



The Theoretical and Empirical Arguments for Diversifying the Teacher Workforce: A Review of the Evidence

Dan Goldhaber

Roddy Theobald

Christopher Tien

University of Washington Bothell

Concerns about the (lack of) diversity of the U.S. teacher workforce—and, in particular, the mismatch between the demographics of the teacher workforce and the nation’s students—are not new. Indeed, the recruitment of minorities into teaching has long been a policy goal, particularly in districts with large percentages of minority students (Dometrius & Sigelman, 1988; Kirby et al., 1999). As then Secretary of Education Richard Riley put it nearly two decades ago, “Our teachers should look like America” (Riley, 1998, p. 20).

Despite this rhetoric, we have made relatively little progress toward ensuring that the diversity of the teaching workforce reflects the diversity of the student body in U.S. public schools (Albert Shanker Institute, 2015). Between 2003 and 2012, for example, the percentage of the nation’s teachers who are Black actually dropped by over a point, while over the same time span, the increase in the percentage of Hispanic students far outpaced the modest increase in the percentage of Hispanic teachers (Snyder, 2014).¹ The situation in Washington State is even starker, as the gap between the percentage of Black and Hispanic students and the percentage of Black and Hispanic teachers has increased by nearly seven points over the past decade (OSPI, 2003, 2013).²

Should school districts seek explicitly to recruit minority teachers? The answer to this question depends in part on one’s view of the importance of providing employment opportunities to traditionally underrepresented groups and how this relates to efforts to create a culturally diverse and culturally sensitive teacher labor force. It also depends on whether minority teachers are more effective in educating some types of students.³ Below, we give an overview of both the theoretical arguments and the empirical evidence supporting the importance of teacher workforce diversity. We also place the magnitude of these empirical findings in context and discuss some potential trade-offs to diversifying the teacher workforce.

Theoretical Arguments for Diversifying the Teacher Workforce

There is a significant literature that argues that a match between the race/ethnicity of teachers and students leads to better student outcomes, particularly in high-poverty environments with significant at-risk student populations (Clewell & Villegas, 1998; Dilworth, 1990; Fordham & Ogbu, 1986; Ingersoll & May, 2011; Irvine, 1992; King, 1993; Madkins, 2011; Ogbu, 1992; Zapata, 1988; Zimpher & Ashburn, 1992).⁴ Some, in fact, posit the teacher-student “role model”

¹ In the 2003–04 school year, Black students represented 17.2% percent of the national student body for primary and secondary education, while Black teachers comprised 7.9% of the teacher workforce. In the 2011–12 school year, Black students represented 15.7% of the national student population in elementary and secondary schools, while Black teachers only comprised 6.8% of the national teacher workforce (Snyder, 2014). Similarly, in the 2003–04 school year, 19.1% of the national student population in primary and secondary education was Hispanic, while only 6.2% of the national teacher workforce was Hispanic. In the 2011–12 school year, 24.3% of the national student body consisted of Hispanic students, but only 7.8% of teachers were Hispanic.

² For the 2002–03 school year, Black students represented 5.6% of the student body and Black teachers comprised 1.48% of the teacher workforce, while 11.6% of students and 2.13% of teachers were Hispanic. In the 2012–13 school year, African Americans comprised 4.6% of students and 1.28% of teachers, while Hispanic teachers comprised 3.37% and Hispanic students represented 19.6% of the total primary and secondary school population.

³ See the November 1998 issue of *Education and Urban Society* for arguments supporting the hiring of minority teachers, particularly in heavily minority school districts.

⁴ Similar arguments are made in the case of female teachers in mathematics and science, fields in which females have traditionally been underrepresented (e.g., Beilock et al., 2010).

gap as an important explanation for the educational and achievement gaps that we see among students (Boser, 2011; Evans, 1992; Hess & Leal, 1997; Little & Bartlett, 2010; Steele & Aronson, 1995; Villegas & Lucas, 2004).⁵

There are at least three commonly cited theoretical rationales for why teacher role models (i.e., a racial/ethnic match between teacher and student) have positive educational benefits for minority students in particular. The first is that minority students, particularly those living and attending schools in disadvantaged settings, benefit from seeing adult role models in a position of authority (Villegas & Clewell, 1998; King, 1993; Villegas & Lucas, 2004). In particular, some scholars have suggested that having an adult role model could alleviate the “burden of acting White” among underrepresented minority students by influencing the cultural value placed on academic success (Fordham & Ogbu, 1986; Fryer & Torelli, 2010; Ogbu, 2004).⁶

Second, some researchers argue that minority teachers are more likely to have high expectations for minority students (Beady & Hansell, 1981; Ferguson, 2003).⁷ This can have important impacts on student outcomes because minority students, especially Black students, appear to be more sensitive to teacher expectations than middle-class White students (Irvine, 1988; Kash & Borich, 1978; McKown & Weinstein, 2002) and also because of the “self-fulfilling prophecy” phenomenon in which negative stereotypes appear to perpetuate poor performance of minority students (Brophy, 1983; Ferguson, 2003; Rosenthal & Jacobson, 1968; Steele & Aronson, 1995).⁸

Finally, there may be important cultural differences between teachers of different backgrounds in terms of instructional strategies and interpretation of students’ behavior. These, in turn, are thought to have long-term consequences for student achievement. For instance, a vast literature finds that Black students are more likely to be disciplined (e.g., be suspended from school) than other students, even after accounting for the nature of students’ misconduct (Children’s Defense Fund, 1975; McCarthy & Hoge, 1987; McFadden et al., 1992; Skiba et al., 2002). Consequently, there is concern that the disparities in disciplinary actions could be based in part on teacher interpretation of student behavior, which may be informed by negative stereotypes (McCarthy & Hoge, 1987; Gregory et al., 2010).

⁵ Racial and ethnic student achievement gaps represent a major concern for education policy (Lee & Burkam, 2002) due to mounting evidence that these gaps impact wage and wealth gaps (Card, 1999), persist into higher education (Arcidiacono et al., 2012), and have remained significant over the last 30 years (Lee, 2002).

⁶ Researchers have tried to find empirical ways to test for the effect of this theory on African American student achievement, with mixed results. Analyzing the National Education Longitudinal Study of 1988, a nationally representative, self-reported survey, Cook and Ludwig (1998) find no evidence that, on average, African American students exhibit lower effort in school and suffer from more social unpopularity due to academic success than non-Hispanic White students. However, Fryer and Torelli (2010) utilized the National Longitudinal Study of Adolescent Health to construct a social matrix measure of popularity and found that Black and Hispanic students with GPAs over 3.5 and in more racially integrated schools did lose significant amounts of popularity, in sharp contrast with White high-achieving students.

⁷ This theoretical argument is bolstered by empirical evidence (discussed in the next section) that teachers are likely to give higher subjective evaluations to students of the same race (Casteel, 1998; Dee, 2005; Ehrenberg et al., 1995; Gershenson et al., 2015; Ouazad, 2014).

⁸ Casteel (1998) further observed that African American students received significantly less positive feedback and interactions within the classroom than White students when they were taught by a White teacher.

These theoretical arguments suggest several ways that increasing the diversity of the teacher workforce *might* improve outcomes for racial/ethnic minority students. However, as we describe in the next section, empirical researchers have put these theories to the test and generally found that, all else being equal (and, importantly, all else is often not equal), minority students *do* appear to benefit when they are taught by a teacher of the same race/ethnicity. Much of this empirical evidence focuses on student test performance, but we also discuss empirical evidence related to other important outcomes such as subjective evaluations and discipline.

Empirical Evidence on the Importance of Teacher Racial/Ethnic Role Models

Early empirical evidence about the importance of teacher role models for student test performance was severely limited both by the lack of annual student testing and by the shortage of large-scale data sets connecting public school students and teachers. For example, the first major empirical study of own-race teacher matches (Ehrenberg et al., 1995) used the National Educational Longitudinal Study of 1988 and did not find a link between test score gains from 8th to 10th grade and having a teacher of the same race, but this evidence is tempered by the difficulty of estimating the impact of individual teacher characteristics on student test growth over a 2-year period.

However, researchers have increasingly gained access to longitudinal data containing annual student test scores linked to individual teachers, which has led to an explosion of follow-up research that revisits this question with considerably more extensive data. This evidence generally suggests that having a teacher of the same race has a small but meaningful impact on student test scores. In the first such study, Dee (2004) analyzed data from Tennessee's Project STAR class size experiment (in which students were randomly assigned to teachers) and found that students taught by a teacher of the same race scored 0.11 standard deviations higher in mathematics and 0.06 standard deviations higher in reading than similar students of the same grade, entry wave, and school who were assigned to a teacher of different race.⁹ These effects were largest for Black students (i.e., when Black students were assigned to a Black teacher).

Dee's findings have been corroborated by several more recent studies that used even more extensive statewide administrative databases of students and teachers, although the magnitudes of the findings tended to be more modest. Clotfelter et al. (2007) used longitudinal data from North Carolina and found that students scored 0.03 standard deviations higher in mathematics and 0.02 standard deviations higher in reading in years when they were assigned to a teacher of the same race relative to years when they were assigned to a teacher of a different race. Goldhaber and Hansen (2010) used the same data set and found even larger effects for Black students; specifically, Black students with a Black teacher scored 0.04 standard deviations higher in both reading and mathematics than Black students with a White teacher, all else being equal. Most recently, Egalite et al. (2015) observed a 0.02 standard deviation greater gain in mathematics test scores and a 0.004 standard deviation greater gain in reading test scores for Black students matched to Black teachers in Florida classrooms relative to Black students with a White teacher, all else being equal.

⁹ These estimates (and all estimates discussed in this section) are statistically significant.

While this empirical evidence generally suggests that diversifying the teacher workforce could help close racial achievement gaps in public schools, this evidence also points to some potential trade-offs associated with focusing solely on teacher workforce diversity. For example, the results in Dee (2004) suggest that White students also benefit from being assigned to a same-race teacher, so in the aggregate, improving the diversity of the teacher workforce may increase the performance of minority students while decreasing the performance of White students. While this would certainly help close racial achievement gaps, this outcome is perhaps less desirable than a policy that improves outcomes for minority students while not harming outcomes for nonminority students.

The empirical evidence we have discussed to this point concerns student test performance, but there is also empirical evidence illustrating the importance of teacher role models for non-test outcomes such as subjective evaluations and discipline. For example, Ehrenberg et al. (1995) found that teachers are more likely to give better subjective evaluation of students' future success and behavior for students of the same race. With the same data, Dee (2005) found that having a teacher of a different race increased the odds that the student was viewed as disruptive by 46%, inattentive by 34%, and rarely completing assignments by 28%. Likewise, Ouazad (2014) found that teachers gave better performance assessments to students of their own race, even when taking into account test scores, student behavior and characteristics, and teacher characteristics. Most recently, Gershenson et al. (2015) found that non-Black teachers had significantly lower expectations of educational attainment for Black students than Black teachers did.

These non-test-related role modeling effects are potentially quite important as, for instance, subjective assessments by teachers could influence the extent to which teachers encourage students and the recommendations they might write for colleges. Additionally, disciplinary actions have been widely linked to decreases in future student achievement and future delinquency (Arcia, 2006; Gregory & Ripski, 2008), suggesting that the discipline gap contributes significantly to the achievement gap (Gregory et al., 2010; Skiba et al., 2011).

Putting Role Modeling Effects in Context

The findings we describe above are encouraging and suggest an empirical basis for teacher workforce diversification. However, it is important to put the magnitudes of the estimated effects on student test performance in context. Figure 1 (mathematics) and Figure 2 (reading) provide some context for thinking about the magnitudes of the estimated role modeling effects relative both to overall achievement gaps between Black and White students (the horizontal lines) and to the estimated effects of other teacher characteristics on student achievement. The horizontal lines in Figure 1 show that the Black-White achievement gap in fourth grade is 0.55 standard deviations in Washington State and 0.85 standard deviations nationally.¹⁰ These achievement gaps grow slightly by eighth grade (both in Washington and nationally) and are somewhat smaller in reading (see Figure 2). On the other hand, the first two

¹⁰ The achievement gaps in Washington State are the authors' calculations from the state's Measurements of Student Progress data in the 2012–13 school year, while the national achievement gaps are from the 2013 National Assessment of Educational Progress.

sets of bars in each figure represent the estimated role model effects discussed in the previous section, which are far smaller than the overall Black-White achievement gaps. It is therefore clear that role model effects alone will not close Black-White achievement gaps in public schools.

Yet, while diversification of the workforce is unlikely to radically affect achievement gaps, we do believe the magnitudes of these role model effects to be educationally meaningful. This can be seen by comparing the first two sets of bars in Figures 1 and 2 with the other sets of bars, representing estimated effects of other teacher characteristics on student achievement from the broader literature. For example, while it is well established in the literature that teachers with higher credential test scores and teachers who have National Board certification are more effective than other teachers, all else being equal, the estimated effects of each of these credentials tend to be smaller than the estimated role model effects discussed above. Put another way, assigning a Black student to a Black teacher is associated with higher learning gains than assigning the same student to a teacher with one standard deviation higher credential test scores or a teacher who is National Board certified.

Moreover, the largest estimates from the literature on role model effects (from Dee, 2004) are surprisingly comparable to the effects associated with the first 5 years of teaching experience and a one-standard deviation change in teacher quality.¹¹ That said, the estimates from Clotfelter et al. (2007), Goldhaber and Hansen (2010), and Egalite et al. (2015) are considerably more modest; for example, the estimated role model effects in Clotfelter et al. (2007) were less than half of the estimated returns to the first 5 years of teaching experience reported in the same paper. Nonetheless, given the importance of *all* the teacher credentials summarized in Figures 1 and 2, it is clear from the relative magnitudes of the estimated role model effects that these effects are educationally meaningful.

Conclusions

The theoretical arguments and empirical evidence we discuss above generally support the notion that improving the diversity of the teacher workforce would help close racial achievement gaps in public schools. However, it is also important to recognize that teacher workforce diversity is just one of many competing objectives for improving the education system and that there may be substantial challenges and potential unintended consequences to diversifying the teacher workforce. One challenge is that we know very little about what contributes to the lack of diversity in the teaching workforce. One of the few examples of empirical evidence on this topic is Goldhaber et al. (2014), who found that minority teacher candidates are less likely to become employed as public school teachers in Washington State than White teacher candidates, all else being equal. Nevertheless, even this empirical evidence comes with competing explanations: It could be that minority teacher candidates were less likely than White teachers to seek a teaching position (perhaps due to better opportunities outside of teaching) or that minority teacher candidates were less likely to be hired for jobs to which they applied than White

¹¹ We say “surprisingly” because teacher quality is the best schooling predictor of student test performance (Rockoff, 2004; Rivkin et al., 2005).

teachers. Thus, we must know more about *why* there is a lack of diversity in the teacher workforce before we can design effective strategies to recruit more minority teachers.¹²

There may also be political challenges that policy makers must overcome to improve teacher workforce diversity. For example, given the small percentages of teacher candidates from racial minority groups in Washington State (Goldhaber et al., 2014), schools and districts would need to actively target minority teacher candidates to make any substantial change to the diversity of the state’s teacher workforce.¹³ However, state agencies in Washington State are prohibited from granting preferential treatment to any individual or group on the basis of race (Washington State Civil Rights Act, 1999) and, thus, cannot use race as a factor in hiring decisions. This means that successful efforts to improve teacher workforce diversity in the state likely require more focus on improving the pipeline of teacher candidates.

Policy makers must also be aware that there may be unintended consequences to diversifying the teacher workforce. One concern, discussed by Egalite et al. (2015), is that newly recruited minority teachers (perhaps recruited to the profession through policies intended to improve the diversity of the teacher workforce) may not be as effective as minority teachers currently in the teacher workforce. Suppose, for example, that Washington State—acting on evidence that minority teacher candidates are disproportionately affected by teacher licensure test requirements (Goldhaber & Hansen, 2010)—decided to improve the diversity of the teacher workforce by reducing or removing these barriers to the teaching profession. This may improve the diversity of the state’s teaching workforce, but there is also compelling evidence (e.g., Clotfelter et al., 2010; Goldhaber, 2007; Goldhaber & Hansen, 2010) that teachers with higher credential test scores are more effective at improving student achievement for all students. Thus, it is unclear what the overall impact of such a policy would be, either on overall student achievement or racial achievement gaps.

That said, these are just caveats to the overall conclusion of this review; namely, that there are good theoretical reasons to believe that minority students would benefit from a more diverse teaching workforce, and these theoretical arguments are largely backed by empirical evidence suggesting that there are small but meaningful “role model effects” when minority students are taught by teachers of the same race. Thus, our perspective is that policy makers should consider policies to increase the diversity of the teacher workforce as one of many strategies to attempt to close racial and ethnic achievement gaps in public schools.

¹² This question is part of the larger focus of this project, funded by the Gates Foundation, titled “The teacher pipeline in Washington State: Examining the transition from student teaching to the classroom and implications for workforce diversity.”

¹³ In the sample of Washington State teacher candidates studied in Goldhaber et al. (2014), 2.9% were Hispanic, 4.4% were Asian, 1.0% were Black, and 0.8% were American Indian.

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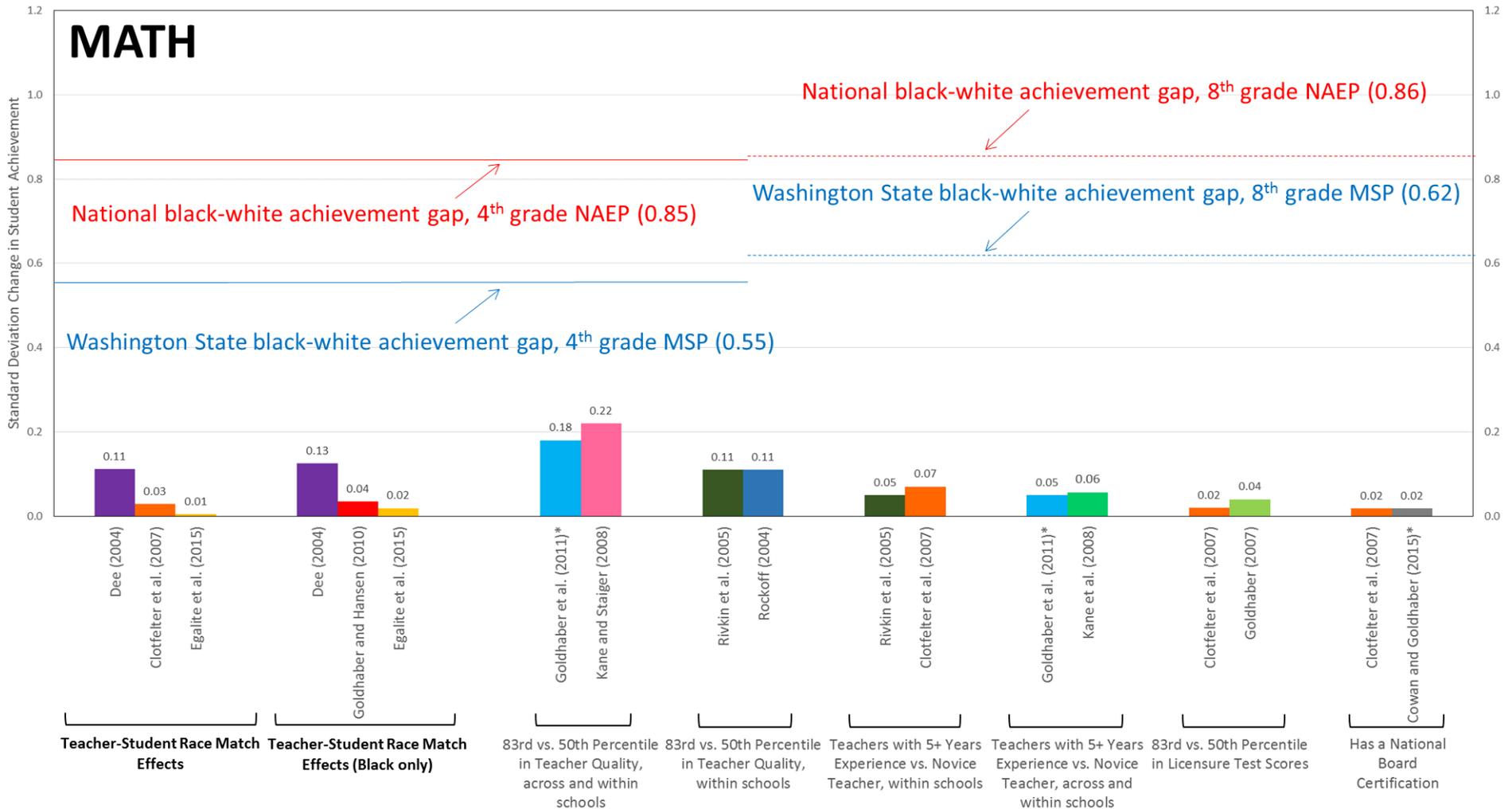
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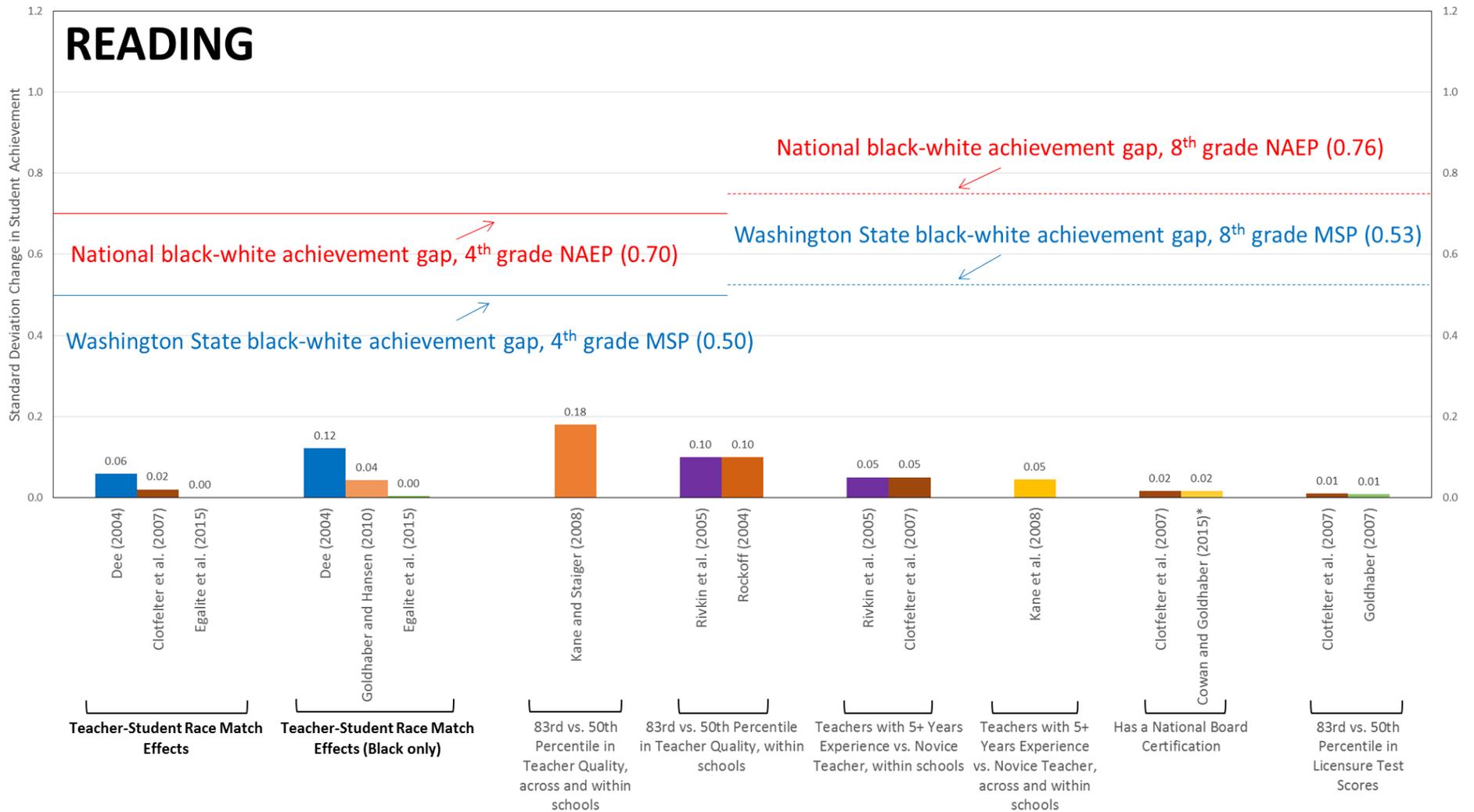
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Figure 1: Estimated Effects in Literature of Teacher Characteristics on Student Math Test Performance



NOTES: Achievement gaps calculated from 2012-13 Measures of Student Progress (MSP) in Washington State and 2013 National Assessment of Educational Progress (NAEP) for nationally-representative sample. *denotes estimate from Washington State.

Figure 2: Estimated Effects in Literature of Teacher Characteristics on Student Reading Test Performance



NOTES: Achievement gaps calculated from 2012-13 Measures of Student Progress (MSP) in Washington State and 2013 National Assessment of Educational Progress (NAEP) for nationally-representative sample. *denotes estimate from Washington State.