

Fifty Years after Brown: New Evidence of the Impact of School Racial Composition on Student Outcomes

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Findings from educational research can have a major influence on public opinion and even on the outcomes of historic legal decisions. This fact was recently demonstrated by the Supreme Court's decision upholding affirmative action in law school admissions at the University of Michigan. The Court's opinion extensively cited a number of research studies to support their finding that diversity constituted a "compelling interest" for the university law school to use a consideration of race in their admissions policies.¹ Another arena in which social science research can have a significant influence in the public and judicial sphere is in K-12 schooling. Currently, school district leaders, policymakers and the public are still debating whether and in what circumstances race can be used in desegregating or creating racially and ethnically diverse schools. Research on the benefits of racially and ethnically diverse schools could help shape the direction and eventual outcome of that debate. Already in Federal Court cases in Seattle, Washington, and Lynn, Massachusetts,² judges have emphasized the importance of obtaining local data to support claims for the benefits that racial/ethnic diversity bring to educational settings. These claims are important because they could preserve the

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ability of school districts to maintain voluntary school desegregation plans, or to consider race in new student assignment plans.

Over the last half-century, many researchers have studied and written about school desegregation and race in American schools. Most studies on the benefits and costs to school desegregation are primarily from the 1960s and 1970s in response to the changes brought about from *Brown*,³ the 1964 Civil Rights Act, and the *Green*⁴ case in 1968—a decision that led to increased enforcement of *Brown* and authorized busing (Clotfelter, 2004, Hallinan, 1998; Orfield and Eaton, 1996). Moreover, the *Swann* decision in 1971 particularly influenced the desegregation of school districts in the South because the court ruled that previously segregated districts needed to balance their schools racially, even if that required cross-town busing to do so.⁵ The early studies of desegregation concentrated largely on the impact of desegregated schooling on the experiences of African American students and focused on school systems that had been intentionally segregated. However, in the last twenty years there has been a resurgence of scholarly work on the subject, including several important reviews of the literature (e.g., Hallinan, 1998; Schofield, 1995; 2001; Wells & Crain, 1994; Dawkins & Braddock, 1994; Crain & Mahard, 1983) and a newer set of studies by several economists (e.g., Rumberger & Palardy, 2003; Hanushek et al., 2002; Rivkin, 2000; Boozer et al., 1992).

These studies, while much more recent, follow a traditional strand of desegregation research focusing on the impact of desegregated schooling environments on the academic progress of African American students, as measured by standardized test scores. Given the broad mission of public schools and the increasing diversity of today's school age population, it is critical to branch out from the traditional achievement view of benefits to diversity, and incorporate different and equally important outcomes to schooling into the literature. Such outcomes include the impact of diverse schooling environments on civic and democratic engagement, the ability or desire to live and work in diverse settings, and the degree to which schools equally support the academic progress of all students, regardless of race.

In addition, the changing demographics of the country (Reardon & Yun, 2001; Clotfelter, 1999) have led to an increase in the number of Hispanic K-12 students at the same time that Hispanic segregation continues to intensify in certain geographic areas (Frankenberg & Lee, 2003; Laosa, 2001; Valencia, 1991). Although schooling for Hispanic students is becoming more segregated, much of the desegregation literature does not speak to the unique circumstances of Hispanic students in segregated schools, many times not including them in the discussion of important schooling outcomes. Such omissions make it difficult to conceive

of what constitutes a desegregated school system when there are three or more races attending schools in substantial numbers. As a result, in addition to expanding the discussion of the impact of desegregation beyond the traditional test based measures, including racial groups that have been largely absent from the discussion is essential. This is particularly important as the courts and school districts are interested in what the impacts of diversity are *locally*, where the presence of three or four racial/ethnic groups in large numbers is not uncommon.

In order to address these different outcomes and include other racial groups, we present findings from a case study of the Miami-Dade County Public Schools, a district that can legitimately be described as multiracial with three different racial/ethnic groups (black, white and Hispanic⁶) present in large numbers. Miami-Dade schools present an ideal place to explore the relationship between school racial composition and student outcomes for several reasons. First, the multiracial composition of the school district, which features a growing Hispanic population, and a declining white population, is a trend common among many urban school districts across the country. Second, the district has varying degrees of racial segregation present across its schools with some schools racially isolated, some schools with two or more racial groups present in large numbers, and some with at least three groups present in large numbers. Finally, the district, like many other urban school districts, has faced an important set of legal questions, public opinion and policy debates about the role of race in its student assignment plan.

Research Design

Data and Instrument

The instrument used in this research, the Diversity Assessment Questionnaire (DAQ), is a 70-item student survey. The instrument was developed by researchers at The Civil Rights Project at Harvard University in collaboration with the National School Boards Association's Council of Urban Boards of Education. It was designed to be a classroom-administered questionnaire that asks students about their experiences in their school and classrooms. The survey—targeted for 11th grade students, but suitable for any high school grade—also includes questions about students' future goals, educational aspirations, attitudes and interests.⁷ The instrument was piloted in Louisville, KY (Kurlaender & Yun, 2001) and has since been administered in seven school districts around the country.

The data employed for this analysis are based on the survey administered in the fall of 2000 to 10,844 students, attending 33 high schools throughout the Miami-Dade County Public Schools. The survey response

rate varies by school, but overall, 49% of all 11th grade students enrolled in a Miami-Dade County public high school completed the DAQ survey. The dataset consists of background information regarding students' racial/ethnic status, gender, whether they were born in the United States, parents' education, and primary language spoken at home. The racial/ethnic classifications used in this analysis are Black, Hispanic,⁸ White, and Other.⁹

In addition to individual-level survey data, we obtained school-level data, including school racial composition, percent free and reduced lunch, percent limited English proficient, and percent in special education. Additional descriptive information about the sample is included in the Appendix. Despite the wide range of response rates across schools, and potential selection bias¹⁰ the sheer size of the sample and the importance of the district—the fourth largest in the country—provide us with preliminary evidence supporting the impact of school racial composition on these outcomes.¹¹

Methods

We separate the paper into three sections each focusing on a separate outcome—desire to live and work in multiracial settings, citizenship, and support for educational attainment. We present the results from our descriptive analyses in several ways. First, we describe the outcome and provide a short review of the relevant literature. Next, we provide an exemplar set of questions from the survey that represent each of the respective outcomes. Within each question, we disaggregate the data by the race of the student respondent and the racial/ethnic composition of the school. We adopt three categories of school composition to examine the data—multiracial, Black-Hispanic, and racially isolated schools. We define multiracial schools as those schools that enroll at least 20% of the three major racial groups (black, white and Hispanic). Racially isolated schools are those with at least one race exceeding an 80% share of the school population.¹² Finally, Black-Hispanic schools were those which did not fit into either of the other categories, these schools are more multiracial than racially isolated schools and had at least 30% each of black and Hispanic students and fewer than 80% of either. These schools occupy an interesting middle ground of schools which are not wholly segregated but do not enroll many white students, here minority students interact with each other, possibly garnering some of the benefits that may accrue to more traditionally defined multiracial schools.

To further explore the relationship between school racial composition and student outcomes, we plot the mean values of each outcome by race and by school, sorted by the percentage of white students enrolled.¹³ By examining these figures we may be able to discern patterns in the data

that relate to the school compositions, and will be able to identify schools that have either very high or low values on that particular composite, or schools that show large differences between the three main racial/ethnic groups on these outcomes. These figures and tables are important tools in understanding how the school composition may interact with student experiences, and provide a means to indicate where to look for schools that are doing exceptionally well or poorly on these outcomes.¹⁴

Even though the existing structure of income distribution and residential segregation make it very difficult to find simple ways of disentangling race and poverty in American schools, examining how these outcomes vary by race of the student and the racial composition of the school remains important since there is consensus that racial segregation is closely related to economic segregation (Massey & Denton, 1993; Wilson, 1987; Orfield & Yun, 1999). It is generally held that schools with a large concentration of poverty offer less in the way of educational preparation or resources and produce less access to informal links that are necessary for education and social mobility (Anyon, 1997; Natriello et al., 1990). Moreover, minority students tend to be concentrated in schools where there are fewer educational offerings (Carter, 1996), and where the overall achievement levels are substantially lower (Jencks et al, 1972). Thus, the benefit accrued to a minority student from attending a desegregated school is not one gained from merely sitting next to the white student, rather from the wealth of resources and school quality, which exist in integrated or predominantly white schools (Wells & Crain, 1994).

These analyses should be viewed as purely descriptive and are designed to provide a window into the experiences of students in these different types of schools on these often overlooked but important outcomes. The answers to these questions could provide policymakers who require empirical evidence to design school assignment policies information about the importance of school racial composition on student learning.

Site

Miami Dade schools have been under a federal school desegregation court order since 1969. In 2000 the school district was declared unitary, withdrawing over thirty years of court supervision on Dade schools.¹⁵ In declaring the Miami Dade school system unitary, the court affirms that the district no longer operates a dual system for whites and blacks and that all vestiges of discrimination have been removed (Orfield & Eaton, 1996). This declaration makes Miami-Dade County an interesting school system to examine. Here we have an example of a system that has been certified as having dismantled the vestiges of segregation "...root and branch" as specified by the *Green* decision.

There are varying degrees of racial segregation present across Miami-Dade's 33 high schools. The racial composition of the school district enrollment in 2000 consisted of 33% black students, 53% Hispanic students, and 13% white students (see Appendix, Table A1 for complete high school enrollments by race). The actual school enrollments vary quite a bit across the district with many schools (14) enrolling greater than 80% of its students from a single race (see Table 1), schools we will refer to as racially isolated schools.¹⁶ By contrast, there are eight schools in the district with at least 20% of its students from all three of the main racial/ethnic groups, schools that we call multiracial schools. Overall, multiracial schools have much lower percentage of free and reduced lunch eligible students enrolled when compared to the other school types (see Appendix, Table A1). Given the strong correlation between white enrollment and poverty levels, as measured by percent free and reduced lunch students, this is to be expected. Indeed, given some of the theories about how school desegregation provides greater access to resources and social networks to poor and minority students this may be one of the mechanisms by which desegregation plans succeed in providing improved outcomes for minority children. This strong negative correlation (-.70) between percent white enrollment and percent free reduced lunch eligibility in Miami-Dade suggests that some of the results in multi-racial schools may well be due to the lower levels of poverty present in these environments. However, since large differences in free lunch eligibility do not exist between black-Hispanic schools and racially isolated schools, poverty alone cannot explain the differences in outcomes present. These theories will be discussed in more detail as we describe the outcomes and results from our analysis.

Table 1
Distribution of School Type, and Percentage of Students Attending Each School Type

Type of School	Frequency of Schools	% Students Attending Schools	Mean % Free and Reduced Lunch Eligible
Multiracial Schools	8	16	27
Black-Hispanic Schools	11	34	39
Racially Isolated Schools	14	50	39
Total	33	100	36

Findings

A. Desire To Live and Work in Diverse Settings

Perhaps the most compelling evidence about the impact of racial segregation is its tendency to become self-perpetuating (Braddock, 1980; Braddock & McPartland, 1983). Perpetuation theory has often been applied to school desegregation studies (Wells & Crain, 1994; Braddock & McPartland, 1983; Braddock & McPartland, 1983; Crain, 1970), and suggests that only when students are exposed to sustained desegregated experiences will they lead more integrated lives as adults (Braddock, 1980; McPartland & Braddock, 1981). In addition, the contact-hypothesis states that “exposure to interracial contact under certain specified conditions produces generally positive changes in intergroup attitudes and interaction patterns.”¹⁷

In studies that apply the contact-hypothesis using time series data, the relationship between the extent of desegregation experienced earlier in life, for example in a school or neighborhood, is compared with desegregation experienced later in life, in postsecondary study or in occupations (Crain, 1970; Braddock, 1980). From a review of 21 studies applying perpetuation theory, Wells and Crain (1994) conclude that desegregated experiences for African American students lead to increased interaction with members of other racial groups in later years. Results from these studies indicate that school desegregation had positive, albeit modest, effects—both blacks and whites that attended desegregated schools were more likely to function in desegregated settings later in life (Braddock & McPartland, 1989). These later desegregated environments include occupational settings, neighborhoods, and colleges and universities.

We asked students to indicate their desire to live and work in multiracial settings through a set of survey questions. In order to examine the relationship between school racial composition and desire to live and work in multiracial settings we created a composite measure labeled *Live_Work*.¹⁸ Although we do not have longitudinal data to measure whether students actually end up living and working in multiracial settings as adults, we are interested in whether students' attitudes toward living and working in multiracial settings would vary as a function of their school racial make-up, a concept theoretically motivated by the contact-hypothesis (Braddock & McPartland, 1983). The survey questions that comprise this composite can be found in the Appendix, Table A2. Table 2 describes students' responses to one such question in the *Live_Work* composite, disaggregated by race, and then further disaggregated by school racial composition.

Table 2
How Interested Are You in Living in a Racially/Ethnically Diverse Neighborhood When You Are an Adult?

	Black	Hispanic	White	Other	Total
Very Interested	24	22	21	28	24
Interested	36	36	33	36	36
Somewhat Interested	27	29	28	26	28
Not Interested	13	13	18	10	13
Total (n=10,481)*	100	100	100	100	100

* Note—Totals might not add to 100% due to rounding error

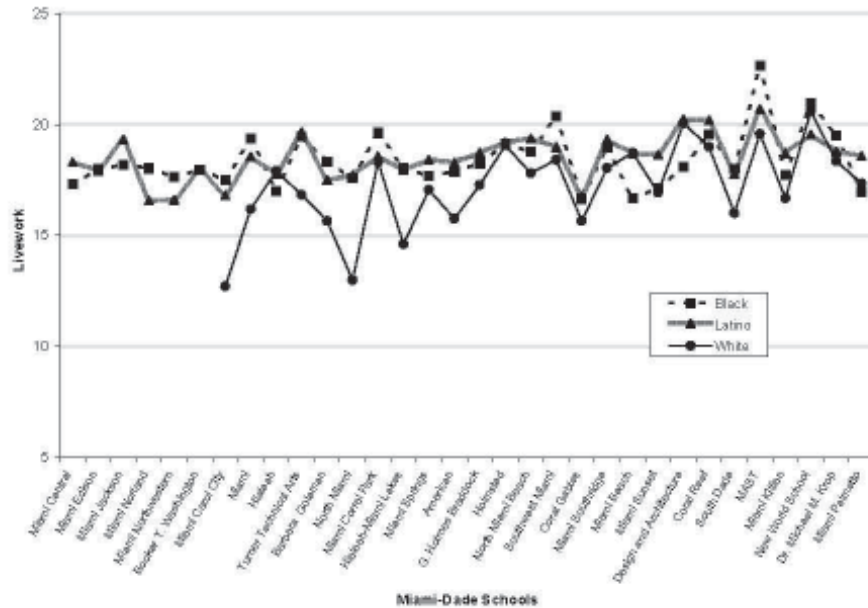
Table 2b
How Interested Are You in Living in a Racially/Ethnically Diverse Neighborhood When You Are an Adult? (Percent indicating “Interested” and “Very Interested”)

	Black	Hispanic	White	Other	Total
Multiracial Schools	68	62	55	68	64
Black-Hispanic Schools	61	60	51	66	61
Racially Isolated Schools	57	55	54	61	56
Overall (n=10,481)	61	58	54	65	60

From Table 2 we note several interesting findings. First, there is remarkable similarity in student responses to this question by race. At the positive end, we see that over fifty percent of students from all racial/ethnic backgrounds report being “Interested” or “Very Interested” in living in a racially/ethnically diverse neighborhood when they grow up (Table 2). Overall, there is a low percentage of students that indicate not being interested in living in a racially/ethnically diverse neighborhood, however, among these respondents, whites respond at a higher rate (18%) compared to African Americans or Hispanics who both respond at 13%. Looking at this question by the three school racial composition categories (Table 2b) provides another view. Here we see that students from all racial ethnic groups that attend more diverse schools report being “Interested” or “Very Interested” in living in a racially/ethnically diverse neighborhood to a larger degree than do their peers who attend more segregated schools with the difference for black students the largest at 11 percentage points.

Figure 1 provides yet another lens from which to view the relationship between school racial composition and desire to live and work in

Figure 1
Average School Value of Livework by Race, Sorted by Percent White Enrollment



multiracial settings. This figure presents the mean value of the Live_Work composite by race (black, Hispanic, white) for each of the 33 high schools in Miami-Dade. In addition, the graph is sorted by the white enrollment in the school. Thus, points on the left side of the figure represent schools with a low white enrollment and the schools on the right side of the figure represent schools with a higher white enrollment. We omit the mean values of Live_Work for white students in five schools, since these schools have only one percent white enrollment and, as a result, the sample size for white students who completed the survey is too small to reliably estimate a mean for the racial group in those schools.

There are several important descriptive features to note from Figure 1. First, on average, white students have lower values of Live_Work than their black and Hispanic peers. However, as the percentage of white enrollment increases the values for all three races converge. For example (see Figure 1) in schools such as Miami Carol City and Miami, which have a 2-3% white enrollment, white students display much lower values of Live_Work than their minority counterparts. However, in New World High School and Miami Palmetto High School, where whites are

a substantial proportion of the school population (39% and 55% respectively) they are as likely to indicate a strong desire to live and work in multiracial settings as black and Hispanic students. Second, Hispanic students display less variation in their reported values of Live_Work across Miami-Dade's 33 high schools than any other racial group. This is not a surprise given that overall, they constitute the majority in Miami-Dade schools (53%) and are likely to be highly represented in nearly every school in the district (See Appendix Table A1). Finally, in schools that have high white enrollments we see the greatest similarities between black, white and Hispanic students' attitudes toward living and working in multiracial settings. Again, this may be partially due to the strong relationship between percent white enrollment and percent free and reduced lunch eligible, and can be an indication of the socioeconomic status of students who are likely to be attending these schools as much as the racial/ethnic composition of the school.

B. Democracy and Citizenship

School desegregation is not merely about improved educational achievement as measured by test scores and college graduation rates; it is also about rethinking historical relationships between racial groups (Schuman et al., 1997; Hochschild, 1984; Gutman, 1987). Prior research on desegregated schooling offers some evidence of positive educational outcomes for minority students (Hallinan, 1998; Schofield 1995, 2001; Wells & Crain 1994; Crain & Mahard, 1983). However, less has been done to examine the impact of racial diversity and desegregation on minority students' white peers or on students from different racial/ethnic minorities. Moreover, societal outcomes, such as the ability to participate in an increasingly diverse democratic society, have rarely been explored, and yet, an outcome such as citizenship has a long established history with the purpose of public education. In *Brown* the U.S. Supreme Court states that public education "...provides the very foundation of good citizenship. Today it is the principal instrument in awakening the child to cultural values in preparing him for later professional training and in helping him to adjust normally to his environment." Given this characterization of the purpose of schooling by the Supreme Court, there is a need to examine how schools are progressing on this important outcome.

As the nation becomes increasingly multiracial, it is important to understand how the educational environment plays a role in preparing students to live and work among people different from themselves. Do students develop a consciousness around the importance of being able to interact with people who are different from them; and are schools doing the job of preparing students to interact and work in an increasingly

diverse democracy? The higher education literature on these outcomes suggests that students educated in diverse settings are better able to participate in an increasingly racially diverse and complex democratic environment (Gurin et al. 2002). Moreover, work done in colleges and universities suggests that educators must structure opportunities for students to “leave the comfort of their homogenous peer group and build relationships across racially/ethnically diverse student communities.” (Gurin et al., 2002:) As such, K-12 schooling can play a critical role in preparing students for the diversity they will face in postsecondary schooling and in the workplace.

To address this question, we examined whether students in Miami-Dade County Schools felt that their schooling experiences have changed their interest in participating in various civic activities, including discussing controversial political issues with students from racial/ethnic groups different than their own. We recognize that preparation may come from multiple sources including the home environment, thus, we attempted to isolate the experience in school from other experiences that may contribute to students’ overall interests in participating in various civic activities. It is our hypothesis that schools, which are often the places where the changing demographics of the nation are most pronounced, can help to produce young adults who are ready to operate in settings where there are people from many different backgrounds.

The DAQ survey asks students a set of questions that address various citizenship and democratic attitudes. We created a composite to measure the relationship between school racial composition and citizenship.¹⁹ The survey questions that comprise the Citizenship composite can be found in the Appendix, Table A2. Tables 3 and 4 describe students’ responses to two such questions in the Citizenship composite, disaggregated by race, and then further disaggregated by school racial composition.

There are several important observations that can be made from the results presented in Table 3. First, overall, 64% of the students who responded to this survey stated that their participation in school curricular and extracurricular activities either “Greatly Increased” or “Somewhat Increased” their interest in improving relationships between people of different racial/ethnic groups. This number is quite substantial when you consider that a large majority of students attribute their increased interest to the school environment. Second, it is interesting to note that a relatively high number of students from all racial/ethnic groups—but especially whites—report that their school has had “No Effect” on their interest in working to improve relations between people from different backgrounds. This relatively large “No Effect” response for white students does not necessarily mean that schools have failed in their mandate

Table 3
To What Extent Have Classroom or Extracurricular Activities Offered through Your High School Changed Your Interest in Working To Improve Relations between People from Different Backgrounds?

	Black	Hispanic	White	Other	Total
Greatly Increased	28	25	19	33	27
Somewhat Increased	37	38	34	35	37
No Effect	27	32	40	26	30
Somewhat Decreased	5	3	6	5	4
Greatly Decreased	3	1	2	2	2
Total (n=10,679)*	100	99	101	101	100

* Note—Totals might not add to 100% due to rounding error

Table 3b
To What Extent Have Classroom or Extracurricular Activities Offered through Your High School Changed Your Interest in Working To Improve Relations between People from Different Backgrounds? (Percent Indicating “Somewhat Increased” or “Greatly Increased”)

	Black	Hispanic	White	Other	Total
Multiracial Schools	68	64	57	65	64
Black-Hispanic Schools	69	63	49	71	65
Racially Isolated Schools	62	63	51	66	63
Overall (n=10,679)	65	63	53	68	64

to improve citizenship outcomes. Given the higher socioeconomic status of schools attended by the majority of white students, it is possible that the students attending these schools already feel compelled to improve relations among different racial/ethnic groups regardless of what they have learned from their schooling, thus a school effect on this issue would not be revealed using this instrument. It is also possible that students do not feel compelled to work to improve relations among groups and, again, they do not attribute this feeling to anything that was learned from school. Thus, while it is not possible to determine why white students have a relatively large “No Effect” response, it points to an important area for further study on these issues in order to carefully understand unique school effects on these outcomes.

Table 3b illuminates interesting patterns as well. For instance, a higher percentage of black students in both multiracial and Black-Hispanic schools attribute a positive effect to their schooling experiences when compared to black students in racially isolated schools. In addition,

a higher percentage of white students in multiracial schools attribute their positive outcomes to their experiences in school by comparison to their white peers in Black-Hispanic or racially isolated schools. Finally, Hispanic students show stable values across all schools, again, most likely due to the large numbers of Hispanic students in the district.

White students, more so than their minority peers, report being very comfortable debating social and political issues in their classes (45% compared to African Americans or Hispanics at 37% and 41% respectively—Table 4). However, more white students and students from other racial/ethnic backgrounds (7% and 8% respectively) report being very uncomfortable debating social and political issues in their classes than do black or Hispanic students (5% and 4% respectively). Looking at this question by three school racial composition categories (Table 4b) provides another angle. Here we see that students from all racial/ethnic groups that attend more diverse schools report being either “Comfortable” or “Very Comfortable” debating current social and political issues in classes than do their peers who attend more segregated schools. The difference by school racial composition is particularly noteworthy for whites who report being either “Very Comfortable” or “Comfortable” in racially

Table 4
How Comfortable Are You Debating Current Social and Political Issues in Your Classes?

	Black	Hispanic	White	Other	Total
Very Comfortable	37	41	45	39	40
Comfortable	43	41	36	37	40
Uncomfortable	14	14	13	17	15
Very Uncomfortable	5	4	7	8	5
Total (n=10,080)*	99	100	101	101	100

* Note—Totals might not add to 100% due to rounding error

Table 4b
How Comfortable Are You Debating Current Social and Political Issues in Your Classes? (Percent Indicating “Comfortable” or “Very Comfortable”)

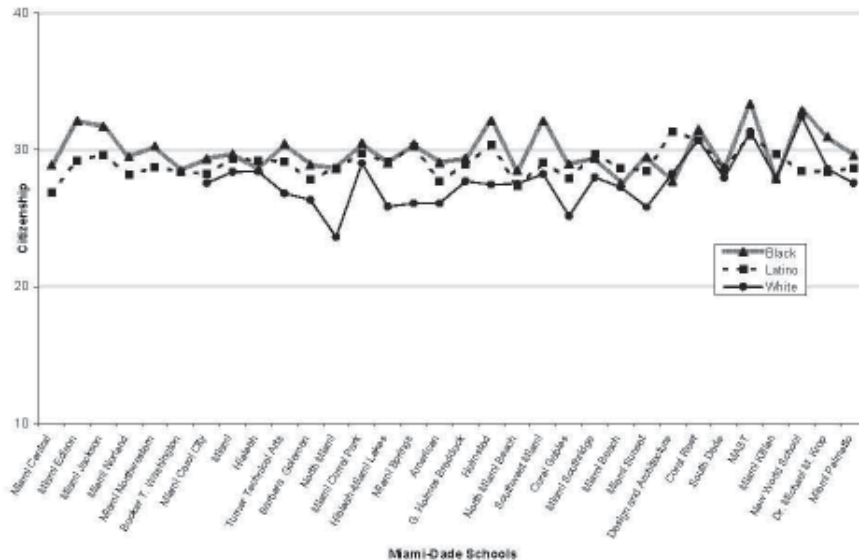
	Black	Hispanic	White	Other	Total
Multiracial Schools	83	84	87	84	84
Black-Hispanic Schools	81	80	79	70	77
Racially Isolated Schools	80	82	68	78	80
Overall (n=10,080)	81	82	80	76	80

isolated schools at 68%, in Black-Hispanic schools at 79% and in multiracial schools at 87%.

On both of these questions it is apparent that for all students having other students similar to themselves in their schools has an impact. For black and Hispanic students this suggests that when their enrollment shares are smaller, as they can be in multiracial schools, they may not feel as comfortable as when they are the majority, such as in racially isolated or Black-Hispanic schools. Similarly, whites are likely to feel more comfortable in multiracial schools, where there are more white students, since in all other schools they are a very small minority. These distinctions are analyzed further using the composite outcome for citizenship.

A descriptive analysis similar to Live_Work was conducted looking at the relationship between the composite outcome Citizenship and school racial composition in Miami-Dade. Figure 2, which is formatted identically to Figure 1 with lower white enrollment schools on the left of the figure and higher white enrollment schools on the right, suggests that black and Hispanic students respond with consistently higher values of citizenship when compared to their white peers. Similarly to the Live_Work construct examined earlier, there does appear to be a convergence

Figure 2
Average School Value of Citizenship by Race, Sorted by Percent White Enrollment



between the racial groups as percent white increases, although not to as great a degree as in the outcome Live_Work.

C. Support—Goals, Opportunities, and Access to Higher Education

Providing access to college is an important goal for most high schools, and an important societal goal as indicated in the United States Supreme Court decision in *Grutter v. Bollinger*, which upheld the use of race in admissions to institutions of higher education. In part, Justice O'Connor writing for the majority states, "This Court has long recognized that 'education ... is the very foundation of good citizenship'.... For this reason, the diffusion of knowledge and opportunity through public institutions of higher education must be accessible to all individuals regardless of race or ethnicity."²⁰

One indication of a successful desegregation plan that achieves this important goal could be defined by equalizing opportunity among different racial/ethnic groups. If this goal is achieved then aspirations—as an indicator of perceived opportunity—should also become more equal between racial/ethnic groups in desegregated environments. To this end, we examine a composite of school support for higher educational aspirations called—Support, which consists of student responses to a set of questions about their interest in taking advanced classes, attending college, and their reported exposure to college information material and encouragement on the part of teachers and counselors to enroll in college prep courses. Tables 5 and 6 include student responses to two representative questions on this outcome disaggregated by race. The responses to questions about school support reveal important similarities and differences by both racial groups and by the three classifications of racial composition of the school. Subsequent analysis of the composite show interesting school level patterns in the data that otherwise might have been masked by the district averages.

Three quarters of students report being either "Somewhat Encouraged" or "Strongly Encouraged" by their teachers to attend college (Table 5). College is clearly being promoted for a large majority of Miami-Dade students of all races. Equally important as the high levels of encouragement received by the students are the reported similarities by race. Across each level of encouragement and discouragement the reported levels are strikingly similar. This is what one would expect to see in a district that had equalized the support given to all students toward higher educational aspirations. In addition, for all students, college is being promoted by teachers to a larger degree in multiracial schools versus more segregated schools (Table 5b), lending further support to the hypothesis that more diverse schools and student bodies

Table 5
To What Extent Have Your Teachers Encouraged You To Attend College?

	Black	Hispanic	White	Other	Total
Strongly Encouraged	41	41	43	38	40
Somewhat Encouraged	34	37	32	32	35
Neither Encouraged nor Discouraged	19	18	19	23	20
Strongly Discouraged	4	2	4	5	3
Somewhat Discouraged	2	2	3	2	2
Total (n=10,772)*	100	100	101	100	100

*Note—Totals might not add to 100% due to rounding error

Table 5b
To What Extent Have Your Teachers Encouraged You To Attend College?
 (% Indicating “Somewhat Encouraged” or “Strongly Encouraged”)

	Black	Hispanic	White	Other	Total
Multiracial Schools	78	80	79	73	77
Black-Hispanic Schools	73	72	73	64	70
Racially Isolated Schools	76	81	67	74	77
Overall (n=10,772)	75	78	74	70	75

lead to, at least, more equality in perceived opportunities across race.

While encouragement to attend college seems to be relatively equalized across racial groups, as would be hypothesized in a truly desegregated schooling experience, an examination of Table 6 suggests that there are still areas that are very unequal, specifically in the encouragement students receive to take AP or Honors classes. This is an important step to equalizing opportunity since these classes are critical for the academic preparation of students, and to ensure their chances for success in postsecondary schooling. Overall, the level of encouragement to take these challenging academic classes is much lower across all racial/ethnic groups. In addition, the differences in encouragement across racial groups is quite large with 54% of white students reporting that they were either “Strongly Encouraged” or “Encouraged” and only 45% and 43% of black and Hispanic students reporting similar experiences. In addition, Table 6b shows that these differences by race persist across all three school types with the largest discrepancy in multiracial schools where 61% of white students report being either “Strongly Encouraged” or “Encouraged” and only 41% and 52% of black and Hispanic students report similar encouragement. Clearly, this is a good indication that multiracial schools do not automatically translate into more equitable schools.

Table 6
To What Extent Have Your Teachers Encouraged You To Take Honors and/or AP Classes?

	Black	Hispanic	White	Other	Total
Strongly Encouraged	16	17	24	22	19
Somewhat Encouraged	27	28	30	27	28
Neither Encouraged nor Discouraged	45	44	37	39	42
Strongly Discouraged	6	6	7	6	6
Somewhat Discouraged	6	5	2	5	5
Total (n=10,778)*	100	100	100	99	100

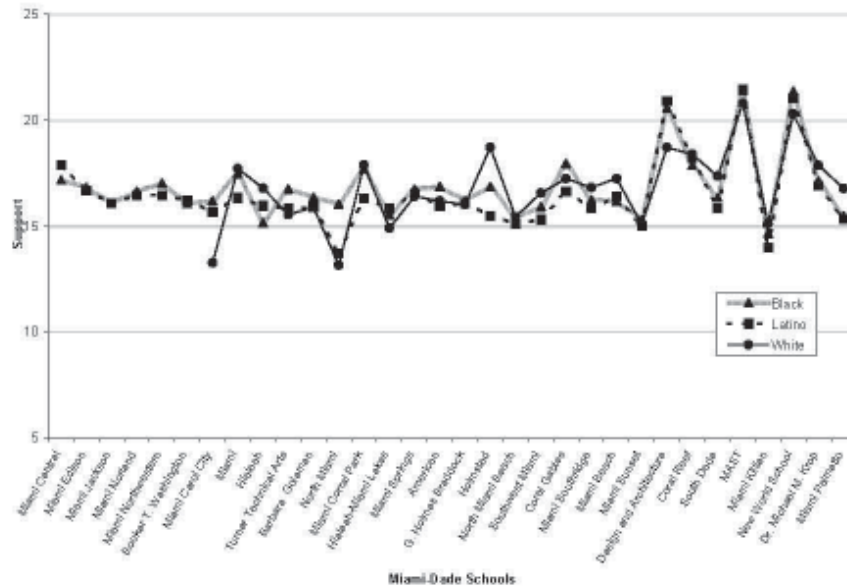
* Note—Totals might not add to 100% due to rounding error

Table 6b
To What Extent Have Your Teachers Encouraged You To Take Honors and/or AP Classes (% Indicating “Somewhat Encouraged” or “strongly encouraged”)

	Black	Hispanic	White	Other	Total
Multiracial Schools	41	52	61	46	50
Black-Hispanic Schools	43	40	49	50	45
Racially Isolated Schools	44	46	49	51	47
Overall (n=10,778)	43	45	54	49	47

Despite the somewhat disappointing equity findings described in Tables 6 and 6b, Figure 3 provides a more encouraging portrait across a wider range of questions comprising this outcome. The patterns described in Figure 3, which is formatted identically to Figures 1 and 2, show that by school, all races track quite closely to one another. That is, if there were large differences in average perceived support²¹ for the pursuit of higher educational aspirations, you would expect to see a large divergence between the values for the different racial/ethnic groups. Instead, Figure 3 shows a great degree of congruence between racial/ethnic groups, with all three rising and falling together within the particular school, keeping relatively tight groupings. This suggests that, on average, the schools in Miami-Dade are treating students' higher educational aspirations similarly, regardless of race. However, it is also interesting to note that some schools are performing better than others at that task. Again, Figure 3 is useful in isolating schools that are doing well and those that are doing poorly. For example, this tool would suggest that Miami Killian would be an interesting high school to examine since it has a high percentage of white students, relatively low poverty levels, and yet has

Figure 3
Average School Value of Support by Race, Sorted by Percent White Enrollment



uniformly low levels of perceived support across all three racial/ethnic groups. An examination of why this is the case could be useful for the district and school, and could result in important information about the specific school context.

Clearly, these questions are only a limited indication of opportunity. There are many other indicators that the DAQ questionnaire does not explore, but these data offer one lens from which to view the potential disparity in aspirations, and in perceived support to reach postsecondary aspirations, among different racial groups within the district.

Conclusion

This paper indicates promising avenues for future research on the role of school racial composition on student outcomes. Miami-Dade is a particularly important district to analyze because of the varying degrees of diversity at the school level, and its recent attainment of unitary status. The district's variation in diversity provides different school contexts to use for comparison purposes on our educational outcomes. Moreover, the demographic makeup of the district, with an increasingly multiracial

composition and smaller white enrollment reflects the demographic changes facing many of the nation's urban school districts.

This paper, using three important outcomes—living and working with people of different ethnic/racial groups, citizenship, and school support—is one example of the type of analysis that can provide insight into student experiences across different school racial composition levels. These types of local student survey data are important for school district leaders to understand whether they are achieving equity outcomes for all students and across a set of very different schooling contexts. These attitudinal outcomes have, to date, been understudied in the literature, which has generally focused on the cognitive outcomes of desegregated schools as measured by more traditional measures such as test scores or educational attainment. While understanding the effect of school racial composition on test score outcomes is important, they should not be the only outcomes of focus. Given the special charge of public schools to educate its citizens more broadly, it is critical to ensure that students receive the tools necessary to function in a society undergoing large demographic changes.

This analysis reveals several important descriptive findings. First, racial and ethnic diversity appears to have positive educational impacts. Students who attend multiracial schools, including whites, responded positively to nearly all of these attitudinal questions to a higher degree than do students who attend less diverse and racially isolated schools. Second, students of all racial backgrounds, throughout the district, report a high level of desire to live and work with people different from themselves. Third, students report that they feel prepared to interact and participate in democratic processes with people who are different from themselves, and further report that they believe school experiences have increased their desire and ability to do so. Fourth, students' perceptions of the support they received towards higher educational attainment are quite similar between different racial/ethnic groups. However, there are also less positive findings, particularly with regard to support for students to take honors or AP courses. Finally, on nearly all of these outcomes, we see a higher degree of positive responses from students who attend multiracial schools than from students who do not. This is particularly true for whites, who demonstrate the most negative attitudes in schools where they are a very small minority.

This study is descriptive in nature, and therefore cannot answer the direct causal question of what effect a desegregated or diverse school has on students' attitudinal outcomes. Such research is nearly impossible to conduct given the many selection mechanisms that lead students to enroll in particular schools. However, it does highlight, given schooling

attendance, what students think about their schooling experiences and how this might differ depending on the school racial composition and the individual race of the student. Moreover, it points to important areas for future research and implications for school practice. First, tracking students longitudinally would provide greater evidence about the role of desegregated schooling experiences on individuals' work or neighborhood environment as an adult. Second, it would be important to further explore white students' outcomes in a district or set of schools where they are the majority, since they are the group frequently associated with having costs as a result of desegregation and not benefits. Finally, it would be useful for school districts to use these type of survey data for professional development with their teachers and other school leaders to learn how students perceive their schooling environment, their teachers' encouragement, and the role of their school in preparing them to live in a multiracial society.

The potential benefits of data such as these are largely untapped. For instance, given appropriate sampling procedures in each school and across the district, hypothesis tests could be conducted to examine important questions in a more systematic way. For instance, we could examine whether student outcomes differ by race within school site, or whether outcomes differ across the different types of schools (in Miami-Dade these would be racially isolated schools, multiracial schools, and black-Hispanic schools). Such statistical tests could provide supporting evidence for school districts to make better decisions about whether their district policies should include provisions to promote racially/ethnically diverse learning environments for their students.

Looking back, it is unclear what the authors of the *Brown* decision thought the public schools would be like today. But what remains clear 50 years later is their vision about what schools should do. Given the broad mission of public schools and the increasing diversity of today's school age population, it is critical to branch out from the traditional achievement view of the benefits to desegregation, and incorporate different and equally important outcomes of schooling into the literature. Such outcomes include the impact of diverse schooling environments on civic and democratic engagement, the ability or desire to live and work in diverse settings, and the degree to which schools equally support the academic progress of all students regardless of race. As the nation becomes increasingly diverse, it will become ever more important to understand the role a school's racial composition plays in preparing all students to live and work among people different from themselves.

Notes

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¹ *Grutter v. Bollinger*, 2003 U.S. Lexis 4800.

² *Comfort v. Lynn School Committee*, 2003 U.S. Dist. Lexis 9486.

³ *Brown v. Board of Education*, 347 U.S. 483 (1954).

⁴ *Green v. County School Board of New Kent County*, 391 U.S. 430 (1968).

⁵ *Swann v. Charlotte-Mecklenburg Board of Education*, 402 U.S. 1 (1971).

⁶ Miami-Dade County uses the terms black, white, and Hispanic so we have adopted their convention for this paper.

⁷ Although the DAQ is designed for high school juniors, due to the presence of mixed grade classrooms, students in other grades completed the survey as well. To maximize the sample size, results from students from other grades are included in this analysis.

⁸ We use the term Hispanic as opposed to Latino in describing students in Miami-Dade, since the majority of this population is of Cuban descent and to describe their population, the district chooses the term Hispanic.

⁹ We present the results for three primary racial/ethnic groups: Black, Hispanic, White, and report a fourth group—Other that consists of students who reported Asian, Other, or did not self-report race/ethnicity (each of these groups individually have too few students to reliably disaggregate results).

¹⁰ These types of analysis are subject to selection bias of several different forms. First, students whose parents care about diverse experiences may prefer to send their children to more diverse schools. These students are also more likely to have more positive feelings towards diversity-oriented outcomes, such as comfort. This would result in findings that students in more multiracial schools are more positive on such outcomes. The extent to which selection bias plays a part in these findings is impossible to determine using these methods. However, it is unlikely that the entire effect that we see is due to selection bias of this sort. In addition, there may be additional student-level selection bias introduced since some students did not choose to take the questionnaire and did not indicate their race. These students are more likely to have negative attitudes toward the outcomes we are measuring. Finally, there may be school level selection bias introduced by both our differences in response rates by school, and the fact that some schools may have differentially administered the survey to selected classrooms or students, again possibly leading to positive bias of the results. Despite these difficulties, this analysis is exploratory and demonstrates how different school level specifications can provide unique and important information. In addition, while it may be impossible to specify the actual magnitude of the relationships found in this analysis, it is unlikely that the entire effect is due to selection.

¹¹ Such limitations prevent us from reporting these findings as representative of the district as a whole, and thus the results reported from our sample are

not presented with tests of statistical significance. Instead, we present these analyses as a starting point for how such data can be used to evaluate the relationship between school racial composition and student outcomes

¹² A school failed to meet the Miami-Dade County desegregation order only if the percentage of black students in the school exceeded 85%. This definition, while legally appropriate at the time of the court order, is not currently appropriate considering the changing demographics of the district. Many of the schools we categorize as racially isolated (enrolling at least 80% of its students from a single racial/ethnic group) are Hispanic schools.

¹³ Because of the small number of white students in segregated Hispanic or Black schools, the responses of white students in these schools need to be interpreted cautiously, and with an understanding that the mean values indicated on the figures will most likely show more variation when fewer white students are included in the analysis.

¹⁴ For a multivariate analysis of the impact of school racial composition on these outcomes see Kurlaender and Yun, 2003.

¹⁵ *Pate v. Dade County School Board*, 303 F. Supp. 1068 (S.D. Fla. Aug. 29, 1969).

¹⁶ In fact, there are 8 racially isolated schools that enroll greater than 85% of a single racial group, which interestingly, is in discord with Dade County's historic desegregation order (see footnote 8).

¹⁷ The conditions for groups in contact are that each group: (1) possess equal status; (2) share common goals; (3) interact operatively, and (4) have environmental support (Braddock, 1980).

¹⁸ The Live_Work composite was created by simply recoding students' responses to 8 items and adding them together. The overall reliability of the composite was 0.76, based on a Chronbach's alpha analysis. In addition, we conducted a factor analysis to test for potential multidimensionality of the composite. Results from this Principal Components Analysis revealed that a simple additive structure was appropriate for combining the items, since each of the primary eigenvectors were all positive and uniform, with the first eigenvalue explaining 40% of the item variation. Results from these analyses can be obtained from the authors.

¹⁹ The Citizenship composite was created by simply recoding students' responses to 11 items on a numeric scale and then combining them additively. The overall reliability of the composite was 0.83, based on Chronbach's alpha. In addition, as in Live_Work, we conducted a factor analysis to test for potential multidimensionality of the composite. Results from this principal components analysis revealed that a simple additive structure is appropriate and again found support for our decision to simply combine the items additively.

²⁰ *Grutter v. Bollinger*, 2003 U.S. Lexis 4800.

²¹ The Support composite was created by simply recoding students' responses to 7 items on a numeric scale and then combining them additively. The overall reliability of the composite was 0.71, based on Chronbach's alpha. In addition, as in Live_Work and Citizenship, we conducted a factor analysis to test for potential multidimensionality of the composite and again found support for our

decision to simply combine the items additively. Results from this principal components analysis revealed that a simple additive structure is appropriate.

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Appendix

Table A1
Distribution of School Enrollment by Different Categories

High School Name	Total Enrollment	% White	% African Amer.	% Hispanic	% Other	% Free/Red Lunch	% Limited English
American	2790	9	40	49	2	24	7
Barbara Goleman	4540	4	4	90	1	44	12
B.T. Washington	1338	1	53	46	0	75	14
Coral Gables	3611	17	10	71	1	27	11
Coral Reef	2673	25	30	39	5	17	1
Design & Arch.	462	24	22	51	3	42	1
Dr. M. M. Krop	3027	43	25	29	3	17	7
G. H. Braddock	4856	10	7	82	1	41	9
Hialeah	3530	4	5	90	0	43	16
Hialeah- Miami Lakes	3354	7	26	66	1	38	10
Holmsted	2865	11	41	47	2	59	5
MAST	550	33	33	31	3	20	0
Miami	3215	3	9	88	0	60	19
Miami Beach	2652	19	23	57	1	47	15
Miami Carol City	2912	2	81	17	0	41	2
Miami Central	2779	1	85	13	0	48	7
Miami Corral Park	4257	6	4	89	1	39	11
Miami Edison	2312	1	93	6	0	53	23
Miami Jackson	2557	1	47	52	0	54	11
Miami Killian	3475	33	21	43	3	20	4
Miami Norland	2369	1	93	5	1	25	2
Miami N'western	3038	1	92	7	1	47	1
High School Total	Total	%	%	%	%	%	%
Miami Palmetto	3402	55	16	23	5	9	2
Miami Southridge	4024	17	40	41	2	35	4
Miami Springs	4022	8	10	81	1	28	15
Miami Sunset	3900	21	5	71	3	21	8
New World School of Arts	480	39	21	35	4	18	2

Table A1 Continued

Name	Enroll- ment	White	African Amer.	Hispanic	Other	Free/Red Lunch	Limited English
North Miami	3347	5	78	16	2	26	15
N. Miami Beach	2595	13	59	24	4	26	8
South Dade	2611	31	22	45	1	36	5
South Miami*	2865	10	11	77	1	37	12
S'west Miami	3495	15	3	81	1	26	7
William Turner Technical Arts	1947	4	52	43	1	57	4
District Total	95,496	13	33	53	2	36	9

*school not included in the sample

Table A2

Diversity Assessment Questionnaire (DAQ) Items Included in Each Composite (all response choices in likert scale).

Composite: Live Work

After high school, how prepared do you feel to work in a job setting where people are of a different racial or ethnic background than you are?

How do you believe your school experiences will affect your ability to work with members of other races and ethnic groups?

How likely are you to go to a college that has students of different racial and ethnic backgrounds?

How likely do you think it is that you will work with people of racial and ethnic backgrounds different from your own?

Please tell us how interested you are in attending a racially/ethnically diverse college campus.

Please tell us how interested you are in living in a racially/ethnically diverse neighborhood when you are an adult.

Please tell us how interested you are in working in a racially/ethnically diverse setting when you are an adult.

Indicate to what extent classroom or extracurricular activities offered through your high school changed your interest in living in a racially/ethnically diverse setting when you are an adult.

Table A2 Continued

Composite: Citizenship

Indicate to what extent classroom or extracurricular activities offered through your high school changed your interest in current events.

Indicate to what extent classroom or extracurricular activities offered through your high school changed your interest in reading about what is happening in other parts of the world.

Indicate to what extent classroom or extracurricular activities offered through your high school changed your interest in volunteering in your community.

Indicate to what extent classroom or extracurricular activities offered through your high school changed your interest in joining a multi-cultural club.

Indicate to what extent classroom or extracurricular activities offered through your high school changed your interest in participating in elections.

Indicate to what extent classroom or extracurricular activities offered through your high school changed your interest in staying informed about current issues facing your community and country.

Indicate to what extent classroom or extracurricular activities offered through your high school changed your interest in taking leadership roles in your school.

Indicate to what extent classroom or extracurricular activities offered through your high school changed your interest in living in a racially/ethnically diverse setting when you are an adult.

Indicate to what extent classroom or extracurricular activities offered through your high school changed your interest in working to improve relations between people from different backgrounds.

Indicate to what extent classroom or extracurricular activities offered through your high school changed your interest in running for public office some time in the future.

Indicate to what extent classroom or extracurricular activities offered through your high school changed your interest in taking leadership roles in your community.

Indicate to what extent classroom or extracurricular activities offered through your high school changed your interest in voting for a Senator or President from a minority racial/ethnic group.

Table A2 Continued

Composite: Support

To what extent have your teachers encouraged you to attend college?
 To what extent have your counselors encouraged you to attend college?
 How much information about college admissions have your teachers given you?
 (such as SAT, ACT, financial aid, college fairs, college applications).
 How much information about college admissions have your counselors given you?
 (such as SAT, ACT, financial aid, college fairs, college applications).
 To what extent have your teachers encouraged you to take Honors and/or AP
 classes?
 To what extent have your counselors encouraged you to take Honors and/or AP
 classes?
 At least one of my teachers takes a special interest in me.

Table A3
 Descriptive Statistics for Composite Variables

Composite	Mean	S.D.	Range
Live_Work	18.3	4.3	0-26
Citizenship	29.1	6.5	0-44
Support	16.3	4.5	0-26