

# Racial Disparities and Discrimination in Education: What Do We know, How Do We Know It, and What Do We Need to Know?

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*This paper reviews what we have learned about racial discrepancies in education, with particular attention to those that might be attributable to discrimination. Empirical studies have found that, on average, African American, Latino, and American Indian children arrive at kindergarten or first grade with lower levels of oral language, prereading, and premathematics skills, as well as lesser general knowledge, than that possessed by White and Asian American children. African American, Latino, and American Indian children are also reported to display behaviors less well suited to the school's learning environment. It has been estimated that at least half, and probably more, of the Black-White gap in twelfth-grade academic achievement would be eliminated if we could eliminate the Black-White performance gap at school entry. The remainder of the performance gap occurs during grades one through twelve. It is here that researchers have looked for discrimination by teachers and school administrators. In particular, they have looked for curricular track placements that, adjusting for prior performance, are disadvantageous for ethnic minority students. They have also looked for the possibility that teachers hold lower expectations for, and are less encouraging to, minority students. The evidence on these matters is mixed. It is suggested that, with the cooperation of school administrators and teachers, district-specific studies of these issues might be undertaken, using both local administrative data and participant-observational methods.*

This paper examines racial discrepancies in education, with particular attention to those that might be attributable to discrimination. I focus on what we know, how we know it, and what we need to know. The goal is to provide information on educational behaviors and outcomes that, taken together, constitute a causal model of educational achievement, taking account of both the actions of teachers and other school district personnel and those of students and their parents.

The paper is organized as follows. In the second section I review what we know about the determinants of schooling achievement and the magnitude of racial discrepancies in such achievement. This provides a framework within which to understand the causes underlying the cognitive and behavioral development necessary for school success. It also serves to identify both those teacher and school district actions that may be discriminatory and those student performance and behavioral variables that may need to be controlled if discrepancies are to be shown to result from discrimination. The third section uses the results of the prior section to discuss in greater detail the most likely sources of discriminatory behaviors by teachers and other school district personnel. These are prioritized, and an effort is made to focus sharply on what we know about each and what more we would still like to know. The fourth section discusses directions for action. This is a preliminary and tentative discussion that attempts to assess the benefits and costs of alternative data collection and analysis strategies that might be undertaken so as to most usefully increase our knowledge in this area. The concluding section summarizes the findings and discusses likely future directions for the field.

#### SCHOOLING ACHIEVEMENT: DETERMINANTS AND RACIAL DISCREPENCIES

There are at least three preconditions that must be satisfied for student learning to occur. The first is that there must be an opportunity for learning, whether from a teacher, a textbook, or other means. The more that is taught, the more that can be learned. The second is student effort. Both time on task and the quality of the concentration brought to the task are important. Finally, there are the skills and experiences brought to the task. If prior learning has not created sufficient skill and knowledge for the student to be ready to cope with the assigned instructional tasks, little achievement of new learning will occur.

All three of these conditions must be simultaneously present, at relatively high levels, or the learning process will be seriously degraded. Thus, learning is a cumulative process, in which feedback from learning experiences in previous time periods is a crucial determinant of current learning. The resulting educational process has been characterized as involving Matthew effects (Stanovich, 1986; Kerckhoff and Glennie, 1999). The reference is to the Book of Matthew in the Bible, which contains the phrase, "the rich get richer and the poor get poorer." That is, as noted by Merton (1967) in his study of scientific citations, we are talking about processes in which those who develop an early lead tend to increase that

lead over time, whereas those who fall behind early tend to fall even further behind over time.

This is particularly unfortunate for those children, including many low-income African American, Latino, and American Indian children, whose family circumstances cause them to begin schooling at a disadvantage by comparison with White and middle class children.

## THE PRESCHOOL YEARS

Three national data sets have been particularly useful in teaching us about between-group differences in cognitive and behavioral development during the preschool years and thus the skills and behaviors with which different groups of children begin their schooling in kindergarten and first grade. The first of these is the Children of the National Longitudinal Study of Youth 79 Cohort (CNLSY79; U. S. Department of Labor, 2000), the second is the Infant Health and Development Project (IHDP; Infant Health and Development Program, 1990), and the third is the Early Childhood Longitudinal Study Kindergarten Cohort (ECLS-K; National Center for Education Statistics, 2002).

From these and other data we have learned that, on average, African American, Latino, and American Indian children arrive at kindergarten or first grade with lower levels of school readiness than do White and Asian children. This includes lower oral language, prereading, and premathematics skills, lower general knowledge, and behavior less well suited to the school's learning environment. These school readiness gaps across race/ethnicity groups have been voluminously documented. Earlier studies did so using the CNLSY79 and IHDP data (Moore and Snyder, 1991; Duncan, Brooks-Gunn, and Klebanov, 1994; Parcel and Menaghan, 1994; Brooks-Gunn, Klebanov, and Duncan, 1996; Smith, Brooks-Gunn, and Klebanov, 1997; Mayer, 1997; Phillips et al., 1998; Phillips, Crouse, and Ralph, 1998; Guo and Harris, 2000). More recent studies have used the ECLS-K data (West, Denton, and Reaney, 2001; Denton and West, 2002; Lee and Burkam, 2002). All of these studies have found that significant portions, but not all, of the race gaps in school readiness disappear after controls for social class background. Particularly noteworthy is the study by Lee and Burkam (2002), which shows that fully three-fourths of the African American cognitive skills gap at kindergarten entry is accounted for by the social class background differential between African American and White families. (This unusually high share of the race gap attributed to social class appears to be due to the very extensive set of social class control variables available to, and used by, the researchers.)

The first five years of life are a period of extraordinary cognitive and behavioral development, and it is not surprising that family structure and

parental education, occupation, and income should affect this process. There is an enormous literature on these issues within the field of developmental psychology, the details of which are beyond the scope of this review. It should be noted, however, that this literature delineates the myriad ways that family resources and behavior affect child outcomes. To take just one example, Hart and Risley (1995) document the very large difference in the number of words spoken, and the extensiveness of the vocabulary used, by White middle-class versus African American parents living in poverty when talking to their preschoolers. It is thus not surprising that as early as 36 months of age (the beginning of testing in the CNLSY79), the oral vocabulary knowledge difference between the two groups is already very large (Farkas and Beron, 2001).

Phillips, Crouse, and Ralph (1998) observe that Black 6-year-olds' vocabulary scores match those of White 5-year-olds, so African American students begin school approximately one year behind White students. Measuring in absolute terms (years of progress), and using data from eight different surveys, the authors estimate that at least half, and probably more, of the Black-White school performance gap in twelfth grade would be eliminated if we could eliminate the Black-White performance gap at school entry. Of course, the geographic segregation of American housing, and the concentration of families by income and race, multiplies the effects of family resource and behavioral differences in creating this preschool gap. Some of this residential segregation is due to housing discrimination. And some portion of the lower resources of ethnic minority households is due to past discrimination in education and employment. Nevertheless, these sorts of discrimination, occurring prior to the child's start of schooling, are not the focus here.

It should also be noted that many preschool programs have been tried as interventions to reduce this school readiness gap for at-risk children, and some have shown promise. Nevertheless, Head Start, the only program implemented on a large scale, has thus far not succeeded in eliminating this gap. This is likely because Head Start devotes too little attention to explicit instruction in cognitive skills (Zill, Resnick, and McKey, 2000). However, this subject has its own large literature, which is also not our concern here.

#### THE EARLY ELEMENTARY YEARS

As already noted, when it comes to schooling achievement, "the rich get richer, and the poor get poorer." In concrete terms, whereas African American children begin elementary school approximately one year behind Whites in vocabulary knowledge, they finish high school approximately four years behind Whites. That is, the vocabulary knowledge of Black seventeen-year-olds is comparable that of White thirteen-year-olds (Phillips,

Crouse, and Ralph, 1998; Jacobson et al., 2001). This is because (as found by these and other researchers), during every year of schooling, Black students learn less than White students.

This begins in kindergarten and first grade. Indeed, since learning to read well is the principal goal of first grade instruction, and since reading fluency is a prime determinant of subsequent progress in all subjects, it is reasonable to suppose that the weaker prereading skills that ethnic minority and low-income children typically bring to first grade, and their subsequent lower performance in reading during first and the other early elementary school grades, are a particularly important determinant of their lower rate of school achievement in later years (Snow, Burns, and Griffin, 1998; Farkas, 2000). Further, consistent with “the poor get poorer,” researchers such as Ensminger and Slusarcik (1992) and Alexander, Entwisle, and Horsey (1997) have shown that for all students, differences in elementary school performance are very consequential for later schooling outcomes.

What are the detailed determinants of increases in the learning gap between ethnic minority and White children during early elementary school, and which, if any, might be attributable to racial discrimination? This is a complex question to which we do not know the answer. As we sift the evidence, two general facts provide guidance. First, learning requires three things: the opportunity to learn (i.e., appropriate instruction), focused student effort on learning, and the appropriate student skills developed from prior learning. Second, because children attend neighborhood schools that are strongly segregated by race and family income, White and ethnic minority children spend their elementary school years in schools that are largely separate from one another. The curricular and institutional practices in these schools are strongly determined by the skills and behaviors that the children and their parents bring to the school and by the expectations that teachers and administrative personnel develop about what is appropriate, what works, and what can be achieved with these children and their parents. As a consequence, both student skills and behaviors, and teacher and school actions and arrangements, combine to cause initial racial gaps to increase over time.

Thus, at least partly because students enter low-income and ethnic minority elementary schools with lower skills and maturity, a less-demanding curriculum is taught in these schools. Lower grades are given in these schools. A higher percentage of children are retained in grade or placed into special education. And these patterns occur not just between schools but within schools and classrooms as well. That is, within many elementary school classrooms, children are put into ability groups for activities such as reading. Once again, the lower performers are grouped together, are taught a less demanding curriculum, and end the year at lower achievement levels than the initially high performers. A reasonably

large research literature documents these patterns. For a useful summary, see Entwisle, Alexander, and Olson (1997, Chap. 4).

But what about detailed patterns of effect, their magnitude, and the role of discrimination? Here is where more complete knowledge is needed. However, a provocative thesis—known as summer fallback—must be considered. Heyns (1978), studying Atlanta, Entwisle and Alexander (1992, 1994; see also Entwisle, Alexander, and Olson, 1997; Alexander, Entwisle, and Olson, 2001), studying Baltimore, and O'Brien (1998) studying a district in Texas, have found that achievement gaps by income and race do not increase during the school year but do so only during the summer. That is, low-income and ethnic minority students learn as much as do middle-income and White children when school is in session—the growing income and race gaps we observe over time are completely due to differential learning when school is out and the students are at home with their parents. In particular, low-income children tend to “fall back” over the summer, actually forgetting some of what they learned during the previous school year, whereas the skills and knowledge of middle-income children tend to continue to increase during the summer months. If true across the broad range of students and schools in the United States, this finding would go a long way toward exonerating the schools of failing their minority and low-income students or of practicing discrimination.

Unfortunately we do not know how generalizable these results are. For example, Entwisle and Alexander's (1992, 1994) research is based on data collected within the Baltimore schools, where they find, for example, that African American and White children begin first grades at comparable performance levels. Since nationally, White students begin first grade at performance levels well above Blacks, it is likely that the Baltimore White students are of significantly lower SES background than is typical for the country as a whole. For recent national evidence from preliminary analyses of the ECLS-K data, see Downey and Broh (n.d.). They report that summer fallback explains SES, but not race, differences in annual reading performance growth. Analyses of the same data by Fryer and Levitt (2002) also report that summer/school year learning growth comparisons fail to explain the Black-White learning growth difference. (These authors suggest that the relative quality of the school attended appears to have the best chance of explaining the Black/White growth gap.) This continuing uncertainty over the importance of summer fallback for explaining Black/White learning growth differences highlights an important data issue—many questions have been investigated only with data sets that are not completely adequate for the inferential task they have been asked to accomplish. In particular, there is a constant tension between the analysis of data from a particular school district and data that are representative of the nation as a whole. In many cases, important findings from one of these data

types cannot be fully trusted because we do not know whether they would be replicable with data of the other type. We return to this point in subsequent sections of this paper.

Let us suppose that summer fallback does not completely explain the increasing social class and race gaps in school achievement as students progress through the grades. Then the questions remain: why do low-income and ethnic minority students learn less each year than middle class and White students and to what extent is this due to discriminatory actions on the part of teachers and school district personnel?

It could be at least partly because low-income and ethnic minority students show less maturity and readiness to learn than do White and middle income students. For example, when teachers from a national sample of students at the beginning of kindergarten were asked whether the students persisted at tasks, the response was “yes” for 75% of Whites, 67% of Hispanics, and 61% of Blacks. Similar patterns were found for groups of children sorted by social class background, for teacher responses at the end of kindergarten, and for related variables such as “seems eager to learn,” “pays attention,” “easily gets angry,” “argues with others,” and “fights with others” (West, Denton, and Reaney, 2001, tables 6, 7).

If minority and low-income students come to elementary school with less maturity and ability to concentrate and put forth effort on schoolwork, this alone could account for their making less academic progress during the year than White and middle class students. However, we are dealing with teacher judgments of student behavior, and it has been reported (Downey and Pribesh, 1999) that these differ according to the race of the teacher. If this is true, causal inferences become particularly difficult, since there are several competing possibilities that cannot be distinguished by the available evidence. First, it may be that minority students really do behave worse than White students, but only for White and not for minority teachers. Second, it may be that White teachers simply perceive the behavior of minority students to be worse than that of White students. Third, it may be that minority teachers judge the same behavior by minority students more leniently than White teachers do. Further, if students of color do in fact behave worse for White teachers, this could be because White teachers show prejudice toward them, it could be despite White teachers showing no prejudice toward them, or it could be because Black teachers are particularly skillful in getting Black students to behave. Here we see some of the difficulties involved in trying to determine the causes of lower minority achievement, particularly where they involve student effort and possible teacher discrimination.

Where student effort is involved, Ainsworth-Darnell and Downey (1998) found that even on self-reports from the National Educational Longitudinal Study (NELS) data, tenth grade Black students reported doing less

homework than White students. Of course this could be due to teachers assigning less homework to them. Interpretation of data in this and related research areas is notoriously difficult, suggesting the need for more sensitive measures and more careful interpretation of the measures we have.

Farkas and Wallin (2002) found that on parent reports from the National Survey of American Families (NSAF) data, African American and Hispanic students are found to be less engaged in school than Whites. And Farkas, Lleras, and Maczuga (2002) found that on National Assessment of Educational Progress (NAEP) data, fourth grade African American, Hispanic, American Indian and low-income students reported a greater rate at which “my friends make fun of people who try to do well at school” than did White and middle-income students. Thus, the balance of the evidence appears to suggest that African American, Latino, and low-income students likely do show lower maturity and school engagement and effort in early elementary school than do White, Asian, and middle-income students. However, quantitative research in this area must be regarded as in its infancy, with a great need for better measures capable of distinguishing among the many and complex causal forces at work.

In addition to student effort, learning requires both appropriate prior knowledge and the opportunity to learn (appropriate instruction). We have already seen that minority and low-income students begin school as much as one year behind White and middle-class children in oral vocabulary, prereading, and premathematics knowledge. What about the opportunity to learn?

As already mentioned, ability grouping is widespread in schools, both within and between classrooms. Teachers claim that students are placed into ability groups on the basis of individual performance and needs, and that such grouping serves simply to improve teaching and learning for all. Critics argue that ethnic minority and low-income students are unfairly and disproportionately placed in lower ability groups, in special education, and are held back a grade and that these placements seriously reduce their opportunities for learning. The possibility of discriminatory placement is one of the most serious potential problems in the early elementary years. What does the evidence show?

Research from the 1980s showed that, nationwide, ability grouping for reading is found in more than 90% of first grade classrooms (McPartland, Coldiron, and Braddock, 1987). This is likely still true today. This ability grouping is based on behavior as well as performance (Kellam, 1994; Entwisle, Alexander, and Olson, 1997, 81–82). Since ethnic minority and low-income children have both lower skills and less good behavior at the beginning of elementary school (West, Denton, and Reaney, 2001; Denton and West, 2002; Lee and Burkam, 2002), this alone is likely to cause them to



receive lower placements than White and middle-class children. But net of skills and performance, do these children receive lower placements? We do not know, since there has been little examination of this issue with nationally representative quantitative data. Ironically, this may be a case where school segregation reduces the possibilities for discrimination. This is because, with low-income and ethnic minority children largely attending elementary school only with children of similar ethnicity and social class background, there are few or no White and middle-income children in the class to be placed ahead of them in higher reading groups.

#### LATER ELEMENTARY, MIDDLE, AND HIGH SCHOOL

There is a saying among elementary school teachers: “grades 1 through 3 are learning to read, while grades 4 through 6 are reading to learn.” This accurately describes the fact that basic skills in reading and mathematics are taught only in grades 1–3 and that beyond these grades these skills are assumed to be present, are no longer taught, and are used as a basis for advanced instruction in social studies, science, language arts, and mathematics. It is thus natural to separate out the early elementary grades as we have done and to group the later elementary, middle, and high school grades together.

Of course the amount learned in each of these later grades still depends on prior skills and knowledge, student effort, and the opportunity to learn (the quantity and quality of the curriculum and teaching offered). And, as already noted, African American, Hispanic, and low-income children enter fourth grade with less knowledge and skills than White, Asian, and middle-income children and continue to show lower academic achievement (both in terms of scores on standardized tests and in course grades) in all subsequent grade levels. Phillips, Crouse, and Ralph (1998) and Jacobson et al. (2001) analyze eight different data sets to pin down the academic performance differentials between African Americans and Whites at various grade levels.

This analysis becomes quite technical. The interested reader should consult the discussion on pp. 241–256 of Phillips, Crouse, and Ralph (1998). However, the conclusion of this discussion is worth quoting in full: “neither traditional socioeconomic differences between black and white children’s families nor differences between their schools are sufficient to explain why black children learn less than white children with initially similar skills. Even when black and white children have the same prior scores, the same measured socioeconomic status, and attend the same schools, black children still gain on average about 0.02 standard deviations less in math, 0.06 standard deviations less in reading, and 0.05 standard deviations less in vocabulary each year. Future research therefore needs to look for less obvious causes of this learning gap” (p. 256).

Of course, even here, where studies of multiple data sets have reached similar conclusions, uncertainty remains. Perhaps this learning gap exists in the recent past and the current time period, when the overall Black-White test score gap has ceased closing but did not exist in the prior time period when the overall gap was closing strongly. Also, studies of seasonal learning effects (Entwisle, Alexander, and Olson, 1997) suggest that Black students may learn as much as White students during the school year, falling behind only during the summers when school is out.

However, if there is a Black-White, school-year learning gap, what are the likely reasons for it? With prior performance accounted for, suspicion falls on the other two principal determinants of school achievement—opportunities for learning and student effort. Also, their correlates, such as teacher, parent, student, and peer group attitudes, including both aspirations and expectations for school success.

Many of these have been addressed, and the literature reviewed, in two important papers by Ferguson (1998a, 1998b). The first of these papers focuses on teachers' perceptions and expectations. While acknowledging the fragmentary nature of the evidence, Ferguson (1998a) concludes that "teachers' perceptions, expectations, and behaviors probably do help to sustain, and perhaps even to expand, the black-white test score gap. The magnitude of the effect is uncertain, but it may be quite substantial if effects accumulate from kindergarten through high school. The full story is quite complicated and parts of it currently hang by thin threads of evidence. Much remains on this research agenda" (p. 313).

In the second paper, Ferguson (1998b) addresses a mix of issues related to schools, focusing on actions that schools could take to reduce the Black-White achievement gap. These include increased enrollment in preschool programs, reducing ability grouping and curriculum tracking, supporting instructional interventions for at-risk students, matching students and teachers by race, selecting teachers with stronger basic skills (as measured by teachers' own test scores), and maintaining smaller classes. Once again, he notes that the evidence on the potential effects of each of these actions is fragmentary. He concludes, "When all is said and done, the main concern is quality of teaching" (p. 366). He supports the use of teacher certification testing in hopes that it will lead to improvement in the basic skills of teachers assigned to Black students. Of course, since Black teachers typically score lower on tests than White teachers, there may be a contradiction between policies of assigning teachers by race and assigning more skilled teachers to Black students.

Other researchers have emphasized different issues. Mickelson (2001) analyzed recent internal data from the Charlotte-Mecklenburg School District, which, thirty years ago, had been desegregated by court-ordered busing and has long been considered a model desegregated district.

Mickelson finds that, in the interim, the district has resegregated to the great detriment of Black students. She argues that racial segregation operates via a variety of mechanisms to offer Black students in racially isolated schools fewer opportunities to learn. These include the assignment of less credentialed and experienced teachers to concentrated Black schools and to lower track courses. Mickelson finds that in this district, even after controls for prior achievement, family background, and other characteristics including self-reported effort, Black students are more likely to be found in lower tracks than are White students. This suggests discriminatory actions by teachers and administrators. Since it has been shown that American schools are resegregating nationwide (Orfield and Yun, 1999; Orfield, 2001), the findings from this school district are likely being replicated in a great many other districts. Mickelson argues that our use of national data sets from prior time periods, and our failure to collect and analyze up-to-date, district-specific data sets, has caused us to overlook these important, district-specific developments.

One of Mickelson's (2001) key findings is that students attending racially isolated elementary schools are more likely, when they are in higher grades, to be enrolled in lower track courses and to show lower school achievement. This is consistent with other research we have reviewed—students who fall behind early tend to fall further behind as they reach higher grade levels. It also draws attention to a consistent theme in this research—the role of track placement in determining students' educational achievement trajectory.

Over the past thirty years, sociologists have undertaken extensive studies of the role of tracking in American schools. At the same time, there has been an unremarked revolution in the structure of school tracking (Lucas, 1999). What was once a system of monolithic tracks, in which all of a student's courses were coupled—belonging to either the higher or lower track—has been replaced by a cafeteria style system in which the student may take an advanced course in one subject at the same time that she or he takes a more elementary course in another subject. This has caused researchers to shift from a single variable on whether the student is in the academic, general, or vocational track to detailed information on the exact title of specific courses taken in each of the subjects. Further, researchers have learned that self-reported student track location often differs from transcript data on actual courses taken, so that one must also distinguish between the student's own "social psychological track location" and objective measures of course taking within the range of courses offered. The result has been to greatly increase the complexity of the issues addressed within this literature.

Findings, however, have been relatively consistent. Socioeconomically advantaged students typically attain the highest school achievement. They attend largely White and middle-class, high-performing elementary schools, and they do well there. They then graduate to high-performing

middle and high schools and typically take courses in the higher tracks there. The combination of strong skills, excellent instruction in more advanced courses, and a peer group and school climate focused on academic competition and high student effort, guarantees a strong upward trajectory of academic achievement. By contrast, ethnic minority and low-income students typically attend racially isolated, low-performing elementary schools. In middle and high school they typically enroll in lower-track courses within lower-performing schools, with a weaker academic climate. Their trajectory of academic achievement is consequently significantly flatter.

Overall, it has been documented that other things being equal, both White and Black students in high minority schools show lower academic performance than those in schools with lower concentrations of Black students (Bankston and Caldas, 1996; Roscigno, 1998). More recently, it has been found that for Blacks, these effects are concentrated in the top half of the performance distribution (Hanushek, Kain, and Rivkin, 2002).

In summary, African American, Latino, and low-income students show lower school achievement than White and middle-income students because a number of factors operate together to powerfully determine this outcome. Lesser school readiness development in the preschool period, combined with racially and economically isolated elementary schools leads to lesser skill development during the elementary school years. This translates to lower track placement in lower performing middle and high schools, and a flatter trajectory of achievement over the K–12 grade span. Important contributors to these trends are lower school resources including lower teacher skills, lower teacher expectations of students, higher student and teacher turnover, placement into lower ability groups and special education, grade retention, summer fallback, placement into lower track courses in middle and high school, and weaker academic climates in schools.

#### POSSIBLE DISCRIMINATION BY SCHOOL DISTRICT PERSONNEL

Which actions by teachers and other personnel are most likely to involve racial discrimination? And of these, which are likely to be most damaging to students and to also be observable and measurable by outside agencies? I have attempted an approximate prioritization, beginning with those areas and actions that appear to score highest on all three criteria.

#### ABILITY GROUPING IN EARLY ELEMENTARY SCHOOL

As already noted, many kindergarten, first, and second grade teachers separate students within the classroom into ability groups for reading.

They do this on the basis of the reading-related skills and classroom behavior (social maturity and readiness to learn) shown by the students. (Since these are not based on innate ability differences, but rather on current performance differences, “ability grouping” is a misnomer. A more appropriate name might be “performance grouping.”) Since low-income, African American, and Hispanic early elementary students, particularly males, generally show lower skills and lesser classroom maturity than middle class and White students, they are more likely to be placed into the lower groups. Since such placement affects both how much the student learns and how the individual thinks of him or herself as a student (the student’s “effort optimism”), it may be enormously consequential for later academic achievement. And since these placements are based on teachers’ informal judgments of student skills and behavior, there is certainly every opportunity for teacher prejudice and discrimination to affect outcomes. Finally, the teacher’s placement of students into ability groupings is an action that is, at least potentially, observable and verifiable.

Of course, residential segregation and the use of neighborhood schools within these segregated neighborhoods decreases the scope for this type of discrimination, since most ethnic minority students attend elementary school with few to no Whites. Nevertheless, some African American and Latino children will be attending school with White children, so that the opportunity for discriminatory placement into ability groups will arise for them. Further, teachers in high minority schools may treat all students as belonging to low ability groups. Then the question becomes, are they given lower placements than their skills and behavior would earn if they were White? Also, would it be better to attempt to induce teachers to place more minority group children in higher ability groups, or would it be more effective to attempt to convince teachers to stop using ability grouping altogether? For the latter argument, see Oakes (1994).

#### RETENTION IN GRADE

Studies show that ethnic minority and low-income children are more likely to be retained in grade than White and middle-income children. Certainly, teachers believe that such retention is for the “student’s own good.” And it is difficult to argue with the proposition that if a student has failed to learn the skills taught in a given grade, promoting him or her to the next grade, where these skills are prerequisite for performance, is almost a guarantee of failure there. Yet it is also the case that being retained in grade, and becoming significantly older than the other children in the grade, is often associated with lower school engagement and effort optimism on the

student's part, which then leads to a self-fulfilling prophecy of poor school performance in subsequent grades.

Once again, the issue is whether the student's performance really requires retention in grade and whether the teacher's judgment of this issue is at all affected by the student's race. And once again, possible teacher prejudice may arise more frequently in racially integrated classes, where teachers are judging White and Black students side by side.

#### SPECIAL EDUCATION PLACEMENT

Placement into special education is also supposed to be for the student's own good. This permits students with learning disabilities to receive special assistance, in small classes, and to thereby be enabled to learn more effectively in a sheltered and customized environment. Once again, however, it often does not work out this way. Instead, assignment to special education often leads to stigma and lower teacher expectations and student effort. Over time this translates into a failed school career, with relatively little school engagement and a flat learning trajectory.

Given that ethnic minority and low-income children come to elementary school with lower skills and behavioral maturity than White and middle-income children, it is not surprising that their special education placement rates are higher. Placement into special education is not done lightly—it often comes after a student has been placed into lower ability groups and held back a grade, and it requires a special meeting of a committee of teachers with the student's parents and the formulation of an individual educational plan (IEP) for the student. Yet it is ultimately based on teacher judgments, as well as on student behavior and performance that has itself been affected by prior ability group placement and teacher interaction. Once again, the role of teacher racial prejudice and discrimination cannot be ruled out.

What do we know about the role of racial prejudice in producing higher special education placement rates for ethnic minority students? The most careful examination of research in this area is the recently completed National Research Council study (Donovan and Cross, 2002). They report that at least some studies, rather than finding an over placement of minority students in special education, given their schooling performance and behavior, actually find an underplacement of these students. That is, recall from the previous section that ECLS data show that African American and Hispanic students enter kindergarten as much as one standard deviation below White and Asian students in prereading and premathematics performance and also with behavior indicating significantly lower school readiness. The authors of the NRC report also note that National Assessment of Educational Progress (NAEP) data show that among fourth

graders, the percent of students from each race/ethnic group reading “below basic” are as follows: Asians = 22%, Whites = 27%, Hispanics = 58%, and Blacks = 63%. With this great an imbalance in performance, it is somewhat surprising that in 1999, while 12.7 percent of White students were classified by their school as having some sort of learning disability, the comparable figure for Black students was only 14.6 percent (Donovan and Cross, 2002, app. table 2-A). Further, at least some studies of White and Black students placed in special education found that the Black students had lower performance and more serious behavior problems. (Once again, this may be due to racially segregated schools, where Black low performers are being compared to average (Black) performance in a segregated school, whereas White low performers are being compared to a higher average (White) performance in a segregated school.)

However, the NRC panel did not conclude that there is either an under- or overrepresentation of Black and Latina/o youth in special education. Rather, they concluded that the data are insufficient to answer the question for several reasons, including lack of standardization in the meaning of categories across geographic locations and failure to systematically evaluate all students to ascertain eligibility, among other reasons. In the absence of the sort of carefully designed study recommended by the report, it will remain impossible to know whether minorities are equally, over-, or underrepresented in special education. Thus once again we find ourselves somewhat frustrated in the search for clear patterns of teacher racial prejudice.

#### TRACK PLACEMENT IN MIDDLE AND HIGH SCHOOL

A relatively large research literature has investigated the determinants and consequences of middle and high school track placement. This work has been primarily based on the analysis of large national data sets from prior time periods. Typical of earlier work in this area is the study by Gamoran and Mare (1989), who found that prior performance is the strongest determinant of how advanced a course the student takes and that, net of such prior performance, Black students are actually placed in higher tracks than White students. They also find that, net of other variables, higher-track placement leads to greater student achievement.

Recent research, however, has led to more complicated findings. It has been shown that rather than using student self-reports of “curriculum placement,” it is more reliable to use transcript data on individual course taking in each subject (Hallinan, 1996; Hallinan and Kubitschek, 1999; Lucas, 1999). In a recent paper with national data and transcript information on course placement, Lucas and Gamoran (2002) find that,

net of prior performance and background characteristics, Blacks and Whites are equally likely to be placed into higher curricular track courses.

Data on tracking in individual, resegregating, school districts, may yield different conclusions than national data sets (Oakes, 1990; Mickelson, 2001). We still do not know to what extent course placements are purely the result of actions on the part of teachers and school administrators, versus the role played by the desires and actions of students and their parents. At least some parents and children consider trade-offs in deciding how many and which advanced courses to enroll in. Of course, if your reading and mathematics skills are well below grade level and you've been getting low grades in all your courses, more advanced courses are not a serious option. Unfortunately, this is the situation of many African American, Hispanic, and low-income students.

#### TEACHER AND SCHOOL RESOURCES

School finance is a complex issue, one that we cannot fully explore here. Nevertheless, it is useful to note that most of districts' revenues are generated locally, through property taxes, so that housing segregation by income translates into very different possibilities for per pupil expenditures across school districts. This has led to proposals in many states for Robin Hood laws requiring wealthier communities to divert some of their school funding to less wealthy communities. At the present time, however, per pupil expenditures across school districts are quite far from being equalized. Not surprisingly, communities and districts with relatively high concentrations of African American and Latino families have tended to be the ones with weaker tax bases and thus lower per pupil expenditures.

A somewhat different pattern of resource allocation applies to schools within the same district. In this case, many federal aid programs, such as Title I (of the Elementary and Secondary Education Act), require that funds be allocated to schools with the highest share of low-income students, creating a pattern in which these schools may receive significantly greater resources than other schools within the district. Of course, it is always possible for districts to defeat this intent by reallocating other funds away from low-income schools to compensate. (The fungibility of many funding streams is a perennial issue within the field of local public finance.)

More generally, whether per pupil expenditures significantly affect schooling achievement continues to be much debated by researchers. (For a useful compendium, see the papers in Burtless, 1996, particularly those by Hanushek, 1996 (who argues that money does not matter) and by Hedges and Greenwald, 1996 (who argue that it does).) See also Elliot (1998).

The long-standing controversies in this field go back to Coleman et al.'s (1966) surprising finding that most variation in student achievement lies



within not between schools, that the family is the strongest determinant of school achievement, and that once family background is controlled most school resource measures show little effect on student achievement. As researchers have continued to investigate these issues over the years, the school resources that show the most promise as determinants of student learning are the human capital resources of teachers. That is, teacher cognitive skills and their successful application to educational practice. Thus, in his review of actions that schools can take to narrow the Black-White student performance gap, Ferguson (1998b) emphasized the hiring of teachers with strong basic skills, as measured by the teacher's own scores on standardized tests.

Teachers, of course, are employed within a competitive labor market, in which each is free to seek the job with the most attractive combination of working conditions and monetary compensation. It is thus not surprising that the lowest-income, lowest-performing schools have the greatest difficulty recruiting and retaining highly skilled and qualified teachers. The extent to which this may be due to teacher racial prejudice is difficult to ascertain, since objectively the working conditions in these schools are far from ideal. Once again we find ourselves faced with a difficulty that is difficult to learn about and difficult to solve.

#### TEACHERS' PERCEPTIONS AND EXPECTATIONS

The possibility of generalized racist attitudes, either conscious or unconscious, on the part of teachers and administrators, underlies the specific issues of student placement and instruction and teacher employment discussed previously. Indeed, this is so potentially important that Ferguson (1998a) devoted an entire article to reviewing the evidence.

Ferguson (1998a) concluded that such racism is likely at least somewhat present and likely plays at least some role in creating and maintaining the Black-White achievement gap. He also showed that it is difficult to study these issues and that the available evidence on the extent and consequences of teacher racism is quite fragmentary.

Nevertheless, we should not rule out the possibility of attempting to directly study teacher attitudes, by collecting survey data, conducting social psychological field experiments (e.g., during preservice and in-service teacher training), or even by directly observing in classrooms. The latter has been successfully undertaken in research areas as potentially difficult as the study of police brutality, where observers found many such cases simply by riding around with officers on their regular tours of duty (Reiss, 1971). With sufficient advance planning and observer training, similar studies could likely be successfully undertaken in selected classrooms.

## COMPENSATORY PROGRAMS

Compensatory programs such as Head Start and Title I date from the 1960s and the War on Poverty under President Johnson. Although evidence is mixed, neither has been the unqualified success that was hoped for. Certainly, as noted previously, these programs have failed to achieve their goal of equalizing the early elementary school performance of low-income with middle-income children. (For a review of findings on Head Start and other early childhood programs, see Zill et al., 2000 and Currie, 2001. For a review of Title I see Farkas and Hall, 2000.) But can the failure of these programs be at least partly attributable to racism? Since many of the administrators and staffers involved in these programs have manifestly good intentions, and, indeed, many are themselves members of racial and ethnic minority groups, it appears unlikely that the failures of these programs to fully achieve the high goals set for them can be attributed to racial discrimination.

## DIRECTIONS FOR ACTION

There are more than 93,000 schools in the United States, distributed across more than 16,000 school districts, employing approximately 3.2 million teachers. Do some of these teachers harbor racial prejudice? Undoubtedly. Does such prejudice result in discriminatory actions? Most likely it does. Are there a clear set of data collection and analysis actions that can be taken to pinpoint the most damaging cases of such discrimination? Perhaps, but the issue is a difficult one. In this concluding section of the paper, I discuss those directions for action that are most feasible and that appear to have the highest benefit-cost ratio in reducing school-based racial discrimination on the part of teachers and district administrators.

## COLLECTING AND ANALYZING LARGE, DISTRICT-SPECIFIC DATA SETS

In research I am currently undertaking, my collaborator and I have sought to use the National Educational Longitudinal Survey (NELS) data to study school achievement differences between public schools where less than and those where more than 25 percent of the student body is African American. After restricting attention to survey respondents with test scores for both their eighth-grade and tenth-grade year, we have data for 5,794 students in 529 largely White middle schools, and for 919 students in 131 higher than 25 percent Black middle schools. This is a rather small and scattered sample with which to study teacher and school district differences in such important behaviors. Yet these data, collected for the 1988 and 1990 school years, are the current primary

source for researchers interested in the investigation of these issues on a national basis.

One possibility for improvement would be to systematically collect and analyze relatively large, district-specific data sets across a representative national sample of school districts, with particular attention to those districts having high shares of ethnic minority students. By accessing data from each district's own store of internal, computerized student records, data collection costs could be kept relatively low. These data might be expected to include data over time on individual students, including the student's race/ethnicity, gender, free-lunch status, standardized test scores, retention in grade, placement into special education, talented and gifted and other programs, course (track) placement, and course grades for every year they were in the district. These could then be merged with school and district data from the Common Core of Data maintained by the U.S. Department of Education. Prior studies of such district-collected data from Atlanta (Heyns, 1978), Dallas (Farkas et al., 1990; Farkas, 1996), and Charlotte-Mecklenburg (Mickelson, 2001) show the potential analytic usefulness of these data. John Kain, at the University of Texas at Dallas, has for some years been assembling data of this sort for the entire state of Texas. As noted previously, these data have already been used to suggest the new finding that racial segregation exerts a large negative effect on the school performance of Black students in the upper half of the performance distribution (Hanushek, Kain, and Rivkin, 2002). These data have also showed their usefulness in a variety of other studies, including those of the schooling consequences of Black suburbanization (Kain and O'Brien, 2000) and the academic effects of placement into special education (Hanushek, Kain, and Rivkin, forthcoming). This is a model of data collection and analysis that might be pursued in other states.

Data such as these could be used to study patterns of retention in grade, placement into special programs, course placement (curriculum tracking), test score and course grade achievement, and school dropout and graduation, separately by race/ethnicity groups. They could also be linked to national standardized testing programs. Possible racial discrimination by teachers and administrators could be investigated.

#### SUPPLEMENTING DISTRICT DATA WITH SURVEYS

Researchers such as Farkas (1996) have supplemented district-collected data with a survey of a subset of students, collecting data on teachers' judgments of student work habits. Data such as these, perhaps also supplemented with data collected from students and parents, could be very useful in further understanding the social psychology of both ethnic minority and majority teachers and students as they interact with one

another across schools and districts with different racial make-ups. For interesting examples of the sorts of issues that can be addressed, see Ainsworth-Darnell and Downey (1998), Ferguson (2001), Farkas, Lleras, and Maczuga (2002), Downey and Ainsworth-Darnell (2002), and Bishop et al. (2003).

#### AUDITS AND OTHER RANDOMIZED OR INTERVENTION STUDIES

The paper by Holzer and Ludwig (this issue) addresses the use of audits in studies of housing and employment discrimination and their possible use in studies of schooling. This is a difficult area, since, unlike agents showing houses or employers interviewing job candidates, schooling does not involve a single "major choice point" to which matched pairs of testers could be sent. However, it might be possible to build on the data collection and analyses suggested previously, sending researchers or observers, or both, to those districts and schools where analyses suggest that racial discrimination is widespread.

It should also be noted that while uncommon, the use of experimental and quasi-experimental methods in educational research is not unknown. For example, random assignment of students to several different compensatory reading instruction treatments is reported in the evaluation of the Reading Recovery program evaluation (Pinnell et al., 1994). And I am currently involved in a random assignment study of one-to-one reading tutoring in the Jacksonville, Florida, school district. Thus it seems plausible that with careful planning, experimental interventions to address some of the problems discussed previously in this paper might be implemented and studied.

In an important paper, Thomas Cook (2002) points out that when large-scale social experiments were first tried in the 1960s and 1970s, education researchers were heavily involved, with studies of Head Start (Cicirelli and Associates, 1969), Follow Through (Stebbins et al., 1978), and Title 1 (Wargo et al., 1972). Unfortunately, the largely negative findings of these studies helped turn education researchers away from this methodology. As a consequence, few randomized experiments have been recently conducted to address the broad range of policy issues that have been at the center of discussion by the educational research community. Thus, Cook's literature review found no experiments on standards setting or on effective schools. Regarding school-based management, he found two experiments on Comer's School Development Program, both conducted by himself (Cook et al., 1999; Cook, Hunt, and Murphy, 2000). However, he found none on other whole-school reform programs, or on Catholic, Accelerated, Total Quality Management, or charter schools. On vouchers, he found a small number of experiments (Witte, 1998; Howell and Peterson, 2002). On

smaller class sizes he found six experiments (Finn and Achilles, 1990; Mosteller, Light, and Sachs, 1996; Krueger, 1999; Krueger and Whitmore, 2001), and on smaller schools, one experiment (Kemple, 2001). He found no experiments on teacher training, but he did find experiments on dropout prevention (Dynarski and Wood, 1997).

On the other hand, Cook found that randomized experiments are relatively common in studies of preschool education, or when the study takes place in a school, but the topic is the reduced use of tobacco, drugs, and alcohol rather than improved instruction (Durlak and Wells, 1997a, 1997b, 1998). The author speculates on the reason for the relative paucity of randomized experiments in the education field and what might be done to increase their occurrence. He observes that the most recent experiments have been conducted and analyzed by researchers from the fields of economics, psychology, political science, sociology, and policy analysis, rather than by researchers trained in, or affiliated with, schools of education. Consequently, he suggests that researchers in this field need to be convinced of the feasibility and desirability of undertaking such studies. Thus, one means to more experimentation would be a culture change within the education research community.

Another, as evidenced by Cook et al.'s (1999) experience in conducting an experiment to evaluate the Comer Program, is to have a foundation-funded network of prestigious scholars insist on random assignment at the school level as a precondition for funding the program and its evaluation. Cook (2002) believes that when the strong desire to conduct a randomized field experiment is present, the practical means to carry it off successfully can usually be found. However, he also counsels that random assignment is most feasible when "treatments are shorter; teachers training is not required; patterns of coordination among school staff are not modified much; the demand for an educational change outstrips the supply; different treatments with similar goals are compared; the units receiving different treatments cannot communicate with each other; and when students are the unit of assignment rather than classrooms or whole schools" (39).

In sum there have been few to no random-assignment experimental studies of school-based interventions designed to reduce educational discrimination and its consequences. The challenge is to devise interventions that reduce racial disparities, while meeting as many as possible of the criteria that help make them capable of being implemented. Such interventions might include programs to reduce ability grouping in the elementary grades, to reduce special education placements, and to reduce curriculum tracking in the middle and high school grades. This does not appear to be an impossible task, but it would require a highly focused and disciplined effort by an organized group of researchers, likely with foundation or government backing.

## CONCLUSION

This paper has examined racial discrepancies in education, with particular attention to those that might be attributable to discrimination. I have focused on what we know, how we know it, and what we need to know.

Studies of the CNLSY79, IHDP, and ECLS-K data, as well as other data sets, have found that, on average, African American, Latino, and American Indian children arrive at kindergarten or first grade with lower levels of oral language, prereading, and premathematics skills, as well as lesser general knowledge, than are possessed by White and Asian American children. African American, Latino, and American Indian children also display behaviors less well suited to the school's learning environment. Phillips, Crouse, and Ralph (1998) estimate that at least half, and probably more, of the Black-White gap in twelfth grade would be eliminated if we could eliminate the Black-White performance gap at school entry.

The remainder of the performance gap occurs during grades one through twelve. To take one example, whereas African American children begin elementary school approximately one year behind Whites in vocabulary knowledge, they finish high school approximately four years behind Whites (Phillips, Crouse, and Ralph, 1998; Jacobson et al., 2001). This is because during every year of schooling, Black students learn less than White students.

There are at least four possible explanations for this learning deficit. One is that ethnic minority children are not provided with appropriate instruction (opportunities to learn). Second is the possibility that these children do not expend sufficient focused effort on learning, both at school and at home. Third is the possibility that the skills these children bring to the learning task are insufficient to fully succeed at the task. And, finally, there is the possibility that none of these are the problem but rather that during the school year ethnic minority children make just as much progress as White children. Instead, the annual increase in their learning gap may be attributable to insufficient cognitive stimulation and instruction that they receive during the summer months, when school is not in session. I discussed each of these possibilities in turn.

There is little doubt that ethnic minority and low-income children are presented with fewer opportunities to learn than White and middle-class children. Their parents typically have lower educational levels and test scores. They typically attend schools with lower-performing children and teachers. These schools typically cover less advanced material. No matter what school they attend, ethnic minority and low-income children are typically overrepresented in lower curriculum tracks and ability groups.

Studies of placement into higher- or lower-tracked curricular slots, including ability groups, honors courses, and special education classes have

failed to produce consistent evidence that ethnic minority and low-income children receive worse track placements than their prior performance would indicate. May teacher and administrator prejudice and discrimination nevertheless play at least some role in the limited opportunities to learn experienced by ethnic minority and low-income children? The answer is they probably do. If such prejudice and discrimination does not show itself in overt actions, it may do so more subtly in expectations not held or encouragement not given. Yet researchers, policy makers, and school administrators have shown little support for the notion that monitoring such attitudes or behaviors is likely to be either practical or useful. Indeed, many seem to believe that such efforts would provoke a counterproductive backlash among teachers.

What about student effort? Research has provided indications that an oppositional culture and at least somewhat reduced student effort by ethnic minority and low-income children may contribute to their lower academic success (Fordham and Ogbu, 1986; Farkas, Lleras, and Maczuga, 2002; Farkas, forthcoming). However, it appears to be unlikely that this reduced work effort explains a large proportion of the Black-White learning gap (Downey and Ainsworth-Darnell, 2002; Ferguson, 2001). Also, it is difficult to disentangle the role of student and family attitudes and behaviors from those of teacher attitudes and behaviors in the creation of less successful learning environments for low-income and ethnic minority children.

As for skills, their strong correlation over time likely plays a significant role in the flatter learning trajectories of ethnic minority and low-income children. That is, since at any point in time, beginning in kindergarten, low-income and ethnic minority children have lower accumulated reading- and mathematics-related skill, they bring this lower skill level to the learning tasks at hand. This may be one reason why it is reported that, when they expend equal homework effort to that of White students, African American students nevertheless complete less of the assignment (Ferguson, 2001).

Finally, we reach the summer fallback issue. Here the evidence is mixed. Studies of data from Atlanta (Heyns, 1978), Baltimore (Alexander, Entwisle, and Olson, 2001), and Texas (O'Brien, 1998) suggest that class and race differences in learning growth occur largely during the summer, whereas studies of national data do not support this inference (Downey and Broh n.d.; Fryer and Levitt, 2002). Of course, if these growth differences did occur largely during the summer, schools would be absolved of responsibility for the lower cognitive gains of minority students.

Where, then, are we on the issue of possible discrimination by school district personnel? Further, if such discrimination is present, what should researchers and policy makers do about it? The first goal must surely be to better document the existence of any such discrimination. Research by Mickelson (2001) is one of the relatively rare cases where this has been

done. Building on Mickelson's detailed, district-specific approach appears to be the most promising direction for future efforts. If researchers would invest effort in gaining the trust and acceptance of school district administrators, they might work with such administrators to both use existing district data and to collect complementary data to test for, and seek to eliminate, whatever school-based discrimination may exist.

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