; Wright-Harp & Muñoz, 2000; Zea et al., 1997). Support can be provided through study sessions, assistance with assignments, and library and computer use (Guillory, 2000). Sileo (2000) suggests the need to support and assist students in setting and attaining goals during academic preparation. Campus climate and classroom environment are important variables to student's subject matter mastery and goal attainment.

Programs may include language-related issues in teacher preparation, culturally sensitive instructional strategies, and assessment of student learning (Dillard, 1994; Francis et al., 1993; Sileo, 2000).

Assessment of reading and writing skills as well as English language proficiency is provided by the SEEK program at the City University of New York (CUNY) system (Francis et al., 1993). Students are provided with extensive help in reading and writing in programs that include low student-teacher ratio and group counseling. College outcomes literature reports that when students expend effort in multiple areas (e.g., interactions with peers and faculty, time in the library, and writing), they are more likely to exhibit gains in multiple areas (e.g., reading comprehension, completion of assignments, creating compositions).

Similar to research-proven practices espoused for all learners, pedagogical instructional strategies should be utilized for diverse students in institutions of higher education. Instruction must be delivered in ways that are familiar to students of color (Dillard, 1994). Instruction should include a variety of learning activities such as learning journals (Dillard, 1994), videotapes and peer-assisted reflection, service learning activities, role plays, opinion maps, story-boarding, concept-mapping, and cooperative learning activities (Sileo, 2000). Increased use of technology within course content and alternative assessment practices are additional methods important to use for retaining diverse students for special education training (Guillory, 2000; Sileo, 2000). Lewis (as cited in Sileo, 2000) reported the use of alternative methods of assessment, such as performance-based assessment.

Non-traditional courses. To meet the needs of non-traditional students, course offerings have been restructured, expanded, and offered as weekly seminars and/or evening or weekend modules, often located at local school district sites. Innovative graduate programs include courses from multiple disciplines, such as bilingual education, ESL, special education, and bilingual multicultural education (McCarty & Gallegos, 2000). Moving coursework to geographic areas where there are many potential recruits and using distance learning technologies and/or direct outreach by faculty members is frequently necessary. Some programs have included student participation in planning and hosting brown bag sessions to supplement classes that are relevant to the course curriculum (Wright-Harp & Muñoz, 2000).

Materials. Instructional recommendations for teaching young CLD students include using textbooks and instructional materials that represent a wide range of diversity (Prater, Sileo, & Sileo, 1997). These recommendations are valid for diverse adult learners as well. Texts should include politically correct language, portray positive images of diverse cultural groups, and acknowledge their contributions to society (Sileo, 2000). Textbooks and instructional materials should be free of bias such as "invisibility" of specific people of color, use of stereotyping roles, and linguistic bias, such as use of masculine pronouns or names from European American groups (Hunt & Marshall, 1994).

Test preparation. Because of the differences in test-taking processes of diverse learners, explicit instruction in test-taking skills has been used to increase student recruitment and retention in the educational pipeline. Courses have provided practice with associative learning (e.g., recall, practice, drill) and problem solving (e.g., searching for a pattern, investigating the

data, drawing conclusions) (McPhail, 1981). Educational Testing Service (ETS) has developed programs for test-taking and contends that this assistance should be viewed as tutoring, a long-term structured program for test preparation (Bell & Morsink, 1986).

Preparation for college entrance exams is created through special college-transition programs (Alliance Project, 1998). Programs that enable prospective teachers to analyze graphic information and develop strategies for higher-level cognitive skills have assisted students of color from low Social Economic Status (SES) backgrounds in meeting admissions criteria (Bell & Morsink, 1986). Of the 230 applicants recruited into the Pathways to Teaching Careers Program (the largest, privately supported teacher recruitment effort in the United States) at Armstrong Atlantic State University (AASU), only 36% met admissions criteria. However, retention rates were between 76% and 81%. As a result of their efforts, program directors recommended that universities should not judge candidates solely on academic variables but also consider prior experience in schools, level of commitment to teaching, administrators' recommendations, and other non-cognitive variables.

Almost every state reports glaring racial disparities in teacher licensure exam pass rates. Fenwick (2001) recommends statewide strategies be developed for eliminating racial disparities in pass rates on teacher licensure exams. The Pathways program integrated preparations for the state licensure examination early in the teacher preparation program. Pathways students at HBCUs scored higher on state certification tests than regular students at these college and universities. Fenwick (2001) reports that a combination of early exposure to course material that is aligned with NCATE standards and the licensure exam, accessible and dependable support, and a state certification test preparation course will increase student performance on the certification tests.

Fenwick (2001) also recommends that leaders at colleges and universities mandate an institutional plan aimed at increasing teacher certification success. An increase in teacher success can have a cyclical effect, thus improving the quality of instruction at the K-12 level to yield a greater pool of college-bound students of color. Another recommendation is for the U. S. Department of Education to provide incentives to state teacher certification agencies to explore and adopt new assessment procedures of basic teaching skills and subject matter competencies. Partnerships should be created with the National Education Association (NEA), American Association of Colleges for Teacher Education (AACTE), and other national associations to create special task forces. These task forces would work with testing companies, state certification agencies, and Institutions of Higher Education (IHEs), especially Historically Black Colleges and Universities (HBCUs) and the Hispanic Association of Colleges and Universities (HACU), to develop goals. Research could be conducted to redefine teacher competency assessment in ways that do not create disparities among students of color.

Field-based experience. Practical teacher experience in diverse communities should be included in teacher preparation programs. Morris, Taylor, Knight, & Wasson (as cited in Sileo, 2000) suggest that hands-on interaction between future teachers and culturally diverse students would provide opportunities for teachers to learn about particular needs of ethnically diverse students (Michael-Bandele, 1993), parents, and other family members in contrast to simply studying diverse groups. Field-based activities should include designing and implementing a

culturally responsive and developmentally appropriate curriculum and instructional activities (Sileo, 2000). An array of professional experiences throughout the program would provide important training and might include: (a) presentations during a professional conference, (b) participation on planning committees for professional workshops, (c) participation in career seminars or training workshops, (d) resume preparation, and (e) practice in interviewing skills (Dillard, 1994; McCarty & Gallegos, 2000; Guillory, 2000).

Funding

Tuition assistance. Because cost is a limiting factor in the recruitment of diverse individuals into the special education teaching field, most faculty members understand the critical importance of obtaining Office of Special Education Programs (OSEP) teacher training grants in order to provide tuition assistance for these students. To alleviate the financial challenges of a college education, financial support such as fellowships or stipends (often funded by these grants) are helpful (Alliance Project, 1998). In an attempt to increase the diversity of the workforce, OSEP has added competitive points to proposals for CLD teacher training. However, OSEP has also created service obligation provisions that require students who receive federal assistance to work two years within special education for every year of tuition received during the course of study. No data have yet been collected on the impact this will have on the recruitment and retention of students of color.

Student teaching wages. Many students enrolled in teacher training programs cannot afford to forfeit salaries and benefits for an extended period of time, specifically during the student teaching period, which often lasts from 6-16 weeks. Fenwick (2001) recommends that colleges/universities and school districts work together to change the typical student teaching constraints. For example, students may complete student teaching requirements as paid interns or paid student teachers. Consequently, students are able to keep their income and job benefits, e.g., health insurance.

Contingency fund. The Pathways program developed an emergency fund to cover reasonable student financial emergencies. Funds disbursed were based on the discretion of the project directors. This pool of funds prevented the derailment of students' education due to financial circumstances (Fenwick, 2001).

Interpersonal Support

Faculty of color. The active recruitment of faculty of color and faculty with more varied cultural experience to provide role models for students of color (Dillard, 1994) has been suggested as a recruitment strategy (Jordan-Irvine, 1992). Blackwell (1984) reported the most persistent and statistically significant predictor of enrollment and graduation of Black graduates is the presence of Black faculty. The presence of faculty of color may increase research on students of color, increase the number of scholars of color in the field, have a significant impact on policy and programs that enhance the achievement of students of color, and validate the school systems' own commitment to diversify (Frierson, 1991). Diverse faculty provide students with diverse educational experiences (Sileo, 2000). Although there are currently no data to indicate the impact of diverse faculty on special education teacher preparation, this strategy has

remained a top priority for colleges/universities for multiple reasons, including attempts to increase the numbers of diverse special education majors.

Mentors. Related to the issue of CLD faculty is the associated impact of mentors. Numerous universities and colleges have instituted various mentorship programs where students of color study with professors who share a common interest (Fenwick, 2001). Opportunities are created for special education trainees to work collaboratively on projects with faculty members. This allows students to expand their individual interests and ideas under the tutelage of their mentor professors (Guillory, 2000; Wright-Harp & Muñoz, 2000). Faculty mentors also monitor students with low grades to identify steps for improvement (Armstrong et al., 1995; Dandy, 1998). Mentoring both doctoral and Master's degree students is considered to be effective in retaining students from culturally diverse backgrounds (Guillory, 2000; Wright-Harp & Muñoz, 2000). Current research, however, provides little information regarding what instructional components should be included in a mentoring program, how much assistance is needed, and what the content of that assistance should include (Huling-Austin, 1986; Little, 1990).

Perhaps departments of special education can build on the work of other fields. Good and her colleagues (2000) studied the academic and interpersonal gains experienced by upperclass mentors in an engineering program for students of color. The mentors acted as tutors, advised freshmen mentees about problems related to their course of study, participated in study sessions, and interacted in social events. The mentors were required to keep journals to record their comments on their own personal and academic development. Grade point averages and retention rates were analyzed. The mentoring impacted students by providing academic assistance to the mentees and unintentional academic assistance to the mentors. Conclusive results cannot be determined since no comparison group was used. However, GPA and retention rates increased for the mentors immediately upon completion of the initial mentoring school quarter.

Student mentors selected as project assistants act as liaisons or mentors for undergraduate students and meet regularly during the academic year. Graduate students are able to respond to undergraduate inquiries, share knowledge and skills, and monitor the undergraduates' progress (Guillory, 2000). Mentors can also be veteran or retired teachers who volunteer to work with teachers in training. Mentors from the Pathways project acted as career coaches and provided assistance with school-related and personal concerns. For many students in the Pathways program, their mentor was the most vital link in the Pathways support system (Fenwick, 2001).

Social and family support. An often-cited retention element is the use of student cohorts who proceed through the special education programs together and develop close contacts and relationships (Alliance Project, 1998; Dillard, 1994; Fenwick, 2001; Monteith, 2000; Trent & Artiles, 1998). Informal interactions with peers are associated with gains in personal and social development and also contribute to gains in general intellectual skills (MacKay & Kuh, 1994). Attention to internal and external factors that influence students' access to learning should be emphasized (Trent & Artiles, 1998). Wright-Harp & Muñoz (2000) identified counseling as a means of effective support.

Many adult learners find it impossible to complete their coursework without sufficient understanding and support from spouse and other family members (Fenwick, 2001). Formal

orientation sessions held several times a year help students, spouses, and family members understand the importance of increasing the diversity of the teaching workforce and the rigors and requirements of college study (Dillard, 1994; Fenwick, 2001). Students and families from the Pathways project attended social hours, picnics, and other gatherings, learning about the program, how to communicate with one another, and how to cope with the stresses of returning to college.

Multisystems Support

Institutional resources. In a study by Bohr, Pascarella, Nora, & Terenzini (1995), African American students who attended predominantly White institutions of higher education experienced significantly greater levels of social isolation, personal dissatisfaction, and alienation than their African American counterparts at HBCUs. Adan & Felner (1995) studied African American family background characteristics and adjustment following the transition to college. For African American students who attended a predominantly Black university, less prior exposure to Whites and greater enmeshment in the African American community was associated with better adjustment to college. In contrast, for African American students attending predominantly White universities, more interracial experiences were associated with better adjustment to college. MacKay & Kuh (1994) found that African American students at predominantly White institutions who are encouraged to take advantage of institutional resources to further their learning and personal development are able to successfully negotiate obstacles and benefit in ways similar to their White counterparts. Caution is suggested in generalizing these findings to other institutional contexts, because the colleges and universities in this study had specific mission statements and culture policies that included diverse student learning and personal development goals as institutional priorities (McKay & Kuh, 1994). Gloria, Kurpius, Hamilton, & Willson's study (1999) found that higher levels of social support, more comfort in the university environment, and positive self-beliefs were associated with academic persistence by African American undergraduate students in a predominantly White university.

Minority institutions. Despite the challenges students from diverse backgrounds have faced, HBCUs have traditionally accepted students who did not always fit the typical college student profile. These students have successfully graduated and gone on to assume significant professional responsibilities in the educational community (Fenwick, 2001). Other colleges and universities with high enrollments of Hispanic/Latino, Asian, or Native American education majors should also be tapped as a resource. Fenwick (2001) recommends that these minority-serving institutions should receive expansion grants to support promising programs, as well as seed grants to foster the development of new teacher pipeline initiatives.

Collaboration. Various programs have documented that the collaboration between colleges, universities, and school districts is an important component of successful recruitment for students of color in special education. Coordination with agencies, school districts, community colleges, 4-year colleges, and community-based organizations assists in recruitment, retention, placement, and follow-up support services for students from CLD backgrounds (Hill et al., 1993). Cooperative research internship programs between community colleges and 4-year institutions have included transition support, assistance with registration, and student advising. Cross-registration between university programs has provided an expanded range of course

offerings available to students (Fenwick, 2001). Goodwin (2001) reports that students enhance their coursework when collaboration exists between programs. It encourages them to explore critical education issues by visiting schools, talking with teachers, school administrators, and education policy-makers while exploring different career paths in education. Fenwick (2001) reported that collaboration: (a) increased support (university and school district) during internships for pre-service teachers during their regular preparation programs; (b) increased job opportunities for teacher graduates; and (c) provided better grounding of teacher preparation programs in the realities of contemporary K-12 teaching. School districts viewed university collaboration positively, because it provided professional development and career ascension opportunities for staff, resolved critical teacher shortages, and diversified their teacher workforce.

Alternative Certification

One of the ways that many districts have responded to the need for CLD and qualified teachers is through Alternative Certification (AC). The intent is to fill classrooms with trained personnel and to reduce the need for emergency certificates. Opponents argue that the increase in alternative certification programs is allowing individuals with little or no preparation to become teachers. In contrast, many view alternative certification as a means for qualified and motivated individuals to obtain a teaching certificate without the lengthy process required to earn a traditional teaching degree.

One of the most challenging aspects of studying and understanding AC is the lack of a generally accepted definition. Although Rosenberg & Sindelar (2001) acknowledge the difficulties in defining critical features of AC programs due to disparities between state programs, AC can be defined by comparison to traditional teaching programs. The three major areas of difference are the length and structure of the program, delivery mode, and candidate population (for a detailed explanation of these areas, please see Rosenberg & Sindelar, 2001). The National Center for Education (NCE) identified eight types of AC nationwide (cited in Kwiatkowski, 1998).

It is interesting to note that the most popular types of AC programs are those that provide emergency certification or waivers so that students in traditional programs can teach while engaged in teacher education coursework.

According to Rosenberg & Rock (1994), candidates for AC do not have a background in education, but typically have a bachelors degree in another field; they may be older and have experience in business or industry. Other AC candidates may have experience in the education setting (e.g., paraprofessionals) but no undergraduate degree (Villegas & Clewell, 1998). Alternative certification programs tend to be shorter and provide more field-based experiences, sometimes in lieu of a portion of the traditional coursework. Typically, the interns assume full responsibility of a classroom of students before program completion.

Because of the lack of consistency in definitions, research on alternative assessment is also problematic. Zeichner & Schulte (2001) note that a great deal of confusion has been generated, particularly because of the nature of the available research. In a recent review, Zeichner & Schulte (2001) found only 21 peer-reviewed publications regarding AC. The majority of

available literature on AC are reports, usually completed by local agencies or in response to internally administered surveys. Unless specified otherwise, the literature cited here deals with AC programs in general education.

Diversity in alternative certification programs. According to the National Center for Education Information, AC teachers represent about 10% of all newly certified teachers and 2% of the entire teacher labor force. Zeichner & Schulte (2001) estimated that 124,000 individuals were certified to teach through AC sponsored by states and school districts between 1983 and 1999. One of the most encouraging features of AC programs is their apparent success in recruiting (Feistritzer, 1994; Hill et al., 1993; Zumwalt, 1991) and certifying significantly larger percentages of CLD candidates (Shen, 1998). It is estimated that about 40% of those alternately certified are from CLD backgrounds (as cited in Appel, 1995). This is due to factors including the location of the programs and provision of financial aid (Kirby, Darling-Hammond, & Hudson, 1989). In a study completed in the Los Angeles Unified School District, Stoddart (1990) found that 70% of the AC students had been educated in city schools compared to 22% of students in conventional preparation programs.

Several studies of urban school districts report success in recruiting and certifying CLD candidates via AC programs. Most of the programs studied are in large urban centers where there are extreme shortages of certified teachers. These urban centers are also typically populated by proportionately higher numbers of CLD potential candidates. Thus, the pools from which AC programs recruit to a large extent ensure or determine the level of CLD participation. For example, Cornett (1990) reported that Texas certified over 16% of its new teachers through AC programs, and the Texas Education Agency reported in 1990 that AC was the primary means of attracting CLD professionals into teaching. Cornett (1990) also found that CLD candidates in Texas from AC programs have higher passing rates on certification tests than those who are certified through traditional programs. The Los Angeles Unified School District prepares 96% of all the AC teachers in California, which averages about 300 candidates per year. Between 1984 and 1990, almost one-third of the teachers recruited through their program have been from CLD backgrounds, compared to 13% from the California State University System (Stoddart, 1990).

In an exemplary study regarding an AC special education program, Rosenberg & Rock (1994) noted that 11 of the 14 participants were from CLD backgrounds. Their project involved the cohort in a two-year experimental program that included unique recruitment procedures (e.g., intensive on-the-job, university-based supervision, and local school mentoring). They reported success in filling 14 positions during the program and signed commitments to continue an additional two years in special education classrooms.

Recruitment into alternative certification. Kwiatkowski (1998) concluded, "Those who leave their present position and seek teaching through alternative certification do so not as a repulsion from a negative situation, but as a positive attraction to something they consider to be a more worthy occupation." (p. 4) That is, many of the individuals who were surveyed did not abandon other careers because of extreme dissatisfaction. Rather, a pull to teaching had the most influence on their decisions. This characteristic of the recruitment pool seems to have a positive effect on retention as well. Many more AC teachers are likely to have experienced an urban

education growing up (Natriello & Zumwalt, 1993; Stoddart, 1990), and there is evidence that this is likely to result in their subsequent employment in an urban community. Darling-Hammond (1990) found that mid-career recruits working on Master's degrees were most likely to stay in teaching based on their interviews prior to completing the AC program.

However, the reality of CLD candidates' probability of pursuing careers in teaching is diminished by at least two factors. In a qualitative study with 140 teachers, Gordon (1994) concluded, "People of color do not choose teaching as a career because incentives such as salary, prestige, and social mobility are low relative to alternative careers now available." He also cited negative image and bad schools as reasons for not entering into teaching. Furthermore, Gordon (1994) noted that major sources of these perceptions are the family and friends of the CLD potential candidate. Thus, they are more likely to choose "other jobs which offer better pay, more opportunities for advancement, and better work conditions" (Case, Shive, Ingebretson, & Spiegel, 1988, p.57).

Based on their work with the Pathways to Teaching Careers Program, Villegas & Clewell (1998) concluded that recruiting from the pool of classroom paraprofessionals and emergency-certified teachers has several advantages, including: (a) large proportions of individuals from CLD backgrounds, (b) extensive school experiences and personal insight into the lives of students from urban minority communities, (c) the likelihood of remaining in their jobs since they live in the communities, and (d) the fact that they have already chosen teaching as a career.

Another study examined the perceived problems of beginning teachers (traditionally and alternatively certified), their levels of confidence, and levels of satisfaction with teaching (Houston, Marshall, & McDavid, 1993). With regard to teaching satisfaction, the perceptions of 69 traditionally prepared and 162 AC first-year elementary teachers were compared after 2 months and after 8 months of teaching. Generally, the differences favored the traditionally certified teachers, but those differences diminished at 8 months. It should be noted that the AC group was significantly more diverse and older than the traditional group.

Attrition

Program attrition. Frequently students from diverse cultural groups do not complete their university studies because of the competing roles of parent, spouse, employee, and student (Fenwick, 2001). The first year is the most common time for both African American and White students to stop or drop out of college. Among those who began at community colleges, nearly 70% of African American and 60% of Whites left during the first year (Nettles & Perna, 1997). Projects that attempted to reduce attrition by requiring their students to sign acceptance forms and a contract describing in detail their obligations to the program have reduced attrition rates (Dandy, 1998; Guillory, 2000).

Teacher attrition. Increasing the numbers of CLD individuals entering teaching is not enough. Attrition rates of those in the teaching force are high, and retention factors must be addressed. Attrition actually begins with teacher education graduates who never enter the classroom. Boe, Cook, Paulsen, Barkanic, & Leow (1999) found that only three of every four graduates of college

special education programs actually enter the workforce. The number of teachers who enter teaching is considered to be the total yield of the teacher preparation programs. The total yield across all teaching disciplines in 1987, 1990, and 1993 for Non-White graduates from teacher preparation programs was 41%, 55%, and 68%, respectively. When compared to the total yield for White graduates during the same time period (82%, 74%, and 73%), it becomes obvious that much larger percentages of CLD teacher graduates do not enter the teaching workforce. The total yield of graduates in special education was 82%, 86%, and 74% for those same years (Boe et al., 1999). Although data on total yield by race/ethnicity for special education graduates were not given specifically, it might be assumed that the yield would be similar to that for all teacher education programs. While it is promising to see that the total yield of minority teacher graduates is increasing, 26% of all education graduates still chose not to enter the teaching workforce in 1993.

As teacher shortages become more pronounced, districts nationwide offer a variety of enticing packages to recruit teachers. Yet, even those packages are not enough to keep teachers if the working conditions are considered too unpleasant. Cross & Billingsley (1994) indicated that variables such as administrative support, role design, work-related stress, and personal job satisfaction actually have the greatest impact on a teacher's intent and decision to stay in teaching. Conversely, job-related variables that subsequently increase work-related stress—such as paperwork burdens, child behavior challenges, and few opportunities for planning with colleagues— increase teachers' desire to leave the field. Few newly hired teachers are ready for the challenge of inner city classrooms. Inadequate preparation and the fact that new hires often received the most difficult teaching positions contribute to the high attrition rate in the profession during the first three to five years (Fenwick, 2001).

The small amount of data on the impact of CLD teacher variables are often contradictory. According to data collected by Poda and Stanley (as cited in Wald, 1996), 41% of minority teachers polled said they were likely to leave the teaching profession. Ford et al. (1997) also confirmed that minorities leave teaching at higher rates. Attrition tends to be higher in urban inner cities and in schools staffed with minority teachers where conditions are more difficult and contribute to high burnout rates (Ford et al., 1997; Wald, 1996). Furthermore, Garibaldi (as cited in Ford et al., 1997) reports that only 29% of minority teachers said they would choose teaching again, and 32% more were uncertain. However, Ingersoll (2001) found that minority teachers in public schools were less likely to leave, while the reverse was true for minority teachers in private schools. Similarly, Boe, Bobbitt, Cook, & Whitener (1996) found that minority special educators were more likely to stay than their White counterparts (83.3% vs. 79.1% respectively); for teachers in general education, the percentages of stayers were nearly identical. Redding (1997) found that retention of minority faculty and staff is greater with the presence of minority leadership. Salary has been shown to be an important variable. In a study of minority teachers, 78% viewed salary as a deterrent to teaching (Ford et al., 1997). Dilworth (as cited in Michael-Bandele, 1993) and information from a 1990 survey conducted by the American Association of Colleges of Teacher Education to conclude that low salary prevents teachers of color from entering teaching and impacts the decision to leave teaching.

Summary and Recommendations

An institution's hiring practices, student recruitment and admissions policies, and curricular programs are evidence of the degree of an institution's commitment to diversity (Villegas, 1993). Rigid adherence to a test score as the single indicator of an applicant's quality decreases the applicant pool (Bell & Morsink, 1986). There is often a general lack of a broad institutional commitment to diversity in the college and university environment where teacher education programs are located (Grant, 1993). Stringent program entry/exit requirements and requirements to pass national or state examinations in basic skills, content areas, and pedagogy are difficult hurdles for many students of color (Wightman, in press). This is particularly true when students have experienced a poor quality K-12 education that has not prepared them well for higher education.

Data on factors influencing the career choices of students of color and their perceptions of various careers would provide beneficial insights for education program. Such information could aid educators and counselors in devising more effective efforts to recruit and retain students of color in the teaching profession (Sileo, 2000).

Future studies must determine how to enhance educational outcomes to increase the college enrollment of CLD students in special education teacher preparation programs.

Fundamental to any effective personnel recruitment and retention system is the information on which the system rests. Reliable data collected on the strategies and activities for recruitment, preparation, and training of special education teachers would provide solid empirical evidence for methods that are essential and those that are not. A reliable system of data collection and analysis, once shaped, will drive and guide the process of personnel recruitment and retention, finally assuring that strategies and activities are effective and continue to produce the desired results. Ongoing systematic data collection analysis and synthesis are the basis for restructuring and modifications (Sileo, 2000). Future research must develop a methodologically sound design to collect and evaluate data on teacher recruitment and retention strategies that can be implemented in a relatively effortless and time-efficient manner.

The literature on AC is filled with possibilities for alleviating the extreme shortage of qualified CLD teachers. It is evident that the proportion of AC teachers that are CLD is significantly larger than in traditional teacher education programs. While this appears to be primarily due to the location of many AC programs, nonetheless, those locations are also often where there are significantly larger numbers of CLD students and extreme teacher shortages. The majority of the research available on AC is in the field of general education. A major concern is that crisis-level shortages will override the need for quality teachers. We recommend analyses of the efficacy of AC programs as compared to traditional programs for training CLD individuals, including data on: (a) the attractiveness of AC as a means to enter the teaching field, (b) the pass rates on teacher licensing exams, and (c) subsequent teacher effectiveness in the classroom.

FUTURE RESEARCH

Considering the increasing diversity in schools, it is likely that most teachers will have multiple racial and ethnic groups represented among their students. It is doubtful that schools will begin to group classrooms by same-race teachers and students. In large cities with hundreds of ethnicities represented, this would be impossible. In fact, in one of the two studies that actually compared teacher race and student outcomes, Dee (2001) warns that his study cannot determine passive/active teacher effects and does not want the results narrowly construed to suggest increased racial segregation. As a result, research is needed to identify effective teaching practices that can be conducted by teachers from any racial or ethnic background with students from many racial and ethnic groups.

In conclusion, our analysis has determined that an incongruence of teachers of color with the public school student population exists. Coupled with the high incidence of diverse individuals living in poverty and the cited repercussions on school performance for students of color living in poverty, this factor has a direct impact on diversifying the special education teacher pipeline. Limited quantifiable data exist on the ethical and equitable reasons for diversifying the workforce in special education, the effects of diversity on student outcomes, and successful strategies to recruit and retain diverse students into teacher preparation programs.

Although the commitment to diversify the special education workforce is of critical importance, factors that impact teacher quality must not be overlooked. The existence of culturally relevant instructional practices and their educational impact on diverse students should be addressed. As with other issues discussed in this paper, not all culturally relevant instructional practices have been empirically validated (Donovan & Cross, 2002). However, there is evidence that many culturally relevant instructional practices are effective irrespective of the race and ethnicity of the teacher (Ladson-Billings, 1994). Therefore, the impact on student outcomes must be the critical factor investigated in future studies of diversity. We believe that cultural diversity within the teaching workforce is important for all of the reasons cited in this paper. We also believe that all educators must be culturally competent.

Based on this premise we recommend that future research examine these critical concerns:

1. Issues of ethics and equity in the diversification of the special education workforce

2. CLD teachers' perceptions of behavior, academic ability, and referrals of CLD students compared to those of their majority counterparts and the subsequent effect on disproportionality

3. The short- and long-term effects of teacher race on academic and behavioral outcomes for students of all races with disabilities, separating the impact of teacher race from culturally relevant instructional practices

4. Enhanced educational outcomes to increase the college enrollment for CLD students in special education teacher preparation programs

5. A methodologically sound research design to collect and evaluate data on teacher recruitment and retention strategies that can be implemented efficiently

6. The efficacy of AC programs as compared to traditional programs for training CLD individuals, including data on: (a) the attractiveness of AC as a means to enter the teaching field, (b) the pass rates on teacher licensing exams, and (c) subsequent teacher effectiveness in the classroom.

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