

Rookie Mistakes: The Interplay of Teacher Experience and Racial Representation

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A growing body of research has documented the important benefits teachers of color bring to students of color, including higher expectations. Separately, researchers have shown that teachers improve student achievement with increasing effectiveness over their careers. We bridge these two streams of research by examining the extent to which teachers' perceptions of racially dissimilar students vary by experience in the teaching profession. Using nationally representative data, we show that while the expectations gap between non-Black and Black teachers regarding Black students' academic potential persists regardless of experience, the gap is much larger among first year teachers. We demonstrate that non-Black teachers with more than one year of experience have higher expectations of Black students than non-Black rookie teachers, and perhaps surprisingly, Black teachers with more than one year of experience have lower expectations of Black students compared to rookie Black teachers. We do not find such results for Latino/a students. We discuss the implications of these results for both research and practice.

Keywords: econometric analysis; race; teacher characteristics; teacher education/development

A growing body of work across education, policy, and public administration research suggests that increased racial and ethnic representation among teachers correlates with improved outcomes for students of color, including better academic tracking, fewer suspensions, more parental involvement, more consistent attendance, and better test scores (Dee, 2004, 2005; Egalite, Kisida, & Winters, 2015; Grissom, Kern, & Rodriguez, 2015; Grissom, Nicholson-Crotty, & Nicholson-Crotty, 2009; Holt & Gershenson, 2017; Lindsay & Hart, 2017; Meier & Stewart, 1992; Ouazad, 2014; Vinopal, 2017), and benefits may last into adulthood (Gershenson, Hart, Lindsay, & Papageorge, 2017). More recently, research has emphasized how racial and ethnic representation affects teachers' expectations and perceptions of students (e.g., Dee, 2005; Gershenson, Holt, & Papageorge, 2016), finding that compared to Black teachers, non-Black teachers have significantly lower expectations of Black students' academic potential. This expectations gap may be particularly important given new evidence that teacher expectations directly affect students' educational attainment (Papageorge, Gershenson, & Kang, 2019).

At the same time, recent research suggests large returns on teacher experience in terms of teacher quality (Harris & Sass, 2011; Ladd, 2013; Ladd & Sorenson, 2017; Papay & Kraft,

2015; Wiswall, 2013). This research demonstrates that teachers are not static; they continue to build human capital with experience (Papay & Kraft, 2015). This dynamic accrual of expertise implies that teachers' strategies and attitudes likely evolve over time, perhaps including towards different-race students. However, to date no attention has been paid to how teachers' experience might moderate the relationship between racial match and teachers' expectations of students.

The current study begins to fill this gap first by exploring whether experience is related to teachers' expectations overall. We then ask our primary research question: whether experience moderates the previously documented gap in expectations for Black students by teacher-student racial match. We also explore this relationship for Latino/a students. Next, we draw on prior research examining the phenomenon of organizational socialization, which posits that operating within a single organizational environment shapes individuals' beliefs, attitudes, and behaviors (e.g., Nasser-Abu Alhija & Fresko, 2010; Wilkins & Williams, 2008, 2009). Therefore, we expand our analysis to explore whether school socialization, as measured by experience

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in a particular school, serves as a distinct predictor of teacher expectations separate from overall years of teaching experience. We end by considering heterogeneity in our main results by student gender, urbanicity, school performance, school socioeconomic status (SES), and school racial composition.

To investigate these questions, we use the nationally representative Education Longitudinal Study (ELS) of 2002 and exploit within-student variation in teacher expectations to compare newer and more veteran racially/ethnically matched and mismatched teachers evaluating the academic potential of the same student. Our findings suggest that while the expectations gap between non-Black and Black teachers regarding Black students' academic potential persists regardless of experience, the gap is much larger among first year non-Black teachers. We demonstrate that non-Black teachers with more than one year of experience have higher expectations of Black students than non-Black rookie teachers and that Black teachers with more than one year of experience have lower expectations of Black students compared to rookie Black teachers. We further show that these differences cannot be explained by school socialization alone. Moreover, among non-Black teachers, the gap in rookie expectations appears to be driven by new teachers in low-performing and high-poverty suburban schools. We do not find such patterns for Latino/a students. In line with previous research, there is no overall gap between non-Latino/a and Latino/a teachers' expectations of Latino/a students. In teachers' rookie years, non-Latino/a teachers have higher expectations of their Latino/a students compared to Latino/a teachers, but this gap does not persist among more veteran teachers.

Understanding these relationships makes several contributions to research and practice. First, we contribute to work investigating how experience is related to teacher effectiveness. To the extent that higher expectations translate to better outcomes for students, improved expectations of students of color among more experienced White teachers may suggest a partial mechanism underlying the overall returns on teacher experience documented in previous research. Also, this work adds nuance to existing research on racial/ethnic mismatch and teacher expectations by allowing for heterogeneity by teacher experience and by investigating differing expectations both of non-Black and Black teachers toward Black students, and non-Latino/a and Latino/a teachers toward Latino/a students. Third, these results inform the implications of the current distribution of experienced teachers across schools, as schools with a higher proportion of students of color and underprivileged students experience more teacher turnover and higher proportions of new teachers (e.g., Ladd, 2013; Scafidi, Sjoquist, & Stinebrickner, 2007).

Finally, answering this question informs the design of policy that can improve outcomes for students of color in the near term. Currently, most teachers in the United States are White (Ingersoll, 2013), and programs such as Teach for America, which are designed to place teachers in hard-to-staff environments, comprise primarily White and inexperienced participants (Chiang, Clark, & McConnell, 2017). Creating a teacher workforce as diverse as the students it serves is an important and worthy policy goal; however, given this baseline, success will be both difficult and slow. Even accounting for a combination policy

approach that increases the pool of available teachers of color and improves the retention rate of those teachers, a meaningful reduction in the "diversity gap" between teachers and students would not be realized for decades (Putman, Hansen, Walsh, & Quintero, 2016). In the meantime, then, policies and management practices that train White teachers to better teach students of different races and ethnicities must continue to be developed and improved. A significant difference in expectations of students of color between new versus veteran White teachers directs policymakers on how best to target interventions under limited resources. The evidence we present here suggests the interventions aimed at pre-service teachers would be most effective in mitigating some of the bias students of color face in classrooms.

Background and Literature

Teachers of color are underrepresented in schools in the United States (Ingersoll, 2013), a concerning fact given the large and growing body of research documenting a link between racial/ethnic representation among teachers and positive student outcomes for represented groups. Such outcomes include test scores, teacher assessment, suspensions, parental involvement, and assignment to gifted programs, among others (e.g., Dee, 2004, 2005; Egalite et al., 2015; Ehrenberg, Goldhaber, & Brewer, 1995; Gershenson et al., 2016; Grissom et al., 2009; Grissom et al., 2015; Holt & Gershenson, 2017; Meier, 1993; Nicholson-Crotty, Grissom, & Nicholson-Crotty, 2011; Ouazad, 2014; Vinopal, 2017).

The literature suggests a number of potential mechanisms through which teacher-student demographic matching may influence student outcomes. These include but are not limited to implicit or explicit racial bias embedded in the discretionary decisions of teachers (e.g., in grading, Cornwell, Mustard, & Van Parys, 2013; Lavy & Sand, 2015), a coproduction inducement—negative or positive changes in the behavior of students in response to being (un)represented among teachers (Grissom et al., 2015; Holt & Gershenson, 2017; Lim 2006), and changes in the policies or priorities of a school due to increased representation among teachers (e.g., Atkins, Fertig, & Wilkins, 2014; Keiser, Wilkins, Meier, & Holland, 2002; Lim, 2006). Scholars have also suggested that same-race teachers may serve as mentors or role models for students of color, eliciting improved academic achievement (Chetty, Hendren, Jones, & Porter, 2018; Egalite et al., 2015).

The outcome of interest in the current paper is teachers' expectations regarding students' future academic potential. Recent work has found that teacher expectations for students depend in part on the racial alignment between teacher and student (Gershenson et al., 2016). In particular, compared to Black teachers, non-Black teachers are less likely to expect Black students to graduate from college.

Teachers' expectations for students are of particular interest, as recent evidence suggests they improve students' actual educational attainment, indicating that students substantively benefit from teachers' optimism about their potential (Burgess & Greaves, 2013; Papageorge et al., 2019). Gershenson, Holt, and Papageorge (2016) outline three mechanisms through which teachers' expectations might affect student outcomes. First, if

students believe teachers have low expectations, they might be especially susceptible to stereotype threat, which may harm students' performance and/or cause students to disidentify from the school environment by inducing anxiety or other negative emotional responses, even if the students' own expectations for themselves are unchanged (Steele, 1997). Second, students may change their own expectations for themselves to conform with teachers' lower expectations, and in turn alter their own behavior in school (Ferguson, 2003). Third, teachers' own behavior—in terms of grading, instruction, evaluation, and/or advising—may change in response to negative perceptions about certain types of students (Ferguson, 2003). Thus, teachers' beliefs about students' potential likely serve as one mechanism connecting representation to substantive outcomes for students of color. And, to the extent that a racial or ethnic gap in expectations exists, it may contribute to racial or ethnic gaps in educational outcomes.

In sum, racial mismatch negatively affects teachers' expectations of Black students, and this expectation gap likely leads directly to substantial gaps in students' outcomes. But it is possible that teachers' expectations of other-race or other-ethnicity students vary with teacher experience. It has been long understood that teacher quality improves steeply over the first few years of teaching (e.g., Hanushek, Kain, O'Brien, & Rivkin, 2005; Kane, Rockoff, & Staiger, 2008; Clotfelter, Ladd, & Vigdor, 2010), but there is now more evidence that returns on experience continue into late career, making teacher retention important for children's outcomes (Harris & Sass, 2011; Ladd, 2013; Ladd & Sorensen, 2017; Papay & Kraft, 2015; Wiswall, 2013). Ladd (2013) summarizes that experienced teachers are not only more effective in raising achievement but strengthen education in other ways, including reducing student absences and encouraging students to read outside of the classroom. They also mentor younger teachers, creating a stronger school community (Ladd, 2013). It is clear, then, that teachers are learning on the job, and students are reaping the benefits. Whether this learning extends to improved teaching of other-race/ethnicity students or reduced implicit bias is an unanswered question. Extant literature provides little direct evidence of how teachers' attitudes and beliefs vary with experience. If more experienced teachers do have higher expectations of their other-race/ethnicity students, this may suggest a partial mechanism explaining the continued growth in teacher effectiveness observed in this previous research.

Experience not only leads to increased effectiveness and improved instruction for teachers, it also inevitably leads to their becoming more socialized into particular school environments (Chan et al., 2008). Previous research has considered the importance of organizational socialization to the potential benefits of a more racially representative public sector workforce, though not in the education context. In two studies, Wilkins and Williams (2008, 2009) find that bureaucrats of color are less likely to provide active representation in an agency with high formal and informal socialization: the San Diego Police Department. Through quantitative analysis as well as interviews with officers, the authors conclude that the pressure to conform and achieve the goals of the organization heavily influences officer behavior. In other words, organizational socialization may overwhelm

racial or ethnic identification in some contexts. Similarly, previous explorations of teacher commitment, attitudes, practices, and beliefs have identified school socialization as one important factor in shaping teachers, including as it relates to their relinquishing previously held attitudes and values and shaping new ones based on local school and district culture (Achinstein, Ogawa, & Speiglmann, 2004; Chan, Lau, Nie, Lim, & Hogan, 2008; Gallucci, 2003; Nasser-Abu Alhija & Fresko, 2010; Reyes, 1990). Thus, we extend our analysis to disentangle the effects of professional experience versus organizational socialization by distinguishing between total time in the teaching profession and time in a specific school.

Finally, previous research has shown that both the effects of race-match (e.g., Grissom et al., 2009) and the returns on teacher experience (e.g., Kraft & Papay, 2014; Rice, 2013) are moderated by student characteristics and school contexts. Therefore, we conclude our analysis with an exploration of heterogeneity in the relationship between teacher experience, racial/ethnic mismatch, and expectations along a number of student and school characteristics.

Data

We explore these questions using data from the Education Longitudinal Study of 2002 (ELS). The ELS contains data from a nationally representative sample of sophomores in high school in the spring of 2002 and includes rich data about students' demographics, family backgrounds, and the schools they attend. Important for the purposes of our study, the ELS surveys two teachers for each student. Each student's math and reading teachers provide a variety of demographic and educational background information about themselves and report subjective assessments of the sampled student they are teaching. The analytic sample includes 10,920 students with non-missing information on all relevant variables.

Dependent Variable

Following Gershenson and colleagues (2016), we measure teachers' expectations of their students using a binary indicator equal to one if a teacher expects a student to graduate from college with a four-year degree or more, and zero otherwise.¹

Independent Variables

The primary independent variables are teacher experience and an indicator of teacher-student racial/ethnic mismatch. For teacher experience, we first construct bins representing years of experience (2–3 years, 4–5 years, and 6 or more years) with first-year teachers as the reference group. Results from these initial analyses, discussed below, guide us toward focusing subsequent models on first-year teachers (Rookie) versus teachers with at least one year of experience (veteran teachers). Throughout, we use a binary indicator that equals one if the teacher and student identify as different races/ethnicities and equals zero if the teacher and student identify as the same race/ethnicity (Other race).

Table 1
Summary Statistics of Students

	All	White	Black	Latino/a
	(1)	(2)	(3)	(4)
Teacher expects college degree or more	0.56	0.60	0.40***	0.43***
Teacher characteristics				
Other race	0.36	0.04	0.80***	0.90***
Graduate degree	0.47	0.46	0.48	0.42***
Regular certification	0.82	0.83	0.83	0.78***
Majored in subject taught	0.57	0.58	0.56**	0.52***
Rookie	0.05	0.05	0.06	0.07***
New at school	0.09	0.09	0.12***	0.10**
Years of experience teaching	14.71	15.02	14.52**	13.35***
	(10.79)	(10.78)	(10.83)	(10.71)
Years at school	9.38	9.99	8.07***	7.81***
	(9.00)	(9.34)	(8.16)	(8.00)
Student characteristics				
Female	0.50	0.50	0.51	0.50
White	0.61	1.00	0	0
Black	0.12	0	1.00	0
Latino/a	0.13	0	0	1.00
Mother has high school or less	0.38	0.33	0.41***	0.54***
Mother has college or more	0.29	0.32	0.21***	0.16***
Low income (\$20,000 or less)	0.13	0.07	0.27***	0.22***
High income (\$100,000 or more)	0.16	0.20	0.08***	0.08***
Reading test score	51.28	53.44	45.67***	46.69***
	(9.93)	(9.38)	(8.75)	(9.58)
Math test score	51.51	53.51	44.71***	46.72***
	(9.83)	(8.99)	(8.60)	(9.74)
9th grade GPA	2.79	2.91	2.32***	2.50***
	(0.81)	(0.77)	(0.76)	(0.84)
School characteristics				
Majority non-White students	0.23	0.07	0.51***	0.54***
Majority FRPL-eligible students	0.06	0.02	0.17***	0.16***
Observations	21,910	13,470	2,630	2,970

Note. “Rookie” indicates the teacher is in their first year of teaching; “veteran” indicates the teacher is in at least their second year of teaching. FRPL = free or reduced-price lunch. Standard deviations are in parentheses. Statistical significance tested difference between Black (Latino/a) and White students. Numbers of observations are rounded to the nearest 10 in accordance with National Center for Education Statistics rules.

* $p < .10$. ** $p < .05$. *** $p < .01$.

Of course, a variety of teacher attributes may influence their expectations of students. Highly trained teachers may set higher expectations for all of their students, for instance. To account for these possible confounding factors, we control for teacher educational attainment (binaries for each level of postsecondary education through doctorate degrees), teacher demographics (gender, age), and binaries for whether the teacher has a major in the subject they teach.

Table 1 summarizes the sample overall and separately by Black, White, and Latino/a students.² Overall, teachers are more likely to expect White students to complete college compared to Black or Latino/a students. White students are also less likely to have a teacher of a different race/ethnicity, more likely to have a teacher who majored in the subject they are teaching, and tend to have slightly more experienced teachers (about 15 years, compared to 14.5 years for Black students and 13.4 years for Latino/a

students), who have been at the school longer (10 years versus about 8 years). Finally, White students are much less likely than Black or Latino/a students to attend a majority non-White school (7% versus 51% for Black students and 54% for Latino/a students) or a school where the majority of students are eligible for free or reduced-price lunch (FRPL) (2% versus 17% for Black students and 16% for Latino/a students).

Table 2 summarizes the sample by teacher race and rookie status. Generally, relative to Black and Latino/a teachers, White teachers have students with more socioeconomic advantage and higher test scores and are more likely to teach at schools with fewer FRPL-eligible students and fewer students of color. On average, Latino/a teachers have the highest expectations for their students, while Black teachers have the lowest expectations for their students. There are no systematic differences between White and Black teachers in education or teaching experience;

Table 2
Summary Statistics of Teachers

	White	Black	Latino/a	Rookie	Veteran
	(1)	(2)	(3)	(4)	(5)
Teacher expects college degree or more	0.57	0.51***	0.63***	0.58	0.56
Teacher characteristics					
Other race	0.34	0.52***	0.21***	0.41***	0.36
Graduate degree	0.47	0.45	0.35***	0.35***	0.47
Regular certification	0.83	0.76***	0.66***	0.37***	0.85
Majored in subject taught	0.57	0.54**	0.48***	0.53**	0.57
Rookie	0.05	0.05	0.07	1	0
New at school	0.09	0.07**	0.09	0	0.10
Years of experience teaching	14.78	14.70	9.61***	0.99***	15.51
	(10.77)	(11.12)	(8.55)	(0.08)	(10.57)
Years at school	9.47	8.95*	5.37***	1.02***	9.86
	(9.03)	(8.80)	(5.64)	(0.46)	(9.02)
Student characteristics					
Female	0.50	0.49	0.52	0.49	0.50
White	0.64	0.26***	0.22***	0.58***	0.62
Black	0.10	0.45***	0.10	0.12	0.12
Latino/a	0.12	0.15***	0.56***	0.17***	0.12
Mother has high school or less	0.37	0.48***	0.42**	0.40	0.37
Mother has college or more	0.29	0.21***	0.27	0.27	0.29
Low income (\$20,000 or less)	0.12	0.26***	0.23***	0.15**	0.13
High income (\$100,000 or more)	0.17	0.09***	0.11***	0.16	0.16
Reading test score	51.60	46.54***	48.76***	50.17***	51.35
	(9.89)	(9.23)	(9.74)	(9.49)	(9.95)
Math test score	51.86	46.14***	48.84***	50.04***	51.59
	(9.73)	(9.62)	(10.31)	(9.61)	(9.84)
9th grade GPA	2.81	2.43***	2.75*	2.67***	2.80
	(0.81)	(0.82)	(0.84)	(0.80)	(0.81)
School characteristics					
Majority non-White students	0.19	0.67***	0.73***	0.26**	0.23
Majority FRPL-eligible students	0.04	0.28***	0.18***	0.03***	0.06
Observations	20,220	1,170	480	1,190	20,730

Note. “Rookie” indicates the teacher is in their first year of teaching; “veteran” indicates the teacher is in at least their second year of teaching. FRPL = free or reduced-price lunch. Standard deviations are in parentheses. Statistical significance tested difference between Black and Latino/a and White teachers, and rookie and veteran teachers. Number of observations rounded to the nearest 10 in accordance with National Center for Education Statistics rules.

* $p < .10$. ** $p < .05$. *** $p < .01$.

however, Latino/a teachers have fewer credentials and less experience than Black and White teachers on average.

Columns 4 and 5 of Table 2 present differences between rookie and veteran teachers. There are no descriptive differences in teachers’ expectations of their students by experience. However, rookie teachers are more likely to have a student of a different race (41% versus 36%), less likely to teach White students, have students who perform slightly worse academically, and are more likely to be in majority non-White schools.

Empirical Strategy

Examining the relationship between teachers’ experience and teachers’ expectations of their other race/ethnicity students presents a complicated empirical challenge. For instance, a variety of

school, community, and individual teacher- and student-level factors may shape teachers’ views of their students. To control for potential confounding factors, we follow Dee (2005) and Gershenson and colleagues (2016) and leverage data from two teachers assessing the same student’s educational potential. Specifically, we model the teachers’ expectations for student i ’s educational attainment as the linear function:

$$E_{ijs} = \gamma OtherRace_{ij} + \rho TE_j + \beta X_j + \theta_i + \alpha_s + \varepsilon_{ijs}, \forall_s \in \{M, R\}, \quad (1)$$

where j indexes teachers, and s indexes subjects; α represents a subject fixed-effect (FE) that controls for systematic differences in teacher expectations across subjects (math and reading); θ represents

student FE that controls for time-invariant, student-specific observables that might shape teacher expectations; X represents a vector of controls for teacher observables (as previously described); $OtherRace$ represents a binary indicator of racial or ethnic mismatch between teacher j and student i ; and TE represents the years of experience teacher j has in the teaching profession (measured using mutually exclusive categories of 1 or less, 2–3, 4–5, or 6 or more years teaching). Intuitively, γ in equation (1) captures the systematic difference in expectations between other-race/ethnicity and same-race/ethnicity teachers assessing the same students. Similarly, ρ reflects a consistent estimate of systematic differences in expectations between teachers with more experience and their less experienced colleagues evaluating the same student. As we noted previously, teacher experience might moderate the negative impact of racial/ethnic mismatch. We test this using the augmented form equation (1):

$$E_{ijs} = \gamma OtherRace_{ij} + \rho TE_j + \delta OtherRace_{ij} \times TE_j + \beta X_j + \theta_i + \alpha_s + \varepsilon_{ijs}, \forall_s \in \{M, R\}, \quad (2)$$

In equation (2), δ captures estimates of the difference in the magnitude of the gap in expectations between same-race/ethnicity and other-race/ethnicity teachers who have varying levels of experience teaching. If, for instance, more experienced non-Black teachers have higher expectations of their Black students, we anticipate δ will be negative, indicating a smaller gap between more experienced non-Black and Black teachers' assessments of Black students' potential. Note that within our model, $\rho + \delta$ provides a means to directly assess systematic disagreement between more and less experienced teachers within racial/ethnic mismatch. We begin with a categorical measure of teacher experience, which includes four mutually exclusive categories: 1 year or less, 2–3, 4–5, and 6 or more years. Previewing our results, which indicate qualitative differences in the expectations gap between racially/ethnically matched and non-matched teachers for students of color in the first year of teaching, we investigate this relationship further measuring TE with an indicator for a rookie teacher (i.e., a teacher in their first year of teaching), allowing for a comparison between a rookie and non-rookie teacher evaluating the same student.³

Finally, as we suggested previously, the observed relationship may be driven not by professional teaching experience in general but instead by school socialization—familiarity with a particular community. In that case, both rookie and experienced White teachers might have lower expectations for students of color as they arrive at a new school and begin serving an unfamiliar community. Thus, professional experience itself may not ameliorate the expectations gap between teachers of color and White teachers, instead suggesting tenure at a given school matters more. We test for this possibility by exploiting a unique aspect of the ELS: The ELS asks teachers to document their years of experience teaching and years of tenure at a school separately. We therefore model this by again presenting a linear model of teacher expectations:

$$E_{ijs} = \gamma OtherRace_{ij} + \vartheta VetNew_j + \phi OtherRace_{ij} \times VetNew_j + \rho Rookie_j + \delta OtherRace_{ij} \times Rookie_j + \beta X_j + \theta_i + \alpha_s + \varepsilon_{ijs}, \forall_s \in \{M, R\}, \quad (3)$$

In equation (3) we separate veteran teachers from rookie teachers and then further separate veteran teachers into two groups: those with previous teaching experience but in their first year at the school at the time of the ELS interview (*VetNew*) and those in at least their second year at the school. By interacting both *VetNew* and *Rookie* with *OtherRace*, we separately estimate the racial/ethnic-mismatch expectations gap between these three groups of teachers. Intuitively, if school-specific experience drives the differences between rookie and more experienced teachers, both veteran White teachers at a new school and rookie White teachers would have lower expectations than White veteran teachers with experience at the school. If, on the other hand, more experienced White teachers generally have higher expectations of students of color, and this transfers across contexts, ϕ in equation (3) will likely be small or positive. Given the growing body of literature highlighting the importance of teacher experience in explaining teacher efficacy over time described previously (e.g., Wiswall, 2013; Ladd & Sorensen, 2017), we expect ϕ will be positive.

We estimate equations (1) through (3) using ordinary least squares (OLS) with standard errors clustered at the school level, since teachers and students are nested within schools. We estimate all three equations on a pooled sample of all students and subsamples of Black, Latino/a, and White students.

Results

Descriptive Analysis

We start with a descriptive analysis (not controlling for unobserved student characteristics), exploring the relationship between teacher, student, and school characteristics and teacher expectations across schools to gain insights into how teachers broadly set their expectations for students. We pay particular attention to correlations between teacher experience and teacher expectations. The results of these school FEs models, run for the full sample and for White, Black, and Latino/a students separately, are presented in Table 3.⁴

As expected and documented in previous research, for students of color, having an other-race teacher (usually White) is associated with a reduction in teachers' expectation that the student will graduate from college (14 percentage points for Black students and 15 percentage points for Latino/a students) and corresponds with measures of academic ability. School FEs absorb many of the relationships between teachers' characteristics and their expectations of students, which suggests that teachers sort systematically into schools on measures of professional training or quality.

The primary question at hand, though, is whether experience moderates the relationship between racial mismatch and expectation setting.

Student FEs Estimates

Figures 1, 2, and 3 show the main results of equation (2) separately for White (Figure 1), Black (Figure 2), and Latino/a (Figure 3) students. These models contain a full set of teacher controls and include student FEs, thus controlling for unobservable student

Table 3
Descriptive Analysis, Association of Teacher Characteristics With Teacher Expectations, School Fixed Effects

	All	White	Black	Latino/a
	(1)	(2)	(3)	(4)
Teacher experience (1 year or less omitted)				
2 years	<-0.01 (0.03)	0.02 (0.03)	0.09 (0.08)	-0.07 (0.06)
3 years	-0.03 (0.03)	0.01 (0.03)	<0.01 (0.09)	-0.06 (0.06)
4 years	-0.02 (0.03)	<0.01 (0.04)	-0.02 (0.09)	-0.03 (0.08)
5 years	-0.05 (0.03)*	-0.02 (0.04)	0.05 (0.08)	-0.10 (0.07)
6 years	-0.02 (0.03)	0.02 (0.04)	0.04 (0.08)	-0.14 (0.07)*
7+ years	-0.04 (0.02)*	-0.03 (0.03)	0.02 (0.07)	-0.02 (0.06)
Teacher characteristics				
Other race	-0.02 (0.02)	0.05 (0.03)	-0.14 (0.06)**	-0.15 (0.06)***
More than bachelors	<-0.01 (0.01)	0.01 (0.01)	-0.05 (0.04)	-0.05 (0.04)
Major in subject	0.01 (0.01)	0.01 (0.01)	-0.02 (0.03)	0.07 (0.03)**
Student characteristics				
Black	0.04 (0.02)*			
Latino/a	<-0.01 (0.02)			
Mom college or more	0.02 (0.01)**	0.02 (0.01)*	0.03 (0.05)	0.06 (0.05)
High income (\$100,000 or more)	0.07 (0.02)***	0.08 (0.02)***	0.02 (0.07)	0.08 (0.06)
Math score	0.01 (0.00)***	0.01 (0.00)***	0.01 (0.00)***	0.01 (0.00)***
Reading score	<0.01 (0.00)***	<0.01 (0.00)***	<0.01 (0.00)	<0.01 (0.00)
Adjusted R	0.417	0.418	0.36	0.24
N	13,490	9,000	1,340	1,580

Note. Standard errors clustered at school level in parentheses; number of observations rounded to the nearest 10 in accordance with National Center for Education Statistics rules. * $p < .10$. ** $p < .05$. *** $p < .01$.

characteristics.⁵ Specifically, these figures plot the estimated relationship of years of teaching experience on teacher expectations of students' college potential separately by racial or ethnic mismatch after accounting for teacher characteristics and student FEs. Figure 1 demonstrates that in their rookie years, other-race teachers have higher expectations of White students compared to White teachers. More veteran non-White teachers have lower expectations, nearly eliminating the gap among later-career teachers. White teachers' expectations of their White students do not significantly vary with experience.

As expected based on previous research, the pattern is quite different for Black students, presented in Figure 2. The large gap between Black and non-Black teachers' expectations of Black

students narrows among more veteran teachers. Interestingly, the gap between Black and non-Black teachers' expectations narrows not only from more veteran non-Black teachers having higher expectations on average, but also due to more veteran Black teachers having lower expectations on average. For veteran teachers, the racial mismatch gap in expectations for Black students remains relatively constant among different levels of teacher experience. This gap is smaller than the rookie gap but still significant.

Among rookie teachers, non-Latino/a teachers actually have higher expectations than their Latino/a peers of their Latino/a students (Figure 3). This pattern reverses among more veteran teachers, such that among teachers with more than one year of

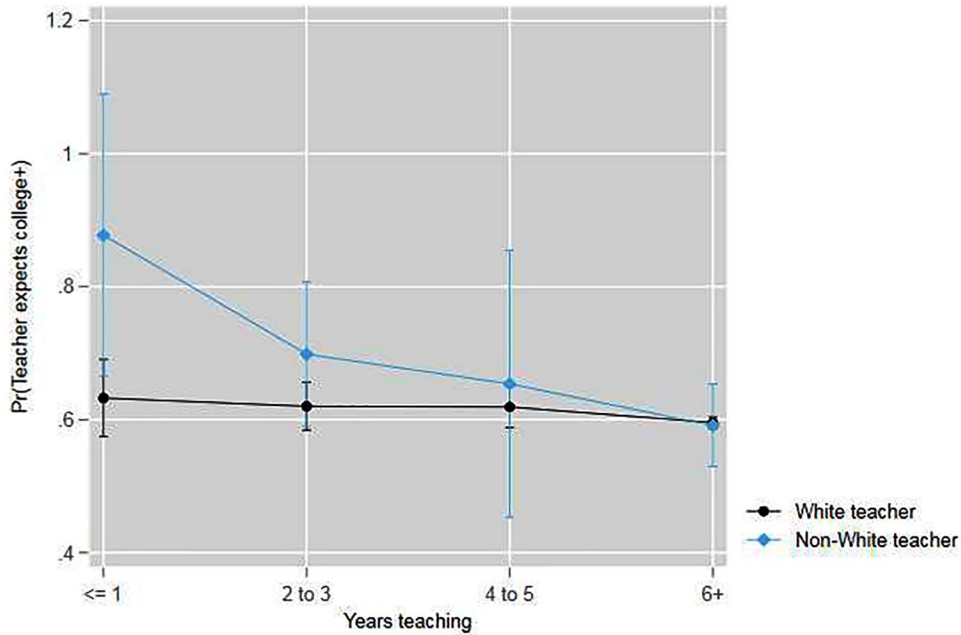


FIGURE 1. Marginal effects of years of teaching experience on teacher expectations of White students' college potential, separately by racial match.

Note. $N = 13,330$. Number of observations rounded to the nearest 10 in accordance with National Center for Education Statistics rules. Model includes all teacher controls and student fixed effects. Capped lines represent 95% confidence intervals.

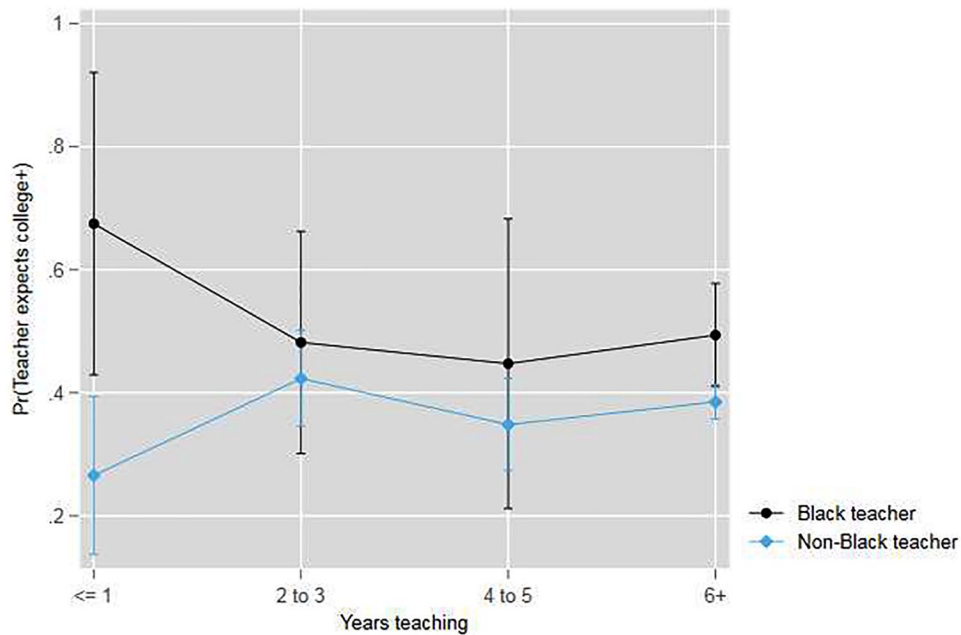


FIGURE 2. Marginal effects of years of teaching experience on teacher expectations of Black students' college potential, separately by racial match.

Note. $N = 2,590$. Number of observations rounded to the nearest 10 in accordance with National Center for Education Statistics rules. Model includes all teacher controls and student fixed effects. Capped lines represent 95% confidence intervals.

experience, compared to non-Latino/a teachers, Latino/a teachers have higher expectations of their Latino/a students. Again, this gap is due to differences in expectations by experience of both Latino/a and non-Latino/a teachers.

These figures make clear that rookie teachers have different expectation-setting patterns compared to more veteran teachers,

regardless of race, and that there is not much variation in expectations by experience among those with at least one year of teaching under their belts. Therefore, the remainder of our analysis estimates equation (2) using the more parsimonious measure of teacher experience, a binary indicator for a teacher's rookie status, as described previously.

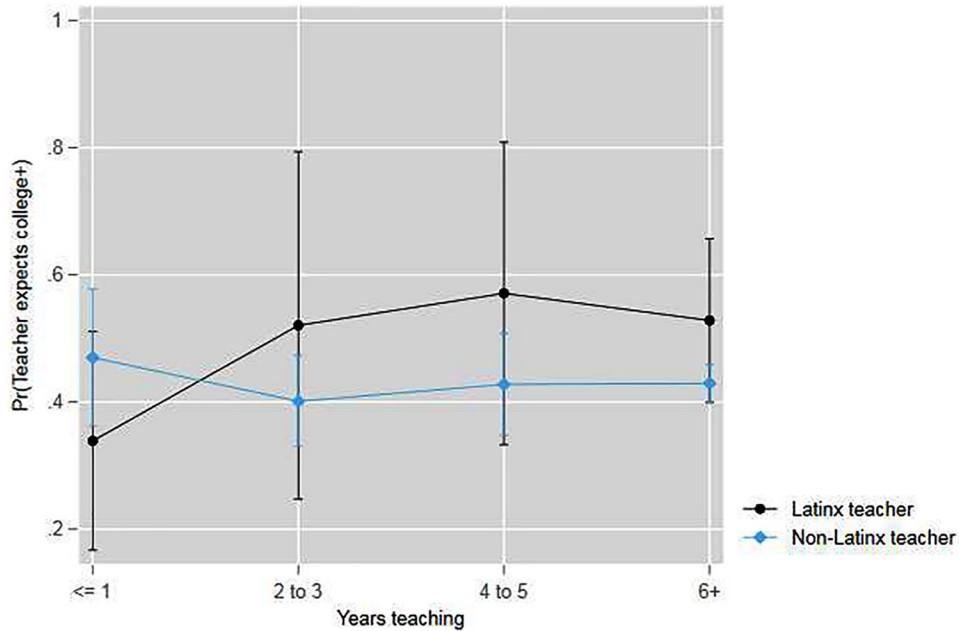


FIGURE 3. Marginal effects of years of teaching experience on teacher expectations of Latino/a students' college potential, separately by racial match.

Note. $N = 2,750$. Number of observations rounded to the nearest 10 in accordance with National Center for Education Statistics rules. Model includes all teacher controls and student fixed effects. Capped lines represent 95% confidence intervals.

Table 4
Relationship Between Other Race and Rookie and Teacher Expectations

	Student FE				Student FE With Interaction			
	All	White	Black	Latino/a	All	White	Black	Latino/a
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Other race teacher	-0.02 (0.02)	0.03 (0.03)	-0.13 (0.05)***	-0.10 (0.07)	-0.02 (0.02)	0.01 (0.03)	-0.11 (0.05)**	-0.12 (0.07)
Rookie teacher	0.02 (0.02)	0.03 (0.03)	-0.08 (0.06)	0.03 (0.05)	0.01 (0.03)	0.02 (0.03)	0.20 (0.15)	-0.18 (0.10)*
Other race X rookie					0.03 (0.04)	0.27 (0.12)**	-0.31 (0.15)**	0.24 (0.11)**
Controls for teacher X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Student FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.01	0.01	0.03	0.01	0.01	0.01	0.03	0.02
N	21,650	13,330	2,590	2,750	21,650	13,330	2,590	2,750

Note. Standard errors are clustered at school-level in parentheses; number of observations rounded to the nearest 10 in accordance with National Center for Education Statistics rules. FE = fixed effect.

* $p < .10$. ** $p < .05$. *** $p < .01$.

Table 4 presents results on the entire sample and separately for White, Black, and Latino/a students. Columns 1–4 present estimates of equation (1) and capture the independent associations of racial mismatch and rookie year with teacher expectations.

As documented in previous research (Gershenson et al., 2016), as well as our own descriptive analysis, compared to Black teachers, non-Black teachers are about 13 percentage points less likely to expect their Black students to graduate from college. There is no effect of racial mismatch overall, for White, or—also

in line with previous research (Gershenson et al., 2016)—for Latino/a students. Also, as suggested by our descriptive analysis (Table 3), being a rookie teacher has no independent relationship with teacher expectations overall or by student race.

The estimates of equation (2) are presented in columns 5–8. Consistent with what we demonstrate in Figures 1, 2, and 3, other-race rookie teachers have systematically lower expectations for Black students and systematically higher expectations for White and Latino/a students. The results suggest that for Black

students, non-Black veterans are 11 percentage points less likely to see college potential, while non-Black rookies are 42 percentage points less likely. For Latino/a students, non-Latino/a rookies are 12 percentage points more likely to see college potential, but there is no statistically significant mismatch gap among more veteran teachers for this subgroup.

These results provide answers to our primary research question: the previously documented gap between non-Black and Black teachers' expectations of Black students is moderated by teacher experience, such that the gap is smaller among more veteran teachers. Experience also moderates the gap for White and Latino/a students but in the opposite direction. Rookie, non-White teachers have *higher* educational expectations for White students than their rookie white colleagues, as we saw in Figure 1. This gap does not exist among more veteran teachers. Similarly, rookie, non-Latino/a teachers have higher expectations of their Latino/a students compared to rookie, Latino/a teachers. However, this racial-mismatch gap reverses direction and is not statistically significant among more veteran teachers.

Disentangling Experience Versus New to School

Our primary results show that the previously documented racial mismatch expectations gap for Black students is driven by rookie teachers. However, as previously noted, it is possible these results are not a product of more teaching experience but rather of experience *at a particular school*. In other words, perhaps this gap is actually attributable to teachers starting at a new school (regardless of experience), being unfamiliar with the students and norms, and therefore relying on societally informed stereotypes and biases. Then, the more time a teacher spends at a school, the more organizational socialization in that school environment trumps that teacher's identities and biases based on race. If school socialization also plays an important role in moderating the effects of racial mismatch among teachers, our measure of experience might actually be capturing both a lack of professional experience *and* a lack of organizational familiarity, thereby confounding our interpretation of our primary results.

To test for this possibility, we estimate equation (3) to separate the relationship between expectations and being new to a school from the relationship between expectations and professional experience. For clarity and ease of interpretation, we present only the marginal effects of other race on (1) veteran teachers not new to a school, (2) veteran teachers in their first year at a school (new to school), and (3) rookie teachers, derived from our estimation of equation (3).⁶

Figure 4 presents marginal effects for White students, Figure 5 for Black students, and Figure 6 for Latino/a students. White teachers' expectations of White students are similar regardless of experience, while non-White veteran teachers who are new to a school have higher expectations of their White students than non-White teachers who are veterans to the profession as well as the school.

Rookie Black teachers have the highest expectations of their Black students, but there is no significant difference in expectations of Black students among Black veteran teachers across school-specific experience. Among non-Black teachers, on the other hand, veterans have higher expectations for Black students

in their first year at a new school than both incumbent veteran teachers and rookie teachers. More specifically, newly arriving non-Black veteran teachers are 23 percentage points more likely to expect a Black student to graduate from college than rookie non-Black teachers, and 16 percentage points more likely compared to veteran teachers already at the school. If organization socialization, not professional experience, explained the patterns we observe, incumbent non-Black veteran teachers would have higher expectations than newly arriving veterans. The results in Figure 5 suggest the opposite is true.

Finally, when assessing Latino/a students' academic potential, teachers do not differ significantly across racial matching or experience category, as the results in Figure 6 demonstrate. Veteran Latino/a teachers, both incumbents and newly arriving veterans, have higher expectations of Latino/a students than rookie Latino/a teachers; however, all of these differences are imprecisely estimated, and we cannot reject the null hypothesis of no difference between these groups. Meanwhile, non-Latino/a teachers do not vary substantially in expectations of Latino/a students regardless of their years of experience in the profession, at the school, or both. Again, consistent with the proposition that professional experience rather than familiarity with the organization and community explains the gap between rookies' and veterans' expectations of dissimilar students, newly arriving veterans do not systematically differ from incumbent veterans in their expectations of Latino/a students.

Heterogeneity by Student Characteristics and School Context

Finally, we conduct a series of analyses to understand whether our main results vary by school or student characteristics of interest. We do this by first restricting our sample to Black students with two non-Black teachers interviewed by the ELS (Table 5, Panel A), and Latino/a students with two non-Latino/a teachers interviewed by the ELS (Table 5, Panel B). Then, sequentially, by populations of interest: schools where a majority versus minority of students are eligible for FRPL, schools in which the majority versus minority of the student body are students of color, only public schools (eliminating private schools from the sample), girls versus boys, schools in urban areas versus suburban areas, and high versus low performing schools. Here, the coefficient on *Rookie* reflects the within-student difference in expectations by teacher experience, holding constant a racial or ethnic mismatch. The results for Latino/a students are largely insignificant. The rookie-veteran expectations gap for Black students among non-Black teachers is largest in lower-income, lower-performing, and suburban public schools. The gap is also larger for male students compared to female students. There are no differences by school racial composition, at least as defined here.

Discussion and Conclusion

To our knowledge, this paper is the first to investigate the relationship between teacher experience, racial and ethnic representation, and teachers' expectations of students. In doing so, we contribute both to the literature on teacher-student racial/ethnic

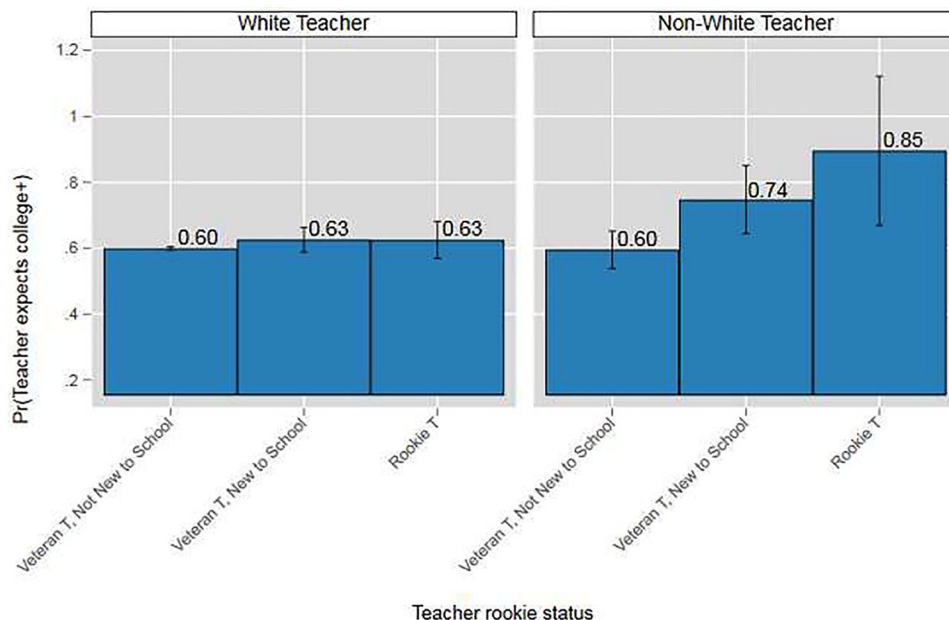


FIGURE 4. Marginal effect of racial mismatch on teacher expectations by school and professional experience, White students. Note. $N = 13,290$. T = Teachers. Number of observations rounded to the nearest 10 in accordance with National Center for Education Statistics rules. Bars depict marginal effects of interaction between other race and indicators for teacher experience at their current school (see equation [3]). Model includes controls for all teacher observables and student fixed effects. Capped lines represent 95% confidence intervals.

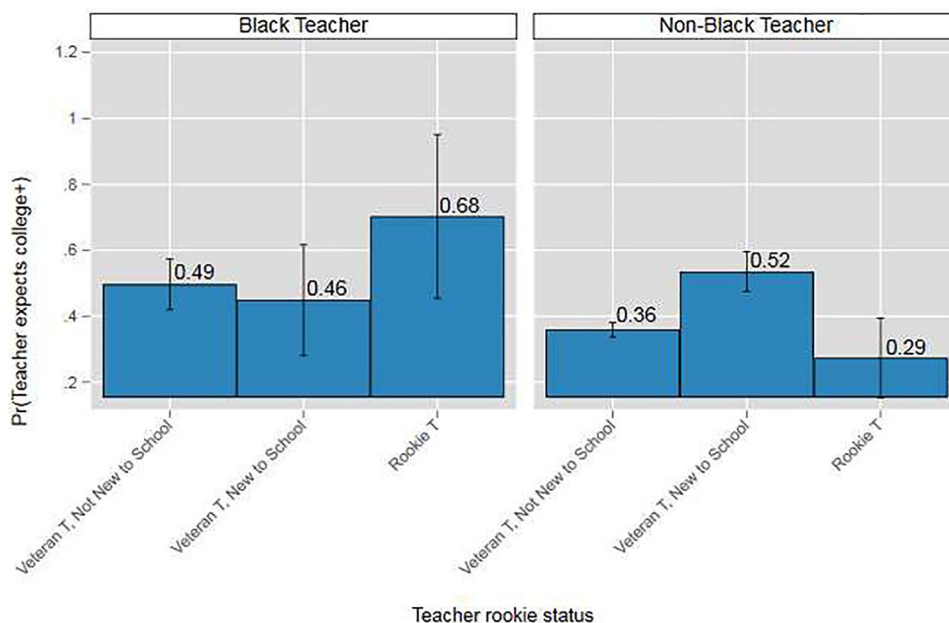


FIGURE 5. Marginal effect of racial mismatch on teacher expectations by school and professional experience, Black students. Note. $N = 2,590$. T = Teachers. Number of observations rounded to the nearest 10 in accordance with National Center for Education Statistics rules. Bars depict marginal effects of interaction between other race and indicators for teacher experience at their current school (see equation [3]). Model includes controls for all teacher observables and student fixed effects. Capped lines represent 95% confidence intervals.

mismatch and on teacher experience. Overall, we find that the negative relationship between teacher-student racial mismatch and teachers' expectations of Black students is smaller among teachers with at least one year of experience. We also provide evidence that these results are driven by experience, not

organizational socialization in a particular school, and that the gap is largest for male students and in lower-income, lower-performing, suburban schools.

Using a student FEs approach to control for student-specific confounders, we show that the gap between Black and non-Black

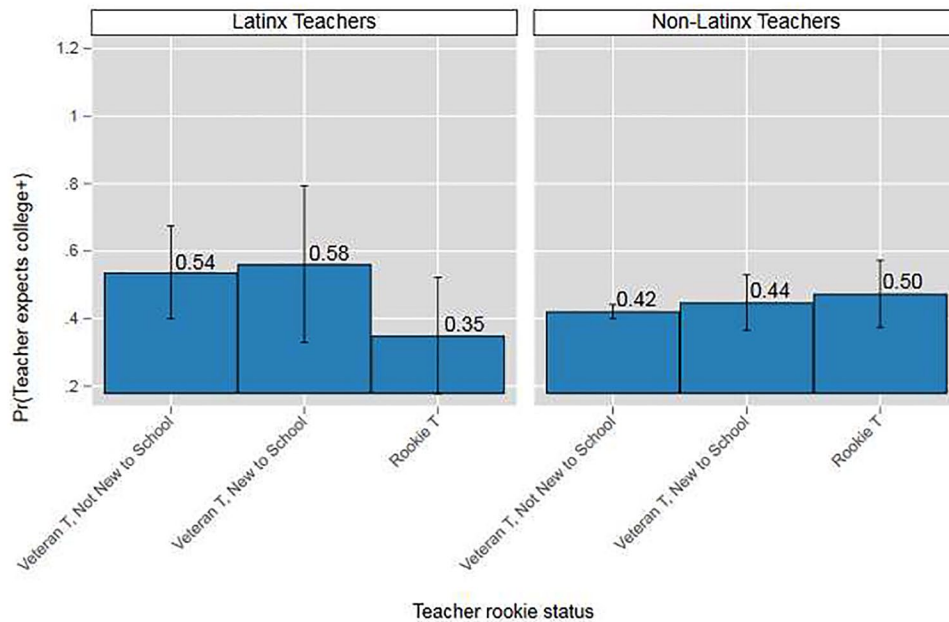


FIGURE 6. Marginal effect of racial mismatch on teacher expectations by school and professional experience, Latinola students. Note. $N = 2,750$. T = Teachers. Number of observations rounded to the nearest 10 in accordance with National Center for Education Statistics rules. Bars depict marginal effects of interaction between other race and indicators for teacher experience at their current school (see equation [3]). Model includes controls for all teacher observables and student fixed effects. Capped lines represent 95% confidence intervals.

teachers' expectations for Black students' educational attainment is considerably larger among rookie teachers but does not vary among teachers with more than one year of teaching experience. We also learned that the dynamism of the gap is a product of both higher expectations among veteran White teachers, and lower expectations among veteran Black teachers. This finding lends nuance to previously documented racial-mismatch expectations gaps for Black students. Further research in this area, utilizing teacher-level longitudinal data, should build on this work to reveal how expectation-setting of individual teachers transforms over time.

Results for Latino/a students follow a different pattern and are generally less precise than for Black students. Consistent with previous research, there is no overall expectations gap between Latino/a and non-Latino/a teachers of Latino/a students. When broken down by teacher experience, we find—unexpectedly—that non-Latino/a rookie teachers have *higher* expectations than Latino/a rookie teachers, but that this relationship flips among veteran teachers, with more veteran Latino/a teachers having higher expectations than veteran non-Latino/a students. However, the expectations gap among veteran teachers is not statistically significantly different from zero. Latino/a students represent a diverse group in ways that might especially matter for analyses of representation, and results are likely to depend on within-group heterogeneity, including by country of origin, immigration history, socioeconomic status, and whether English is the first language (e.g., Reardon & Galindo, 2009). This may partly explain why this analysis, as well as previous race-match work on this group of students (e.g., Gershenson et al., 2016), produces noisy estimates.⁷ Unfortunately, the ELS does not have information on teachers' native languages, immigration histories, or countries of origin, all of which would be necessary factors to more effectively

test for representation effects within the Latino/a group. Moreover, Latino/a teachers make up a relatively smaller share of teachers in the ELS ($N = 480$) with generally less experience than Black and White teachers. Consequently, we caution readers in interpreting the precision of the estimates for Latino/a students. We leave it to future research and different data to investigate the effects of representation for Latino/a students by language, immigration history, and especially, country of origin.

Next, the results of our heterogeneity analysis suggest that part of what may be driving the rookie-veteran expectations gap for Black students among non-Black teachers are perceptions about Black students in certain types of schools. Troublingly, we document substantially lower expectations for Black students among rookie non-Black teachers in lower-income and lower-achieving schools—precisely the schools likely to experience high turnover among teachers and regularly receive new teachers from both traditional certification programs and alternative programs such as TFA (Chiang, et al., 2017; Jacob, 2007; Ladd, 2013). The heterogeneity analysis also reinforces previous findings (e.g., Kunesh & Noltemeyer, 2015) that Black boys especially face stereotypes.

This study contributes to work exploring the importance of teacher experience for student outcomes (Harris & Sass, 2011; Ladd & Sorenson, 2017; Papay & Kraft, 2015; Rice, 2013; Wiswall, 2013). While previous research has shown that more experienced teachers are more effective at raising student achievement, reducing absences, and creating a strong school community, it was unclear how experience is related to perceptions of students of a different race or ethnicity. Future research should take up the question of whether the higher expectations of Black students by other-race veteran teachers found in the current

Table 5
Heterogeneity of Rookie Gap in Non-Black Teacher Expectations of Black Students

	Majority FRPL	Minority FRPL	Majority NW	Minority NW	Public Schools	Girls	Boys	Urban	Suburban	High Performing	Low Performing
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Panel A. Black students											
Rookie teacher	-0.97 (0.23)***	-0.09 (0.07)	-0.16 (0.16)	-0.12 (0.08)	-0.16 (0.09)*	-0.07 (0.10)	-0.18 (0.09)**	0.04 (0.12)	-0.25 (0.08)***	-0.01 (0.08)	-0.28 (0.11)**
Controls for teacher X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Student FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.21	0.02	0.05	0.02	0.03	0.02	0.03	0.01	0.04	< 0.01	0.05
N	100	1,430	550	980	1,260	780	750	630	680	560	750
Panel B. Latino/a students											
Rookie teacher	-0.23 (0.16)	0.06 (0.06)	0.05 (0.10)	0.04 (0.06)	0.06 (0.07)	0.03 (0.08)	0.07 (0.08)	0.16 (0.09)*	< 0.01 (0.08)	-0.02 (0.08)	0.03 (0.10)
Controls for teacher X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Student FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.21	0.02	0.03	0.03	0.02	0.04	0.00	0.05	0.03	0.02	0.02
N	220	1,670	820	1,070	1,490	930	960	780	890	660	940

Note. Sample is always restricted to students with two racially mismatched teachers. Standard errors clustered at school-level in parentheses. Number of observations rounded to the nearest 10 in accordance with NCES rules. FRPL = Free or reduced-price lunch eligible; NW = Non-White students; FE = fixed effect. High and low performing is defined using the ELS provided academic climate scale. The academic climate scale captures an index of five items concerning school principal perceptions of their school's student morale, teacher effort on student achievement, teacher morale, student academic priorities, and homework expectations for students. High performing includes schools in the top two quartiles of the academic climate index while low performing includes schools in the bottom two quartiles.
* $p < .10$. ** $p < .05$. *** $p < .01$.

paper are, in fact, a direct mechanism for overall improved teacher effectiveness. Also, our analysis disentangling school-specific experience (i.e. school socialization) from overall teaching experience indicates that future research should explore how school socialization affects teacher effectiveness with regard to other student outcomes, such as test scores or behavioral outcomes.

This study also contributes to ongoing work regarding the effects of (a lack of) racial representation among the teacher workforce for students of color. As more and more outcomes are found to be related to student-teacher demographic mismatch for more and more groups of students, it is important to extend scholarship to understand the nuances of this relationship, including investigating potential moderating factors at the teacher and school levels. Such nuance allows better targeted interventions to create changes. The current manuscript, for example, indicates implicit bias trainings, particularly during pre-service teacher preparation, may be especially helpful among rookie teachers.

Indeed, identifying that rookie teachers are the primary drivers of the previously documented racial mismatch expectations gap for Black students, and that this gap is particularly large in lower-income, lower-achieving schools, has several implications for practice. First, there is an opportunity to continue to adapt teacher training and pre-service education programs to better counteract teachers' incorrect, preconceived notions of Black students' potential before they enter the teaching profession. Historically, teacher education programs have been criticized for not adequately preparing teachers to serve a diverse population of children (Ladson-Billings, 1999). Teacher preparation programs have responded over the last several decades, however, incorporating curriculum and experiences to improve multicultural education (Hollins & Guzman, 2005). Ongoing research regarding the effectiveness of such culturally relevant teacher training and pre-service programs have yielded mixed results in the past (e.g., Cochran-Smith, Davis, & Fries, 2004; Deering & Stanutz, 1995), but more recent research shows promising results of well-designed programs and interventions (Okonofua, Paunesku, & Walton, 2016; Sleeter, 2001; Wiggins, Follo, & Eberly, 2007). Successful programs have emphasized the need for more transformational teaching training that embraces diverse perspectives across content and methods (Ambe, 2006) and gives teachers experiences interacting with people from diverse backgrounds (Akiba, 2011).

Still, the best way to overcome a deficit framework of teaching students of color remains an open question with scholars suggesting an emphasis on reflection and critical pedagogy (Milner, 2003), culturally relevant pedagogy (Ladson-Billings, 1996), and critical multiculturalism (May & Sleeter, 2010), among others. Our results suggest this work is of pressing importance and deserving of ongoing attention. Establishing cultural competency and experience with other-race students before becoming a lead teacher may reduce the large gap we observe in first year non-Black teachers' expectations of Black students.

The implications for teacher training are especially important given that our descriptive statistics document that rookie teachers are more likely than veteran teachers to have a student of a different race, and our heterogeneity analysis shows that gaps are large

among vulnerable students. Indeed, schools with a higher proportion of minority and underprivileged students experience more teacher turnover and higher proportions of new teachers (e.g., Jacob, 2007; Ladd, 2013; Scafidi et al., 2007). Given our results combined with research showing that lower expectations of students directly affect student performance, this disproportionate representation of rookie teachers in minority-majority schools may be especially detrimental to Black students' outcomes. For a student with college-going talent who, for whatever reason, has not considered college a viable destination, meeting a teacher capable of seeing their potential and planting the seeds of academic confidence could be the crucial difference. For students in disadvantaged schools, where many environmental factors may already be taxing students' identification with academic success, teachers can be a buffer from the environment, a countervailing force that may be the students' first signal that they can succeed in college. The results presented here underscore that we can better prepare teachers for this crucial role.

This leads to the second implication for school administrators and districts: Increase teacher retention—of all races—at schools and in classrooms with a higher proportion of students of color, and work to attract more experienced teachers to these schools and assign them to these classrooms. Given the consistent and widespread results documenting the benefits of Black teachers for Black student performance, the recruitment and retention of Black teachers should continue to be a primary goal. However, as discussed above, even with aggressive action, a meaningful reduction in the diversity gap between teachers and students is unlikely to happen for decades (Putman et al., 2016). In the meantime, our results suggest that increasing the experience level of non-Black teachers teaching Black students can at least moderate the racial mismatch expectations gap, ultimately reducing the negative effects of the current lack of racial representation among teachers.

This analysis should be interpreted within its limitations. First, this paper does not use data that follow teachers over time. Rather, we compare teachers with more and less experience evaluating the same student. This leaves open the possibility of a selection problem where, for example, non-Black teachers with systematically lower expectations of Black students exit the teacher workforce early in their careers. This exiting could leave us with a sample of non-Black veteran teachers with higher expectations of Black students due to factors other than their professional experience. We leverage an ELS item that asks teachers about their happiness with teaching in an attempt to allay this concern within the confines of our data (see online Appendix Table A8 for a detailed description of the test and results), but it is not a substitute for an analysis that utilizes a teacher-level panel dataset. We encourage future work to use such data and reexamine the questions investigated in this paper.

Second, our disentangling of teacher experience from school socialization is incomplete because we do not have information on the types of schools teachers transfer from, which may be relevant given that teachers sort nonrandomly across schools. For example, teachers who transfer between two very similar schools in a district may have different expectations than teachers who transfer from a low-income school to a higher-income school or vice-versa. Again, we leave it to future research to more

fully investigate the relationship between patterns of teacher sorting across schools, professional experience, racial mismatch, and expectations-setting.

Finally, rookie and veteran teachers may differ in ways not captured by variables available in our dataset. One factor in particular may be problematic: cultural competency. Teacher training programs have increasingly incorporated implicit bias and cultural competency training (e.g., Hollins & Guzman, 2005), making it likely that newer White teachers have more positive views of students of color compared to more veteran teachers. There is no way to explicitly test pre-service experiences with our data. However, two factors allay these concerns. First, we find that rookie teachers have *lower* expectations of Black students compared to more veteran teachers, which is not what we would expect given general trends in teacher training and race relations. Second, we find large changes in expectations after just one year of teaching. We think it unlikely that rookie teachers are dramatically qualitatively different in terms of racial perceptions and training compared to second year teachers.

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NOTES

¹We use positive perceptions of academic potential for conceptual clarity, ease of inference, and parsimony. We do not use categorical outcome measures because estimators appropriate for such outcome measures preclude the use of student FE, a critical component for identifying a consistent estimate of the relationship of interest. The results when using a similar measure of negative perceptions (e.g., a binary indicator for a teacher believing a student will only attain a high school diploma or less) are provided in online Appendix Table A1. As expected, these results demonstrate that non-Black teachers are more likely than Black teachers to expect Black students to achieve a high school education or less. There are no systematic differences in other-race teacher expectations of this dependent variable by experience, however. In other words, other-race rookie teachers do not have systematically different expectations regarding Black students' high school achievement, only regarding their likelihood of college completion.

²Online Appendix Table A9 presents summary statistics on pooled samples of Black and White students, and also Black, White, and Latino/a students.

³Our baseline estimates may be biased if the sorting of students systematically varies by teacher experience (race) and student background together. We provide some evidence to alleviate this concern, along with an explanation of the statistical tests, in the online appendix (see Appendix Table A2).

⁴For the sake of space, only relevant and/or significant variables are presented in Table 3. However, all variables described in Tables 1 and 2 are included in the model used to generate the estimates presented in Table 3. A full version can be found online in Appendix Table A3. Further, Appendix Table A10 presents estimates of other potential moderators between other race and teacher expectations, including teacher certification and education.

⁵Online Appendix Table A4 presents the estimates from these models in table form.

⁶See online Appendix Table A6 for the coefficients from the model in table form. Note that some teachers are missing information on the number of years they have been at a school. Therefore, Appendix Table

A7 replicates the primary results (Table 4) after dropping these teachers. The results are nearly identical to Table 4.

⁷To explore whether language or immigration history—the relevant information available in the ELS—may help disentangle some of these representation effects, we re-estimate equations (1) and (2) on subsamples of Latino/a students: those whose native language is Spanish, and those born outside the United States. These results are presented online in Appendix Table A5. The results from equation (1) are presented in Columns 1 through 3. Among foreign-born Latino/a students, having a non-Latino/a teacher is associated with lower expectations of college going. However, rookie-teacher status has no significant moderating effect on this relationship. And, generally, the results from Equation (2) on these subgroups, presented in columns 4 through 6, reflect the overall results for Latino/a students, suggesting no significant heterogeneity in the match-experience relationship by language or immigration history.

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