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Does School Racial Composition Matter to Teachers: Examining Racial Differences in Teachers' Perceptions of Student Problems

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Abstract

This study investigates how teachers' perceptions of student problems are affected by school-level student/teacher racial compositions. Utilizing the full spectrum of student/teacher racial compositions, results from nonlinear models show that students, regardless of their individual racial background, will be evaluated partially on the racial composition of the school they attend. This conclusion holds irrespective of individual teacher race, although teacher racial identity influences the extent to which school composition matters. Findings suggest that White, but not Black or Hispanic, teachers are affected by teacher racial composition when making judgments about the severity of student problems.

Keywords

school racial composition, teacher perceptions, organizational demography

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Introduction

In the United States, roughly 83% of public school teachers identified as White in the most recent public release of the National Center for Education Statistics's (2012) Schools and Staffing Survey. Meanwhile, approximately 23% of elementary and secondary school students are Hispanic while another 14% identify as Black (Davis & Bauman, 2013). According to the 2010 Census, above 50% of children below the age of 1 year are ethnic minorities (U.S. Census Bureau, 2012). This means that not only are current compositions of elementary and secondary school students increasingly minority, but future cohorts will likely be composed largely of students from minority race/ethnic groups. Barring a dramatic shift in the demographic profile of teachers in the United States, White teachers more likely will continually teach students who are racially different from themselves. These demographic transitions are especially important for urban education as cities are transforming from White majority to minority majority such that in 2010, 58% of the largest metro areas were minority majority (Frey, 2011). Research investigating substantive differences in how racial organizational structure affects teachers' perceptions of the school they work in is vital considering the current trends in teacher and student racial compositions. Much research has investigated individual teacher–student relationships (Dee, 2004; Downey & Pribesh, 2004; McGrady & Reynolds, 2013), while other studies have focused on the equally elaborate teacher–school relationship (Fairchild et al., 2012; Morris, 2005; Renzulli, Parrott, & Beattie, 2011). Yet, few studies have concentrated on how school context affects teachers' perceptions, attitudes, and actions toward students (Martinez, McMahon, & Treger, 2015; Morris, 2005; Watson, 2011). The analyses presented here fill this void.

To explore the influence of school context on teachers, I investigate how school racial composition affects teachers' perceptions, particularly their perceptions of student problems. The research questions addressed are as follows:

> **Research Question 1:** How do student and teacher racial compositions measured at the school level affect teachers' perceptions of students?
> **Research Question 2:** Does the potential impact of school context differ for teachers of different racial groups on their perceptions of the student body?

Past findings on the effect of race on teacher–student and teacher–school relationships guide hypotheses to answer these questions. Organizational demography is used as an empirical framework in constructing the analytic

strategy. To begin examining these research questions, it is important to first document previous research on the effect of race on teacher–student relationships and the effect of school racial composition on teachers' behavior.

Research on the Role of Race in Teacher–Student Relationships

Research investigating the salience of racial disparities in teacher–student interactions is important for many reasons. Teachers serve as gatekeepers (Farkas, Grobe, Sheehan, & Shuan, 1990; Zimmerman, Khoury, Vega, Gil, & Warheit, 1995) to students' education and knowledge acquisition. Teachers also contribute to a child's educational experience both directly and indirectly as students' thoughts and feelings toward school are influenced in part by teacher attitudes and support (Ferguson, 1998; Hallinan, 2008). For example, students with positive feelings about school are less likely to have problems with absenteeism, dropping out, discipline, and have more positive outcomes in achievement and behavior (Hallinan, 2008). Teachers also serve as significant others in influencing students' status aspirations, which are correlated with educational attainment (Bozick, Alexander, Entwisle, Dauber, & Kerr, 2010). Considering the importance of teachers in the development of students, any systemic bias (examined here in the form of racial bias) in this relationship is important to investigate and, if necessary, mediate.

Research supports the effect of racial differences on the following: (a) how teachers evaluate students (Downey & Pribesh, 2004; McGrady & Reynolds, 2013), (b) the expectations that teachers have of students (Brown et al., 2003), (c) the treatment of students (Dee, 2004; Morris, 2005), and (d) the commitment teachers have toward students as displayed by teacher turnover and satisfaction (Fairchild et al., 2012; Renzulli et al., 2011). These racial differences can either have positive or negative outcomes for the student based on their race and the teachers' race (Dee, 2004; Frankenberg, 2006; McGrady & Reynolds, 2013). Generally, White students are rated higher on teacher evaluations (Downey & Pribesh, 2004; McGrady & Reynolds, 2013), given more praise (Casteel, 1998), and have higher expectations of what they can achieve (Brown et al., 2003). Non-White students may benefit from racial differences when they are matched with a teacher of their own race or cultural background (McGrady & Reynolds, 2013). Due to the overrepresentation of White teachers in schools, minority students often do not experience this benefit.

Attempts to explain race-based differences in education research often do so by appealing to larger organizational contexts as the reason racial differences are found. It is argued that what appears to be discriminatory behavior

based on race could be explained by one or more intervening variables (Ferguson, 1998; Mueller, Finley, Iverson, & Price, 1999). For example, teacher perceptions could be linked to school characteristics as teachers may think more negatively when in the context of under-resourced schools. Because minorities attend these schools more often, it leads to an appearance of race-based discrimination when the negative perceptions may be due to limited resources instead. The present study informs this discussion by including measures for school resource availability along with teachers' racial background, and the school's racial composition across different school types and grade levels. Organizational demography provides an excellent empirical framework for considering how school racial composition may influence teachers' perceptions of students.

Organizational Demography Framework

Organizational demography postulates that the demographics of an organization matter through the mechanism of similarity attraction which predicts that individuals will gravitate toward others who share similar attributes (e.g., gender and race) as themselves (Maume & Sebastian, 2007; Stainback & Irvin, 2012). The process of similarity attraction may be seen as teachers may feel more acquainted with contexts where they share the same racial identity as a majority of students/teachers. In contexts where they are not the majority, teachers may judge the student body based on stereotypes—this is especially true if teachers have had little interaction with the majority group in other social settings (Frankenberg, 2006; Renzulli et al., 2011). Like most individuals, teachers' interaction with members from other racial groups may occur where they live and work. Given the structure of metropolitan areas where Hispanic–White and Black–White segregation remain high (Lichter, Parisi, & Taquino, 2015), and increasing at the macro-level (Lichter et al., 2015; Reardon et al., 2009), White-minority residential interactions are likely to remain limited. Teachers' workplace provides another outlet for interactions with minorities via their peers and students. In this sense, the extent to which schools remain segregated is an important indicator of potential interaction.

School racial segregation remains high with Black–White dissimilarity values around 44 within school districts and 62 between school districts for metropolitan areas in 2010 (Logan, Zhang, & Oakley, 2017). There has been much debate concerning the resegregation of schools with some scholars noting increased segregation in the 1990s (Orfield, Frankenberg, & Lee, 2003; Orfield & Lee, 2007) while others finding compositional changes in metropolitan areas as the reason for this apparent resegregation (Fiel, 2013; Logan,

2004; Logan et al., 2017; Orfield & Lee, 2007; Stroub & Richards, 2013). However, most recent studies agree that after 1990, the rate of school desegregation has slowed, if not plateaued (Fiel, 2013; Logan et al., 2017; Stroub & Richards, 2013). Researchers also note that future segregation trends may be complicated with the rise of charter schools and rapidly changing metropolitan demographics where steady increases in the minority population are seen (Fiel, 2013).

If White teachers remain residentially segregated and work in schools with a large amount of segregation, then it is likely that interaction with racial minorities will be limited. The consequence of this situation is that Whites will respond differently than minority group members when in settings where they are not part of the racial majority (Mueller et al., 1999; Stainback & Irvin, 2012). This stems from the idea that minorities are accustomed to being a part of the subordinate group and have developed coping mechanisms for dealing with this social setting. Conversely, Whites have not developed the same mechanisms considering, the strong possibility, they have had limited interactions with racial minorities (Mueller et al., 1999; Renzulli et al., 2011). As Jupp and Slattery (2012) note, teachers bring these discursive contexts into schools which influence how teachers view themselves and their role within the school and how teachers view the school. They argue that teachers are not static in their identities or perceptions of school processes but are shaped through experience as teachers—I offer a test of this idea with the inclusion of years teaching in the school and profession to understand how experience may alter teachers' perceptions. The current study uses the organizational demography framework in an important way: By knowing a teacher's race and school racial composition, a test of how teachers respond to being in either the majority or minority racial group in terms of their perceptions of the student body is executed.

Data and Method

Data are from the 2003-2004 Schools and Staffing Survey restricted-use data files and are made available by the National Center for Education Statistics. The Schools and Staffing Survey is conducted by the National Center for Education Statistics and has four components, which include the School Questionnaire, the Teacher Questionnaire, the Principal Questionnaire, and the School District Questionnaire. The questionnaires are sent to a sample of respondents in public, public charter, private, and Bureau of Indian Education/tribal schools with questions about school demographics and teacher and principal perceptions of school problems, school attributes, and characteristics of the student population included in the various surveys. The sample of

schools is based on a stratified probability sample design with public and private schools oversampled based on certain characteristics. Once the school sample is obtained, teachers within the schools are stratified and sampled based on their attributes. These data contain both school-level and teacher-level variables. The data set allows for stratification on race and ethnicity of teachers and includes necessary student and teacher racial composition measures. The data also contain school-level characteristics such as proxies for poverty, school location, and school urbanicity, which allow for a proper investigation of the research questions (Tourkin et al., 2007).

Dependent Variable

The dependent variable is an index created using responses from the teacher survey concerning problems with students including the following: student tardiness and absenteeism, cutting class, pregnancy, dropping out, apathy, and being unprepared to learn. Teachers were asked, "To what extent is each of the following a problem in this school? Indicate whether it is a serious problem, a moderate problem, a minor problem, or not a problem at all at this school." The Likert-type scale was coded from 0 to 4, reversing when necessary, so that larger numbers indicate more perceived problems. Altogether, there were 11 items asked for teachers to indicate the extent to which the item was a problem in the school. A promax rotated factor procedure was carried out on the polychoric correlation matrix of these 11 items as detailed by Ham, Neilands, and Dolcini (2001). This specific method was used due to the ordinal nature of the question set which may yield different results if analyzed under traditional factor analysis procedures. The results of the promax rotated factor procedure on the polychoric correlation matrix yield similar results to an orthogonal rotated analysis where seven of the 11 items load on the same factor. The four items left out asked teachers about students' health, poverty status, parental involvement, and teacher absenteeism. Considering the research question, these four are dropped from the index because they did not pertain to items students arguably have direct control over. Together the seven items used for the index have a standardized alpha score of .870. The items used in the index are similar to a factor loading by Djonko-Moore (2016) on similar data which the author defines as "teacher perceptions of student behavior."

It is important to emphasize that this index does not have to tie into any objective measure of student problems, for it captures teachers' perceptions. This is a strength of the dependent variable considering the subjective nature of racial bias. Had actual reports of student problems been used, questions surrounding how teachers subjectively judge students based on a school's

racial composition would be missed. Second, this dependent variable captures teachers' perceptions of students at the school and not necessarily in their classroom, that is, teachers may have never been exposed to these problems nor had an interaction with an individual student engaged in these problems. In this way, this study deviates from typical studies of teacher–student racial mismatch and delves deeper into how school context affects teachers' perceptions of student behavior.

Independent Variables—Teacher Level

Basic individual teacher demographic variables were included in the analysis as controls including sex, age, income, level of education, and teaching experience. For a complete list of teacher-level independent variables and their means, refer to Table 1. As most teachers are females, it was important to control for sex in this model to see if there are gendered biases in perceiving student problems (Frankenberg, 2006, Institute of Education Sciences, n.d.). The age and income variables are continuous variables with the income being divided by US$1,000 for presentation purposes (effect sizes would be too small to present if "per US$1 increase" was used). The level of education variable is a dummy variable, with teachers with a master's degree being the reference category. To control for teaching experience, three variables were used in the model including total years of teaching experience, total years of teaching experience at the school being surveyed, and total number of hours a teacher reported working during the most recent full week of teaching.

It is known that violent acts directed at teachers will have a negative effect on their teaching and emotional well-being (Wilson, Douglas, & Lyon, 2011) and may consequentially cause them to view students in a more negative light. Therefore, a dummy variable was included for teachers who have ever been physically attacked by a student (1 = yes). Dissatisfaction among teachers is associated with teachers' attitude toward students and student outcomes, including an increase in disciplinary problems (Louis, Marks, & Kruse, 1996). Considering this association, controls for teacher satisfaction were included. First, teacher satisfaction was measured with a question asking how satisfied the teacher is working at their current school. Another measure of teacher satisfaction was measured by an index of the teachers' perception of school management. The index was created using answers to five questions about the principal and school administration with higher scores indicating that the teacher feels more positively about school management. Finally, another index was included to measure how autonomous a teacher feels in their classroom. The index was created using a combination of six responses to how much control a teacher feels they have in their classroom in terms of

Table 1. Means and Variable Definitions for Dependent Variable and Teacher-Level Variables (Teacher *N* = 21,030).

Variables	Variable description	*M*	*SE*
Dependent variable			
Student Behavior Scale	Scale: Standardized alpha = .870		
	Combination of seven questions: Student problem in (a) tardiness, (b) absenteeism, (c) cutting class, (d) pregnancy, (e) drop outs, (f) apathy, and (g) unprepared to learn	10.54	0.06
Level 1 variables			
Sex	Dummy variable = 1 if male	0.60	0.00
Age	Continuous variable for teacher's age	42.86	0.08
Income	Continuous variable for teacher's income divided by US$1,000	43.72	0.12
Masters	Dummy variable = 1 if teacher has Masters	0.48	0.00
Total hours worked	Continuous variable of total hours teacher worked in most recent full week of teaching	52.90	0.08
Years teaching—total	Continuous variable of total years teaching	14.86	0.07
Years teaching—school	Continuous variable of total years teaching at surveyed school	9.42	0.07
Teacher autonomy	Scale: Standardized alpha = .778		
	Combination of six questions whether teacher has control over the following in their classroom: (a) instructional materials, (b) content/skills taught, (c) teaching techniques, (d) evaluation of students, (e) discipline of students, and (f) homework assigned	21.07	0.02
View of administration	Scale: Standardized alpha = .861		
	Combination of five questions whether teacher agrees that (a) principal lets staff members know what is expected, (b) administration's behavior is supportive & encouraging, (c) principal enforces school rules for student conduct and backs up teacher when needed, (d) principal knows what kind of school is desired and communicates this, and (e) staff members are recognized for a job well done	11.32	0.03

(continued)

Table 1. (continued)

Variables	Variable description	*M*	*SE*
Attacked by student	Dummy variable = 1 if teacher has ever been attacked by a student	0.06	0.00
Satisfied with job	Question asking if teacher is generally satisfied being a teacher at school	2.43	0.01
WNH	Dummy race variable (1 = WNH)	0.87	0.00
Hispanic	Dummy race variable (1 = Hispanic)	0.04	0.00
BNH	Dummy race variable (1 = BNH)	0.06	0.00
ANH	Dummy race variable (1 = ANH)	0.01	0.00
ONH	Dummy race variable (1 = ONH)	0.02	0.00

Source. 2003-2004 Schools and Staffing Survey (restricted-use data); weighted using Method A Weighting.
Note. WNH = White not Hispanic; BNH = Black not Hispanic; ANH = Asian not Hispanic; ONH = Other not Hispanic.

instructional materials, content being taught, teaching techniques, evaluation of students, discipline of students, and the homework assigned. The teacher autonomy index and view of administration index I create correspond to Djonko-Moore's (2016) typology of "teacher control" and "teacher satisfaction," respectively.

As the main focus of this study revolves around the race of the teacher and their varying perceptions of student problems at different schools, a set of dummy variables controlling for teacher race was included in the models with categories being White non-Hispanic, Hispanic, Black non-Hispanic, Asian non-Hispanic, and Other non-Hispanic. Henceforth, the terms "White," "Black," "Asian," and "Other" will be used to describe teachers in these categories—it should be understood that teachers in these categories are not Hispanic.

Independent Variables—School Level

There are nine school-level variables used throughout this analysis. A series of dummy variables was included to control for the community setting of the school where urban (large or mid-sized central city) and suburban (urban fringe of large or mid-size city) schools are compared with rural (small town or rural community) schools (Roscigno, Tomaskovic-Devey, & Crowley, 2006). A set of dummy region variables are included to control for any lasting historical effects between schools in the South and the rest of the country (Plank, 1990). Two dummy variables capturing school type are included in the model where high schools are compared with middle schools and public

charter schools are compared with non-charter schools. The student–teacher ratio of the school is included in the model to control for the effect higher ratios may have on teachers' perceptions of student problems. The student–teacher ratio is a continuous variable calculated by the number of students in the school per full-time equivalent teacher. As area poverty statistics were not readily available for the schools in this dataset, a continuous variable measuring the percentage of the student body approved for the National School Lunch Program (free/reduced lunch services) is included as a proxy for schools dealing with economic disadvantage (Frankenberg, 2006; Renzulli et al., 2011). Student and teacher racial composition variables are included in various models throughout the analysis. Proportion Hispanic students/teachers, proportion White students/teachers, and proportion Black students/teachers are all continuous variables measuring the proportion of students and teachers of a given racial group in the survey school. Table 2 below displays the weighted means of the school-level variables in the sample.

Analytic Strategy

As stated earlier, the analyses here examine how school racial composition matters in terms of teachers' perceptions of student problems. This examination is carried out through two analyses. First, a general test of the effect of school racial composition on teachers' perceptions of student problems was executed. These models included a set of dummy variables controlling for a teacher's race along with the school's student–teacher racial composition. Aside from the general test, models were stratified by teacher race to see how the potential effects of school racial composition vary by teachers of different racial backgrounds. Given small sample sizes of Asian teachers and teachers of other racial identities, they were excluded from the stratified analyses. Curvilinear effects for student–teacher racial composition are included in all models. The inclusion of curvilinear terms frees models from issues of sensitivity that are found when arbitrary thresholds are used to define minority status. For example, past research on the effects of racial composition on teachers' behavior have used different cutoff points ranging from 40% to 70% to determine when a particular racial group should be considered the majority (Fairchild et al., 2012; Mueller et al., 1999; Renzulli et al., 2011). Furthermore, due to socially constructed power relations, by maintaining the continuous nature of the school racial composition variables, this study allows researchers to see how teachers from different racial groups are distinctly affected by organizational racial composition. The inflection points for the curvilinear terms are calculated using the derivative of the polynomial function and can be interpreted as the point which a relationship changes direction.

Table 2. Means and Variable Definitions for School-Level Variables (School *N* = 3,260).

Variables	Variable description	Means	*SE*
Urban area	Dummy variable = 1 if in large city or mid-size central city	0.23	0.008
Rural area	Dummy variable = 1 if school in small town or rural area	0.30	0.008
Suburban area	Dummy variable = 1 if in urban fringe of large or mid-size city	0.47	0.009
Northeast	Dummy variable = 1 if school in Northeast	0.16	0.002
West	Dummy variable = 1 if school in West	0.23	0.003
Midwest	Dummy variable = 1 if school in Midwest	0.24	0.003
South	Dummy variable = 1 if school in South	0.37	0.003
Student–Teacher ratio	Continuous variable of number of students per full-time equivalent teacher	15.74	0.076
Lunch	Continuous variable measuring the percentage of student body approved for National School Lunch Program	33.08	0.398
Charter	Dummy variable = 1 if school is a public charter school	0.01	0.001
High school	Dummy variable = 1 if school is a high school	0.77	0.006
Proportion Hispanic student	Continuous variable of number of Hispanic students in school	0.10	0.003
Proportion White student	Continuous variable of number of White students in school	0.71	0.004
Proportion Black student	Continuous variable of number of Black students in school	0.13	0.003
Proportion Hispanic teacher	Continuous variable of number of Hispanic teachers in school	0.03	0.002
Proportion White teacher	Continuous variable of number of White teachers in school	0.88	0.003
Proportion Black teacher	Continuous variable of number of Black teachers in school	0.06	0.002

Source. 2003-2004 Schools and Staffing Survey (restricted-use data); weighted using Method A Weighting.

Given that the research question is about the context of the school in which a teacher works, multilevel ordinary least squares (OLS) regression was used

to analyze the dependent variable. For the purposes of this study, only schools considered regular secondary schools are analyzed which excludes special emphasis schools, vocational or technical schools, and alternative schools (Hallinan, 2008). Furthermore, only regular full-time and regular part-time teachers were left in the sample. These teachers have the best gauge of student problems at the school in comparison to substitute or temporary teachers who are more likely to have limited interaction with the student body in question. After the data were made to fit these methodological attributes, 3,260 of the original 7,816 sample schools with 21,030 of the original 40,280 teachers were left for the analyses. Weights are scaled using Method A scaling, which scales weights so that they sum to the cluster sample size (Carle, 2009) and adjust standard errors making it less likely for Type I errors to occur.

Results

Table 3 displays models using the analytic sample of 21,030 teachers. Model 1 in Table 3 shows results of the effects of teachers' race and teacher racial composition at the school level on teachers' perceptions of student problems. The results show that teachers who have been in the profession longer perceive fewer student problems although longer tenured teachers at the survey school perceive more student problems. The inflection point shows that the effect changes direction after a teacher has taught in the school for 25 or more years. Jupp and Slattery (2012) call for research on identification creativity that seeks to understand the growth and change of teachers as influenced by knowledge of students, subject matter, and school context. They are especially interested in how teachers become committed to inner-city students. The present study gives evidence that these understandings of school context (which includes in it a plethora of attributes that could be further disentangled) lead to teachers' perceiving more student problems. Further investigation is necessary before any definitive claims are made about selection issues with longer tenured teachers or how well these perceptions match reality.

Turning attention to the effect of teachers' racial identity shows that, on average, White teachers perceive more student problems than non-White teachers. Results in Model 1 also show that the proportion White, Hispanic, and Black teachers in a school significantly influences how teachers perceive student problems. The effect for the proportion Hispanic and Black teachers is moderated once student racial composition is accounted for as shown in Model 2.

In Model 2, only the proportion White teacher retains statistical significance as increases in the teacher racial composition are correlated with

Table 3. Multilevel OLS of Teachers' Perceptions of Student Problems on Teacher and School Characteristics.

	Model 1		Model 2	
Variables	β	*SE*	β	*SE*
Intercept	9.44***	0.66	11.38***	0.68
Level 1 variables				
Sex (Female = 1)	0.56***	0.05	0.55***	0.05
Age	−0.01**	0.00	−0.01**	0.00
Income	−0.01*	0.00	−0.01***	0.00
Masters (Yes = 1)	0.1†	0.05	0.12*	0.05
Total hours worked	0.02***	0.00	0.02***	0.00
Years teaching in profession	−0.01*	0.00	−0.01*	0.00
Years teaching at school	0.05***	0.01	0.06***	0.01
Years teaching at school[a]	−0.001***	0.00	−0.001***	0.00
Teacher perceptions				
Teacher autonomy	−0.08***	0.01	−0.07***	0.01
View of administration	−0.21***	0.01	−0.21***	0.01
Attacked by student (Yes = 1)	0.39***	0.10	0.38***	0.10
Satisfied with job	−0.67***	0.04	−0.66***	0.04
Individual race variables[b]				
Hispanic	−0.46***	0.14	−0.5***	0.14
Black not Hispanic	−0.91***	0.12	−0.94***	0.12
Asian not Hispanic	−0.41†	0.23	−0.49*	0.23
Other not Hispanic	−0.36*	0.17	−0.38*	0.17
Level 2 variables				
Urban[c]	0.88***	0.13	0.45***	0.13
Suburban[c]	−0.02	0.10	−0.16	0.10
Northeast[d]	0.46***	0.14	0.47***	0.14
West[d]	0.41**	0.13	0.34*	0.14
Midwest[d]	−0.21†	0.12	−0.11	0.12
Student–Teacher ratio	0.06***	0.01	0.05***	0.01
Free/reduced lunch	0.04***	0.00	0.03***	0.00
Charter school (Yes = 1)	−2.29***	0.54	−2.59***	0.53
High school (Yes = 1)	3.87***	0.10	3.87***	0.09
Teacher racial composition				
Proportion White teachers	6.39***	1.92	4.04*	1.96
Proportion White teachers[a]	−6.72***	1.53	−3.35*	1.67
Proportion Hispanic teacher	2.16	1.50	−2.22	1.88
Proportion Hispanic teachers[a]	−3.62†	1.92	1.88	2.12
Proportion Black teachers	4.14**	1.37	−0.48	1.87

(continued)

Table 3. (continued)

	Model 1		Model 2	
Variables	β	*SE*	β	*SE*
Proportion Black teachers[a]	−3.47*	1.72	1.51	2.02
Student racial composition				
Proportion White students			−5.33***	1.04
Proportion White students[a]			2.43**	0.84
Proportion Hispanic students			4.18***	0.96
Proportion Hispanic students[a]			−4.3***	1.10
Proportion Black students			4.98***	1.04
Proportion Black students[a]			−5.16***	1.05
AIC	112,033		111,693	
σ^2 β	4.11		3.57	
σ^2 ε	9.623		9.61	
School *N*	3,260		3,260	
Teacher *N*	21,030		21,030	

Source. 2003-2004 Schools and Staffing Survey (restricted-use data); weighted using Method A Weighting.
Note. OLS = ordinary least squares; AIC = Akaike information criterion.
[a]Curvilinear term. It is the squared term for the variable indicated.
[b]Reference category is "White not Hispanic."
[c]Reference category is "Small Town or Rural Area."
[d]Reference category is "South."
†$p < .1$. *$p < .05$. **$p < .01$. ***$p < .001$.

teachers perceiving more student problems. This relationship holds until the White teacher composition reaches 60.3%[1] at which point increases in the White teacher composition are correlated with fewer perceived student problems. The addition of student racial composition to Model 1 shows that student racial composition influences teachers' perceptions of student problems. Increases in the proportion Hispanic and proportion Black students are correlated with an increase in perceived student problems while increases in the proportion White students are correlated with decreases in perceived student problems. The curvilinear terms for the student racial composition variables are also statistically significant showing that slope direction changes occur for the proportion Hispanic at 0.486, for the proportion Black at 0.483 and for the proportion White at 1.10. The slope changes for the Hispanic/Black student composition show that when proportions reach ~48%, increases in the proportion Hispanic/Black are correlated with fewer perceived student problems. This finding is noteworthy and will be discussed in more detail in the subsection "Student Racial Composition Effects." As the inflection point for

the proportion White cannot be actualized (i.e., schools cannot be 110% White), the slope does not change direction within the range of possible proportions, and this effect should be thought of as the general trajectory for the effect of proportion White students on teachers' perceptions.

The models presented in Table 3 show that teacher and student racial composition influences teachers' perceptions of student problems. The models presented in Table 3 treat teachers as a homogeneous group in terms of how school racial composition affects their perceptions. Given the structure of race in American society and similarity attraction processes, one may expect that teachers of different racial groups respond to the school racial composition differently. Therefore, Table 4 presents results from models stratified by teachers' race including models for White, Hispanic, and Black teachers. It is important to note that due to space constrictions, only focal variables are presented, but all variables in previous models are included. Discussion first is focused on the effect of teacher racial composition on teachers' perceptions of student problems, then attention is given to the effect of student racial composition.

Teacher Racial Composition Effects

The stratified models in Table 4 reveal teacher racial composition at the school is significantly correlated with how White teachers perceive student problems, but not significant for Hispanic or Black teachers. To better illustrate the relationship between teacher racial composition and White teachers' perceptions of student problems, Figure 1 graphically displays the quadratic functions by teacher racial composition. As the proportion Black teachers in the school increases, White teachers perceive more student problems. Similarly, as Hispanic teacher composition increases, White teachers perceive fewer student problems until this composition reaches 46.9%. After this tipping point, increases in the Hispanic teacher composition are correlated with White teachers perceiving more student problems. Finally, increases in the White teacher composition are correlated with increases in perceived student problems. This relationship remains until the White teacher composition reaches 59.9% at which point increases in the White teacher composition are correlated with fewer perceived student problems. These results show that, for White teachers, increasing proportions of their peers who are Hispanic or Black are correlated with perceiving more student problems. Conversely, with increasing proportions of their White peers, White teachers perceive fewer student problems. Results for Hispanic and Black teachers are not graphed due to the nonsignificant relationship between teacher racial composition and perceptions of student problems. Next, attention is turned to the

Table 4. Effects of Teacher and Student Racial Composition on Teachers' Perception of Student Problems by Teacher Race.

	White teachers	Hispanic teachers	Black teachers
Teacher racial composition			
Proportion White teachers	4.882*	−0.085	0.033
Proportion White teachers[a]	−4.076*	1.691	0.7
Proportion Hispanic teacher	−3.743†	6.885	−3.505
Proportion Hispanic teachers[a]	3.935†	−5.684	11.499
Proportion Black teachers	−1.618	−4.668	1.739
Proportion Black teachers[a]	3.995†	10.815	−0.228
Student racial composition			
Proportion White students	−5.113***	−6.046†	−8.481*
Proportion White students[a]	2.371**	0.876	6.074*
Proportion Hispanic students	3.824***	6.199*	3.673
Proportion Hispanic students[a]	−2.889*	−9.305**	−6.395
Proportion Black students	5.026***	3.349	8.347*
Proportion Black students[a]	−4.821***	−3.937	−9.086**
Inflection points (student composition)			
White	1.073	—	0.698
Hispanic	0.662	0.333	—
Black	0.521	—	0.459
Intercept	10.981***	12.839***	11.018**
School *N*	3,200	470	600
Teacher *N*	18,160	710	1,210

Source. 2003-2004 Schools and Staffing Survey (restricted-use data); weighted using Method A Weighting.
Note. All models contain all control variables used throughout the analysis (full models available upon request).
[a]Curvilinear term. It is the squared term for the variable indicated.
†$p < .1$. *$p < .05$. **$p < .01$. ***$p < .001$.

effect of student racial composition on teachers' perceptions of student problems.

Student Racial Composition Effects

Figures 2, 3, and 4 take the results presented in Table 4 and graphically display the slopes for each teacher racial group by proportion student racial composition. These figures show a comparison of how increases in the proportion of each student racial group affect each teacher racial groups' perception of student behavior.

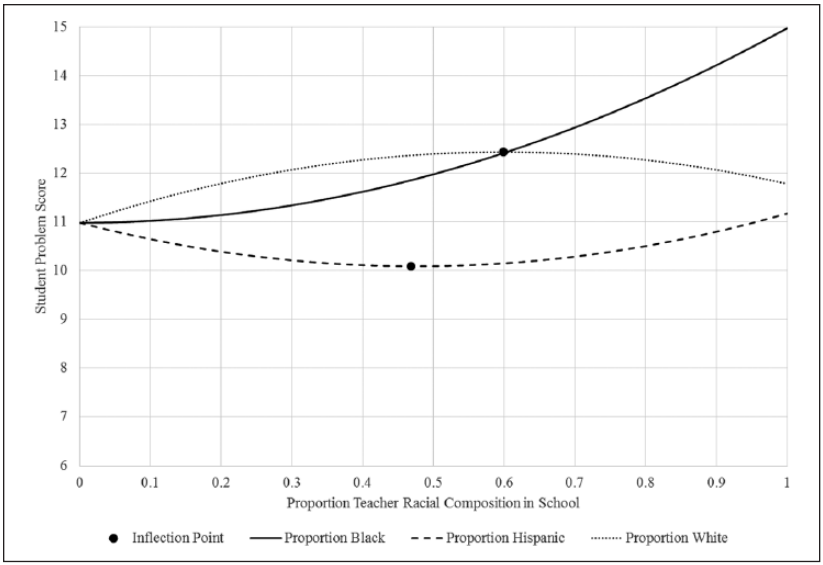

Figure 1. White teachers' perceptions of student problems by teacher racial composition.

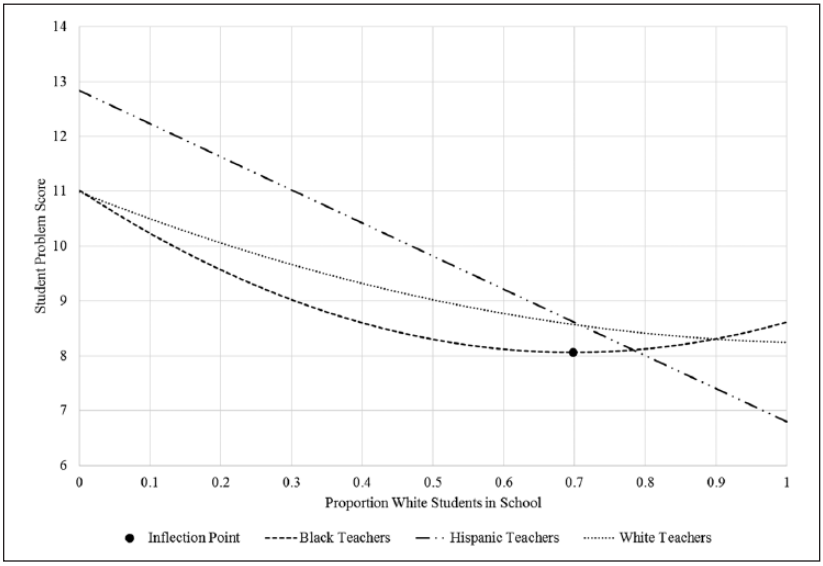

Figure 2. Proportion White students by teacher race.

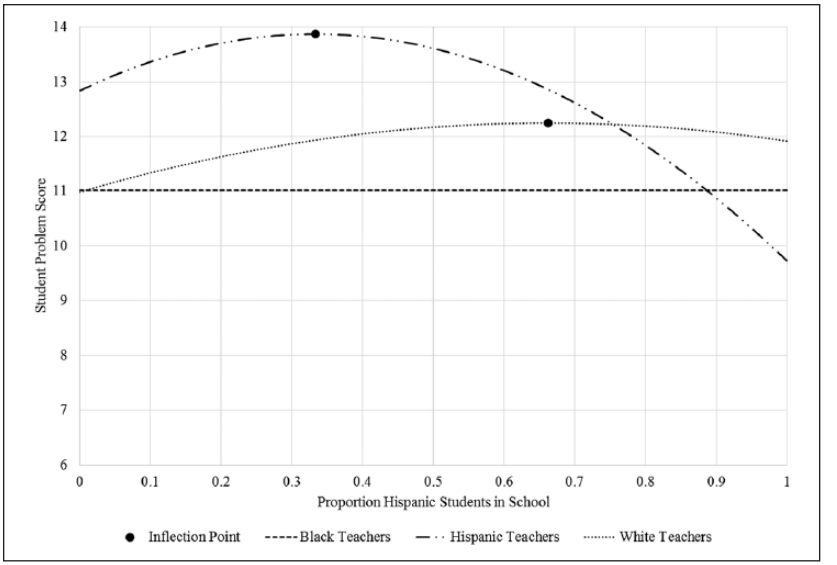

Figure 3. Proportion Hispanic students by teacher race.

Figure 2 displays the slopes of each teacher racial group for the White student composition. In this figure, the slope for Black teachers decreases with increases in the White student composition, but changes direction when this composition reaches 70%. At this point, increases in the White student composition lead Black teachers to perceive more student problems in the school. A curvilinear effect does not exist for Hispanic teachers, so their slope is graphed as a linear relationship showing that increases in the White student composition are correlated with perceiving fewer problems. When comparing Hispanic teachers to others, they perceive more student problems when the White student population is below 70%, but once this composition rises above 70%, Hispanic teachers perceive fewer student problems compared with Black or White teachers. The slope for White teachers remains on a steady downward trajectory as higher compositions of White students are correlated with lower scores on the student problem index.

Figure 3 displays the slopes of each teacher racial group for the Hispanic student composition. The slope for Black teachers is modeled as a straight line equal to the intercept to show the nonsignificant effect of the Hispanic student composition on Black teachers' perceptions. When displayed this way, Black teachers report the lowest score on the student problem index until the Hispanic student composition reaches around

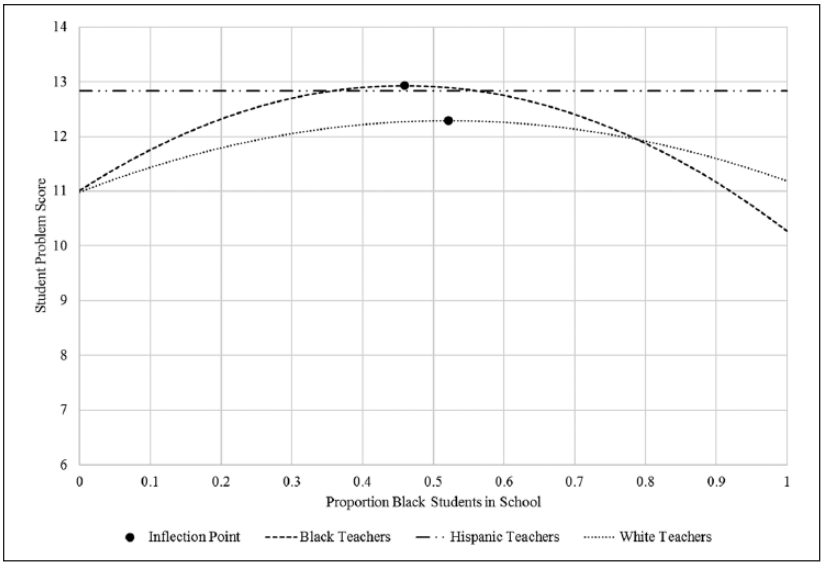

Figure 4. Proportion Black students by teacher race.

90%. At this composition, Hispanic teachers perceive the fewest student problems compared with Black and White teachers. The slope for Hispanic teachers has the most dramatic change as Hispanic teachers perceive the most student problems when the Hispanic student composition is about 33%. From this peak, a sharp decrease in the slope occurs leading to about a 4-point change in the student problem score at 100% Hispanic students. The slope for White teachers has an upward trajectory where increases in the proportion of Hispanic students are correlated with increases in the student problem score. This relationship holds until the Hispanic student composition reaches 66%. At this point, a change in direction occurs where increases in the Hispanic composition lead to decreases in the student problem score. Although this directional change exists, it is substantively minor as the student problem score hovers around 12 beginning around 35% and holds fairly steady up until the composition is at its maximum. Furthermore, after the Hispanic student composition reaches 75%, White teachers perceive more student problems than their Black or Hispanic peers.

Figure 4 displays the slopes for each teacher racial group for the Black student composition. The intercept is modeled for the slope of Hispanic teachers to show the nonsignificant finding of the effect of Black student

racial composition on Hispanic teachers' perceptions. The slope for Black teachers is the most volatile with a maximum score around 13 and a minimum score close to 10. When the Black student composition is about 45%, Black teachers perceive the most student problems compared with all other teachers. After this point, increases in the Black student composition are correlated with decreases in the student problem score. The decline is so steep that after the Black student composition reaches 80%, Black teachers perceive fewer student problems compared with their peers. Interestingly, the slope for White teachers also changes direction. After the Black student composition reaches 52%, increases in the composition are correlated with decreases in the student problem score. This change in direction at larger compositions of Black students is not predicted by similarity attraction processes. Hypotheses state that Whites will respond more negatively when they are in situations where they are not the majority due to a lack of social capital preparing them for such situations. The exact opposite is witnessed through results shown in Figure 4 and, to a smaller extent, Figure 3.

Looking across all figures shows that teachers, regardless of racial identity, perceive fewer student problems at larger White student compositions. Predicted scores never rise above ~9 after the White student composition reaches 65% whereas predicted scores never drop below 9 for the entire continuum of Black and Hispanic student compositions. As mentioned earlier, using the entire continuum of student racial composition allows the complexity of the relationship between teacher racial identity and student racial composition to be realized. To align this study and compare it with previous studies (Fairchild et al., 2012), I completed analyses, not presented here, which assumed a 70% cutoff point to determine when a student racial composition constituted majority status. Results showed that in schools with 70% or more Black or Hispanic students, White teachers perceived more student problems than Black or Hispanic teachers. But in schools with 70% or more White students, no statistically significant difference was found between teachers of different racial groups.

Using solely a dichotomized analysis would have evidenced similarity attraction processes and fit common narratives of how Whites are different than minorities in terms of their racialized views. Although the findings presented earlier give evidence toward this conclusion, using the full continuum of student racial composition paints a more complex picture of the racialized organizational relationships that individuals experience. For example, White teachers' perceptions changed when the Black student composition reached 52% and when the Hispanic student composition reached 66%. Also, Hispanic teachers had lower scores than White teachers at the highest levels of the White student composition—similarity attraction processes would predict

that White teachers would have had the lowest scores. If the entire continuum of compositions were not used, these important nuances in the data would have been missed.

Discussion

The analyses contribute to literature on organizational demography in the institution of education by finding that student and teacher racial composition at the school level influence teachers' perceptions of student problems. This study makes methodological advances which inform discussions on the relationship between organizational racial composition and individual racial identity. Previous studies on schools' compositional influences use school typologies where demarcations of minority schools are determined by some pre-assigned percent minority threshold (Fairchild et al., 2012; Mueller et al., 1999; Renzulli et al., 2011). Replication results in the current study indicate very different conclusion based on the type of methodology used to determine organizational racial composition. On one hand, when aligning with previous research and using a 70% threshold to determine minority status, traditional narratives of White difference are confirmed where White teachers perceive more student problems in minority schools. On the other hand, when nonlinear relationships are modeled across the entire spectrum of school racial composition, a more complex story emerges.

Results from nonlinear racial composition models show that students, regardless of their individual racial background, will be evaluated based partially on the racial composition of the school they attend. This conclusion holds irrespective of individual teacher race though teacher racial identity influences the extent to which school composition matters in evaluations of student problems. For example, although increases in the proportion White students in a school generally leads to fewer perceived student problems for Black, White, and Hispanic teachers, the rate of change is a lot greater for White teachers. This steeper slope results in White teachers reporting fewer student problems compared with their peers once the White student composition reaches above ~78%.

These analyses also reveal some counterintuitive findings. In the global model, increases in Hispanic and Black student compositions are correlated with fewer perceived student problems once these compositions reach ~48%. The results from the stratified teacher samples show that this relationship is being partially driven by the lower scores given by Hispanic and Black teachers in largely Hispanic and Black schools, respectively. Although the stratified models also revealed that White teachers perceive fewer problems as compositions of Hispanic and Black students rose above 66% and 52%,

respectively. This finding does not appear to fit into traditional understandings of racial mismatch contributing to more negative outcomes (Fairchild et al., 2012; Renzulli et al., 2011). Part of the divergence in findings may be attributed to methodological differences.

Although here I emphasize the results that do not fit traditional narratives, I would remiss if I did not restate the finding that teachers of all racial backgrounds perceived more problems in schools that had large compositions of Hispanic and Black students compared with schools with large compositions of White students. This finding may be explained using a deficit notion perspective. That is, if schools with a large proportion of students of racial minorities are viewed as in need or have an inability to conform to normative ideals of behavior, then teachers may expect to find problems among students in these schools which would pre-bias their viewpoint. In investigating student disciplinary referrals, Martinez et al. (2015) explain racialized differences in referrals through the lens of critical race theory where differences exist because teachers have pre-existing beliefs about Black student behavior.

Also, if teachers enter into schools through programs such as Teach for America (TFA), which is known to target at-risk schools, teachers may have a biased entering posture as they assume placement in these schools means that students face many problems. Thus, it would be important to know the motivations as to why teachers work at schools that comprised large minority compositions. As Renzulli et al. (2011) theorize, there may be a difference between teachers who actively choose to teach in predominately minority schools and teachers who were forced into the situation. Teachers may be forced into the situation through a lack of other opportunities or the shifting demographics around them. Teachers who choose to teach in these schools may do so out of a sense of social justice and have a completely different entering posture. If there are differences among teachers who actively choose to teach in these schools compared with those who are forced into the situation, it may shine light on why teachers perceive student problems the way they do. Drawing on suggestions from Jupp and Slattery (2012), it is also important to consider how tenure in schools influences teachers' perceptions of student behavior and their motivations to remain in or leave their teaching school or the profession altogether. Future studies may include teacher follow-up information to determine if statistical differences exist in teachers' perceptions of student behavior for teachers who remain in the school versus those who exit.

The findings presented here are especially important considering the trend toward more diverse racial compositions of school aged youth (U.S. Census Bureau, 2012). As student populations in schools become more diverse, how teachers' perceptions of student problems are affected by an increased

presence of minority students will become increasingly important. Figure 1 offers insight into this matter as lower proportions of White students are correlated with more perceived student problems by teachers of all racial backgrounds. Considering links between teacher commitment/mobility and school racial composition (Fairchild et al., 2012), and teachers' perceptions of students (Djonko-Moore, 2016), understanding how to attenuate the influence of school demography on teachers' perceptions is important. In addition to understanding the significance that an increasingly diverse student body has on teachers' perceptions, the findings also show that when White teachers evaluate student problems at the school, they will also consider the racial composition of their peers.

These results raise questions around why teacher racial compositions will affect how White teachers view student problems. Previous work investigating the role of racial composition in the institution of education revolve around how these compositions affect teachers' own attitudes and commitment to the profession of teaching (Fairchild et al., 2012; Renzulli et al., 2011), yet little is said about how these compositions may affect teachers' views of students. Theoretical development, beyond the scope of this article, is needed to better tie teacher racial composition to teachers' views of students.

Future research can complement this study by investigating the professional background of teachers teaching in schools with large minority compositions. Again, the findings presented throughout this article show the importance of having more nuanced analyses regarding how organizational demography matters to teachers' attitudes and perceptions of the schools they work in. Although the complexity of racial composition is explored through the addition of curvilinear effects, the analyses still do not account for the racialized structure of the institution of education which values White-middle class cultural values above others (Matias et al., 2014). Another component missing in this current study is an investigation into the extent that differing perceptions matter pragmatically in how teachers treat students of different racial backgrounds.

Work from Martinez et al. (2015) give some insight into this question as they theorize potential mechanisms of racialized differences in student disciplinary referrals to be linked to teachers' perceptions of race and skin color. Similarly, it is important to know how students may respond to these negative perceptions (McGrady & Reynolds, 2013). Knowing this information can help in understanding the types of teacher trainings that are needed to curtail the influence of school racial composition.

One critique of this article is that the findings may be masking underlining socioeconomic factors driving the noted racial differences (Farkas et al., 1990; Zimmerman et al., 1995). As socioeconomic status and race are

highly associated (Conneely, 2008), it may be difficult to separate the effects of one from the other when studying differences in teacher perceptions. I attempt to control for socioeconomic factors by including measures of teacher education level, teacher income, tenure, and age. The advantage that these analyses possess is that it compares individuals with similar occupational prestige, theoretically limiting occupation driven socioeconomic differences. Admittedly, these controls do not account for the nuanced backgrounds that teachers enter the classroom with (i.e., their discursive contexts) and that may contribute to their socioeconomic status. Therefore, future research should investigate the influence of socioeconomic status on teachers' perceptions of students. This contribution will help further distinguish between effects based on the structures of race in the institution of education and socioeconomic status. These analyses rely on a perceptual measure of student problems, which is helpful in understanding how these perceptions differ based on a teacher's racial identity. An important next step is to compare these subjective measures with objective ones to see how closely teachers' perceptions align with actual reports of student problems. Although this suggested analysis helps in understanding how much bias exists in teachers' perceptions, it is not entirely objective—for even enumerated counts of student problems may be lower than actual problems in schools with higher proportions of White students.

Conclusion

The findings presented in this article suggest that school racial composition matters for teachers' perceptions of student problems. It is important to put any discussion of racial differences/identity in historical and social context. Understanding that race is a social construction with no biological basis, the racial differences found in this study should not be explained by innate characteristics of those identifying as White, Black, or Hispanic. Instead, they should be explained by the context in which these teachers are socialized and trained. Considering that neighborhoods in most major American cities are still segregated by race (Sampson, 2012; Sharkey, 2013), White, Black, and Hispanic teachers more than likely have had different socialization experiences. For example, it is possible that White teachers have had limited interactions with minorities and experience a type of culture shock when teaching at schools with high concentrations of minority students. This is not to say that minorities exhibit more problems, but distinct cultural behaviors may be perceived as problematic (Downey & Pribesh, 2004). As evidenced by Groulx (2001), who reports preservice teachers expressing lower levels of interest and comfort in teaching at Hispanic and Black schools compared

with suburban or private ones due in part to perceptions of safety and resource availability at minority schools.

The results give mixed support for this idea as White teachers perceive more student problems in schools with high compositions of Hispanic students. Yet, in schools with high compositions of Black students, Hispanic teachers perceive the most student problems. These results highlight the importance of considering the racialized experiences of other racial groups in research that has so often been dichotomized into Black–White comparisons. Thinking about the role that socialization and teacher training plays into teacher development can help explain the racial differences found in this study better than sweeping generalizations, such as "White teachers think more negatively of minority students."

To help curtail the influence of school racial composition discussed in this article, teacher training may need to be adapted to allow exposure to and understanding of different racial and cultural groups (Groulx, 2001; Sleeter, 2001). Regardless of race, this would help teachers become more impartial in terms of superficial qualities of students and allow for fewer biases in assessments of students. Second, increasing the number of minority teachers should be a goal in the institution of education. This would help provide role models to an increasingly minority student population and expose White students to professional minorities, challenging common societal racial narratives (Frankenberg, 2006). These recommendations will take time and attention to systemic discrimination in the teaching profession that begins way before students of color consider teaching as a career option. Recruiting minority teachers goes beyond inclusive advertising or targeted recruitment, but begins in the very institutions where minority students experience the discrimination these recruitment strategies set out to eradicate. The circularity of this problem is not cause for frustration but truly calls for policies that set out to tackle structural racism. Race still matters in discussions of student achievement, but ignoring the problem is hardly a way to remedy it. Instead, public, district, and school policy informed by active and relevant research can go a long way in continuing the process of racial reconciliation, which began with fervor and sacrifice by many who dreamed of a day when race would no longer be a relevant factor in determining the way which any citizen or student is evaluated.

Author's Note

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Note

1. Throughout this article, racial composition will be discussed as proportions and percentages where percentages are calculated as the proportion multiplied by 100.

References

Bozick, R., Alexander, K., Entwisle, D., Dauber, S., & Kerr, K. (2010). Framing the future: Revisiting the place of educational expectations in status attainment. *Social Forces*, *88*, 2027-2052.

Brown, M. K., Carnoy, M., Currie, E., Duster, T., Oppenheimer, D. B., Shultz, M. M., & Wellman, D. (2003). Keeping Blacks in their place: Race, education, and testing. In *Whitewashing race: The myth of a color-blind society* (pp. 104-131). Berkeley: University of California Press. Avalaible at: http://www.jstor.org/stable/10.1525/j.ctt1pn8hj.

Carle, A. C. (2009). Fitting multilevel models in complex survey data with design weights: Recommendations. *BMC Medical Research Methodology*, *9*, Article 49.

Casteel, C. A. (1998). Teacher-student interactions and race in integrated classrooms. *The Journal of Educational Research*, *92*, 115-120.

Conneely, N. (2008). After PICS: Making the case for socioeconomic integration. *Texas Journal of Civil Liberties & Civil Rights*, *14*, 95-125.

Davis, J., & Bauman, K. (2013). *School enrollment in the United States: 2011*. Washington, DC: U.S. Census Bureau.

Dee, T. S. (2004). Teachers, race, and student achievement in a randomized experiment. *The Review of Economics and Statistics*, *86*, 195-210.

Djonko-Moore, C. M. (2016). An exploration of teacher attrition and mobility in high poverty racially segregated schools. *Race Ethnicity and Education*, *19*, 1063-1087. doi:10.1080/13613324.2015.1013458

Downey, D. B., & Pribesh, S. (2004). When race matters: Teachers' evaluations of students' classroom behavior. *Sociology of Education*, *77*, 267-282.

Fairchild, S., Tobias, R., Corcoran, S., Djukic, M., Kovner, C., & Noguera, P. (2012). White and Black teachers' job satisfaction: Does relational demography matter? *Urban Education*, *47*, 170-197. doi:10.1177/0042085911429582

Farkas, G., Grobe, R. P., Sheehan, D., & Shuan, Y. (1990). Cultural resources and school success: Gender, ethnicity, and poverty groups within an urban school district. *American Sociological Review*, *55*, 127-142.

Ferguson, R. F. (1998). Teachers' perceptions and expectations and the Black-White test score gap. In C. Jencks & M. Phillips (Eds.), *The Black-White test score gap* (pp. 273-317). Washington, DC: Brookings Institution Press.

Fiel, J. E. (2013). Decomposing school resegregation: Social closure, racial imbalance, and racial isolation. *American Sociological Review*, *78*, 828-848. doi:10.1177/0003122413496252

Frankenberg, E. (2006). *The segregation of American teachers*. Cambridge, MA: The Civil Rights Project at Harvard University.

Frey, W. H. (2011). *Melting pot cities and suburbs: Racial and ethnic change in metro America in the 2000s*. Washington, DC: Brookings Institution.

Groulx, J. G. (2001). Changing preservice teacher perceptions of minority schools. *Urban Education*, *36*, 60-92. doi:10.1177/0042085901361005

Hallinan, M. T. (2008). Teacher influences on students' attachment to school. *Sociology of Education*, *81*, 271-283.

Ham, L., Neilands, T. B., & Dolcini, M. M. (2001). *Factor analysis of categorical data in SAS*. Western Users of SAS Software Conference 2001, September, San Francisco, CA.

Institute of Education Sciences. (n.d.). *Fast facts*. Washington, DC: National Center for Education Statistics.

Jupp, J. C., & Slattery, G. P. (2012). Becoming Teachers of Inner-City Students. *Urban Education*, *47*(1), 280-311.

Lichter, D. T., Parisi, D., & Taquino, M. C. (2015). Toward a new macro-segregation? Decomposing segregation within and between metropolitan cities and suburbs. *American Sociological Review*, *80*, 843-873. doi:10.1177/0003122415588558

Logan, J. (2004). *Resegregation in American public schools? Not in the 1990s*. Albany, NY: Lewis Mumford Center for Comparative Urban and Regional Research, University at Albany.

Logan, J. R., Zhang, W., & Oakley, D. (2017). Court orders, white flight, and school district segregation, 1970-2010. *Social Forces*, *95*, 1049-1075. doi:10.1093/sf/sow104

Louis, K. S., Marks, H. M., & Kruse, S. (1996). Teachers' professional community in restructuring schools. *American Educational Research Journal*, *33*, 757-798.

Martinez, A., McMahon, S. D., & Treger, S. (2015). Individual- and school-level predictors of student office disciplinary referrals. *Journal of Emotional and Behavioral Disorders*, *24*, 30-41. doi:10.1177/1063426615588289

Matias, C. E., Viesca, K. M., Garrison-Wade, D. F., Tandon,M., & Galindo, R. (2014). What is Critical Whiteness Doing in OUR Nice Field like Critical Race Theory? Applying CRT and CWS to Understand the White Imaginations of White Teacher Candidates. *Equity & Excellence in Education, 47*(3), 289-304.

Maume, D. J., & Sebastian, R. (2007). Racial composition of workgroups and job satisfaction among Whites. *Annals of the American Academy of Political and Social Science*, *609*, 85-103.

McGrady, P. B., & Reynolds, J. R. (2013). Racial mismatch in the classroom: Beyond Black-White differences. *Sociology of Education*, *86*, 3-17. doi:10.1177/0038040712444857

Morris, E. W. (2005). From "middle class" to "trailer trash": Teachers' perceptions of White students in a predominately minority school. *Sociology of Education*, *78*, 99-121.

Mueller, C. W., Finley, A., Iverson, R. D., & Price, J. L. (1999). The effects of group racial composition on job satisfaction, organizational commitment, and career commitment: The case of teachers. *Work and Occupations*, *26*, 187-219.

National Center for Education Statistics. (2012). *Fast facts: Teacher trends*. Institute of Education Sciences, U.S. Department of Education. Retrieved from http://nces.ed.gov/fastfacts/display.asp?id=28

Orfield, G., Frankenberg, E. D., & Lee, C. (2003). The resurgence of school segregation. *Educational Leadership*, *60*(4), 16-20.

Orfield, G., & Lee, C. (2007). *Historic reversals, accelerating resegregation, and the need for new integration strategies*. Los Angeles: The Civil Rights Project, University of California, Los Angeles.

Plank, D. N. (1990). Why study the south? In D. N. Plank & R. Ginsberg (Eds.), *Southern cities, southern schools: Public education in the urban south* (pp. 1-16). New York, NY: Greenwood Press.

Reardon, S. F., Farrell, C. R., Matthews, S. A., O'Sullivan, D., Bischoff, K., & Firebaugh, G. (2009). Race and space in the 1990s: Changes in the geographic scale of racial residential segregation, 1990-2000. *Social Science Research*, *38*, 55-70. doi:10.1016/j.ssresearch.2008.10.002

Renzulli, L. A., Parrott, H. M., & Beattie, I. R. (2011). Racial mismatch and school type: Teacher satisfaction and retention in charter and traditional public schools. *Sociology of Education*, *84*, 23-48.

Roscigno, V. J., Tomaskovic-Devey, D., & Crowley, M. (2006). Education and the inequalities of place. *Social Forces*, *84*, 2121-2145.

Sampson, R. J. (2012). *Great American city: Chicago and the enduring neighborhood effect*. Chicago, IL: The University of Chicago Press.

Sharkey, P. (2013). *Stuck in place: Urban neighborhoods and the end of progress toward racial equality*. Chicago, IL: The University of Chicago Press.

Sleeter, C. E. (2001). Preparing teachers for culturally diverse schools: Research and the overwhelming presence of whiteness. *Journal of Teacher Education*, *52*, 94-106. doi:10.1177/0022487101052002002

Stainback, K., & Irvin, M. (2012). Workplace racial composition, perceived discrimination, and organizational attachment. *Social Science Research*, *41*, 657-670. doi:10.1016/j.ssresearch.2011.11.016

Stroub, K. J., & Richards, M. P. (2013). From resegregation to reintegration: Trends in the racial/ethnic segregation of metropolitan public schools, 1993-2009. *American Educational Research Journal*, *50*, 497-531. doi:10.3102/0002831213478462

Tourkin, S. C., Warner, T., Parmer, R., Cole, C., Jackson, B., Zukerberg, A., . . . Gruber, K. (2007). *Documentation for the 2003-04 Schools and Staffing Survey* (NCES 2007-337, U.S. Department of Education, Ed.). Washington, DC: National Center for Education Statistics.

U.S. Census Bureau. (2012). *Most children younger than age 1 are minorities, Census Bureau reports* [Press release]. Retrieved from https://www.census.gov/newsroom/releases/archives/population/cb12-90.html

Watson, D. (2011). "Urban, but not too urban": Unpacking teachers' desires to teach urban students. *Journal of Teacher Education*, *62*, 23-34. doi:10.1177/0022487110379216

Wilson, C. M., Douglas, K. S., & Lyon, D. R. (2011). Violence against teachers: Prevalence and consequences. *Journal of Interpersonal Violence*, *23*, 2353-2371.

Zimmerman, R. S., Khoury, E. L., Vega, W. A., Gil, A. G., & Warheit, G. J. (1995). Teacher and parent perceptions of behavior problems among a sample of African American, Hispanic, and non-Hispanic White students. *American Journal of Community Psychology*, *23*, 181-197.

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