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The Growing Need for Diverse Teachers in the Mountain West

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Abstract

This policy brief examines the racial and ethnic diversity of the public teacher workforce in five Mountain West states, drawing on survey data from 1993 to 2016. We find increases in student diversity are generally outpacing teacher diversity in the region, though important differences in teacher-student parity and access to nonwhite teachers across states are also evident. In addition, we demonstrate the recruitment and retention of nonwhite teachers in these states lag considerably behind the rest of the U.S. This brief concludes with recommendations to help Mountain West states and districts promote greater racial and ethnic diversity among their teacher workforces.

Introduction

The racial and ethnic diversity of the public teacher workforce has gathered much attention in recent years. Since the 2014-15 school year, the student body in U.S. public schools has been majority-minority, with at least 50 percent of students being nonwhite (Maxwell, 2014). Crossing this milestone has brought renewed focus to the underrepresentation of racial and ethnic minorities among teachers, collectively accounting for just less than 20 percent of teachers based on the most recent data (McFarland et al., 2018). A number of districts, states, and the U.S. Department of Education have all made recruitment and retention of teachers of color a priority in recent years. This focus on teacher diversity is timely in light of new empirical research documenting a number of ways in which teachers' race may affect their students. As we describe further below, a student of color's test scores, chances of promotion into

advanced classes, exclusionary disciplining, and even high school graduation have all shown associations with the presence of teachers of color in the classroom.

In this brief, we examine the diversity of the teacher workforce in the Mountain West,¹ a region with a historically large Hispanic population that continues to grow more ethnically and racially diverse over time (Pohl, 2017). Additionally, this region's population is growing quickly; four Mountain West states – Utah, Colorado, Nevada, and Arizona – are in the top eight fastest-growing states (United States Census Bureau, 2017). Population growth in each of these states is disproportionately driven by nonwhite groups, putting the region at the vanguard of demographic change the nation as a whole will be facing in coming years (Teixeira et al., 2015). The racial and ethnic diversity of Las Vegas has even been cited as a likely model for what diversity in the United States as a whole will look like in 40 years (Kolko, 2017).

In short, the states in the Mountain West region represent a combination of historical demographic patterns and current population growth rates that can offer insights for other states that will soon follow on similar population trajectories. These features make the Mountain West region an interesting case study of teacher diversity, offering lessons to policymakers looking to diversify the workforce in the face of continued demographic change.

Teacher Diversity Mitigates Racial Mismatch

Racial mismatch occurs when the race of a student does not align with that of their teacher, and nonwhite students who do not see themselves reflected in at least some of their teachers during school tend to exhibit a number of negative outcomes. Though sociologists have long theorized about how students belonging to minority groups may be academically disadvantaged by having a predominantly white teacher workforce, only recently has empirical research provided more concrete evidence to substantiate the ways in which racial matching impacts students (see Goldhaber et al., 2015 for a concise review).

The current evidence suggests racial matching between students and teachers affects a number of student outcomes. White teachers typically have higher expectations for white students than for students of color (Papageorge et al., 2016). These lower expectations have adverse impacts on their students of color, whether on their self-concept or on their chances of having their intelligence recognized (Perry, 2017). When teacher discretion plays a role in advancing students into gifted programs, black students are far less likely than white students to be promoted when their teachers are white (Grissom & Redding,

2016). Black students are much less likely to experience exclusionary school discipline when their teacher is the same race as them; this particularly holds true for black male students (Lindsay & Hart, 2017). Finally, a recent study utilizing data from the famous Tennessee STAR experiment on class size conducted in the 1980s found that black students who were randomly assigned just one black teacher during their early elementary years were 13 percent more likely to enroll in college (Gershenson et al., 2018). These racial matching effects may not be due primarily to overt racism among teachers but are generally presumed to be the result of unconscious biases (Dee & Gershenson, 2017).

Unfortunately, the majority of research on racial mismatch is based on black-white comparisons among teachers as they are exposed to racially diverse students. Conversely, relatively little is known about the specific impact of ethnic mismatch on Hispanic students, the largest minority group in public schools in Mountain West states. We do know that English Learners (ELs), who are often native Spanish-speaking, benefit from having a bilingual teacher and lag behind their native English-speaking peers in school outcomes (Quintero & Hansen, 2017). Also, empirical evidence from Florida shows ethnic matching between Hispanic STEM teachers and Hispanic students in middle and high school grades is associated with a greater likelihood for students to take STEM courses upon enrollment in college (Sass, 2015). These lines of evidence are at least suggestive that ethnic matching effects similar to racial matching effects observed among black students and teachers may also play out among Hispanics.

A diverse teacher workforce would help to mitigate the adverse consequences of racial and ethnic mismatch, as it provides students multiple opportunities to interact with teachers of color during their formative years of schooling. Diversity is also beneficial for white students, as it is associated with greater levels of tolerance of other groups (Wells et al., 2016).

Racial Diversity Shifting Quickly Among Mountain West States

Racial and ethnic minority groups are the largest contributors to population growth across America, as the white population ages and nonwhite groups experience higher fertility rates and inflows from migration. The 2010 U.S. Census revealed an absolute decline in the number of white youths in America, while Hispanics, Asians, and multiracial children made up all of the net growth in the nation's under-18 population. Overall, of the 27.3 million added to the U.S. population between 2000 and 2010, half of that number came from Hispanics (Frey, 2011).

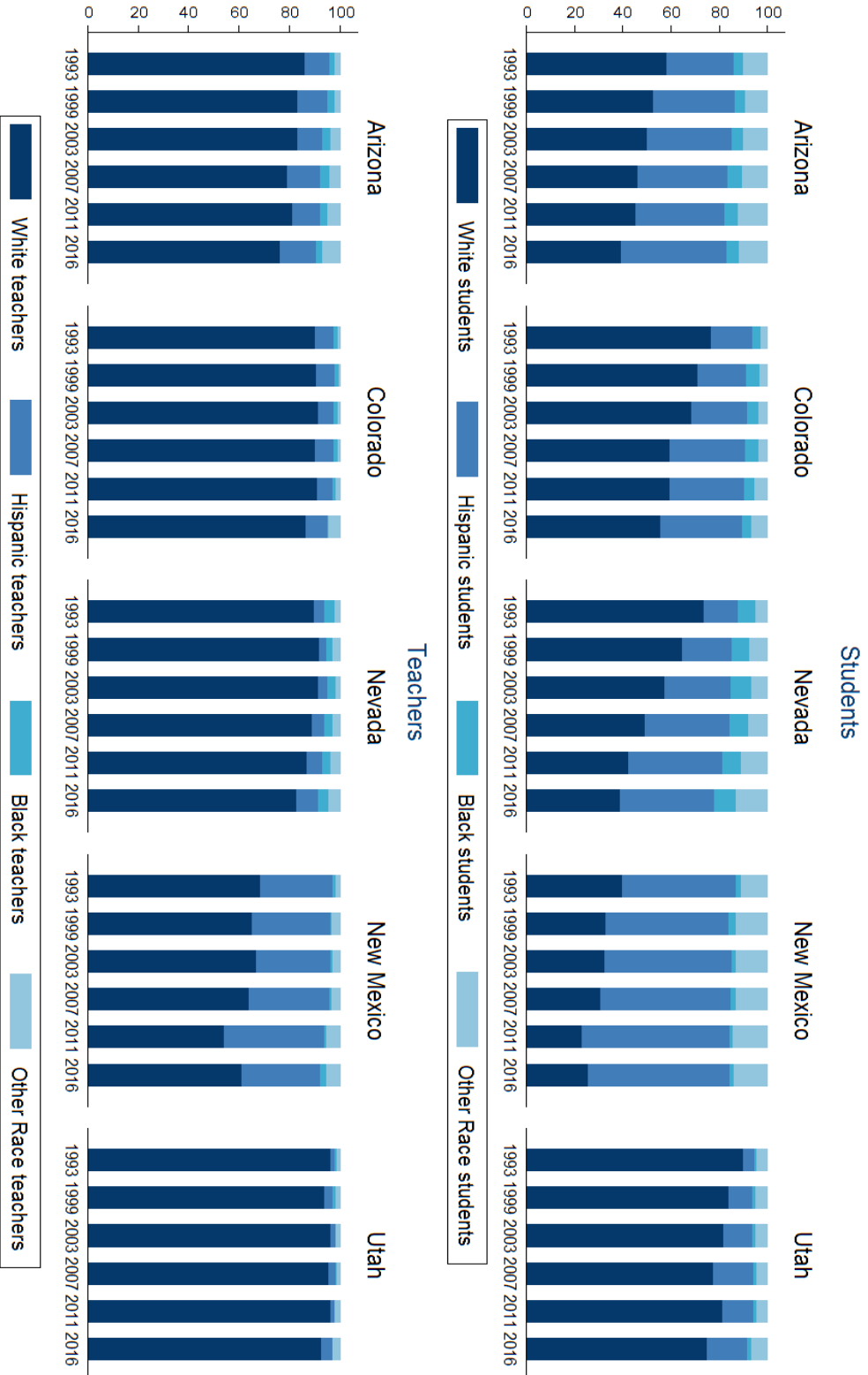
This population shift due to the ascendance of nonwhite racial and ethnic groups is particularly notable in the Mountain West. These states have seen an influx of nonwhite groups, especially Hispanics, over the last few decades. The nonwhite population skews much younger than the white population of these states. William Frey has analyzed the percentage of each state's population comprised of children (under age 18) who belong to a racial or ethnic minority (Frey, 2016). Three of the five Mountain West states have young populations that are majority-minority, while Colorado's is over 40 percent. Frey also identifies the top five states with the greatest "racial generation gaps" between their over-55 and their under-35 populations. Arizona, Nevada, and New Mexico, respectively, earn the top three spots. Large generational gaps in these states mean the overall population shift from white to nonwhite groups will happen sooner in the Mountain West than in other states.

Growing Racial Diversity Creates Growing Demand for Teacher Diversity

The fast pace of growth among nonwhite ethnic and racial groups in the region implies an acute need for diverse teachers both today and in the years ahead. Nonwhite groups are underrepresented among the teacher workforce nationwide. Though some studies of teacher demographics (e.g., Ingersoll & Merrill, 2017) have shown improvements in the diversity of the teacher workforce in recent decades, Putman et al. (2016) show the pace of diversification among teachers lags behind the pace of diversification among students. In other words, without major changes to the pipeline into the teaching profession, teacher underrepresentation will likely grow over time, particularly underrepresentation of Hispanic teachers.

In Figure 1, we present data from five waves of the Schools and Staffing Survey (spanning 1993-2011) and the 2016 American Community Survey reporting student (top row) and teacher demographics (bottom row), documenting trends from 1993 to 2016 in the Mountain West states. The charts show that the share of nonwhite students, particularly Hispanics, has increased over the past 20-plus years in all five Mountain West states. Both the initial share of Hispanic students and their growth rate varies by state. For example, the share of Hispanic students in New Mexico has always been large, accounting for nearly half of all students in 1993, and the growth of this group's share has been positive but modest over the last 25 years. Meanwhile, Hispanic students in Nevada accounted for less than 20 percent of students in 1993 and this subgroup has seen dramatic growth since then, now constituting nearly 50 percent of all students.

Figure 1
Student and Teacher Demographics in the Mountain West



Source: Authors' calculations based on the Schools and Staffing Survey, 1993-1994, 1999-2000, 2003-2004, 2007-2008, 2011-2012; the Common Core of Data, 2015, and the American Community Survey, 2016.

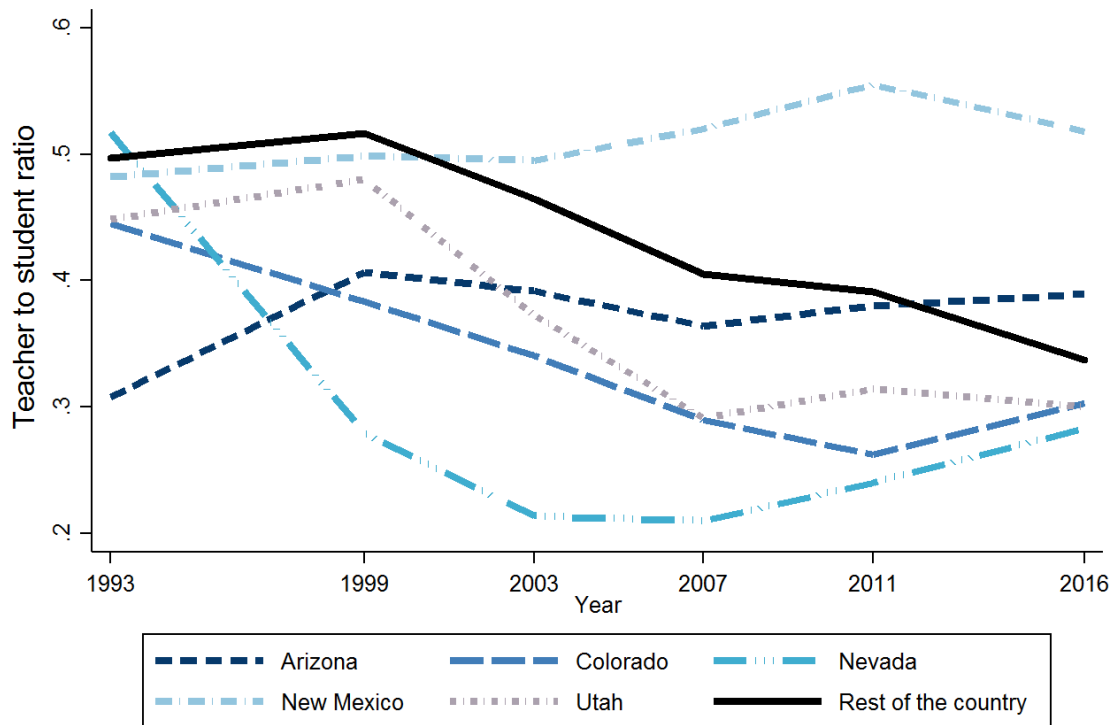
Looking now at the share of nonwhite teachers across the bottom row of Figure 1, we again see different trends arising across states. Note that all states employ teacher workforces that are relatively more white than their student populations. This pattern is what we should generally expect based on the “racial generation gaps” in the region we described above where the adult population is much more white than the population of children. Though the teacher workforces have all grown somewhat more diverse over time, the pace of diversification among teachers generally lags behind that among students. New Mexico has the highest share of Hispanic teachers among these states—presumably because of its large, long-established Hispanic population—and the diversification among teachers appears to be roughly keeping pace with student diversification (though still lagging behind in absolute numbers). All other states, however, have a relatively small percentage of Hispanic teachers. This is especially apparent in Colorado, where the nonwhite teacher share has grown slowly in spite of the quick growth observed among nonwhite students.

Another way to depict these differences between student and teacher demographics is to calculate the teacher-student parity index (Villegas et al., 2012). This index is defined as the ratio of the nonwhite teacher share over the nonwhite student share within a school system. If the share of nonwhite students is equal to the share of nonwhite teachers, this index takes on a value of 1. If the share of nonwhite students exceeds the share of nonwhite teachers, the index value falls below 1, and vice versa.

Figure 2 shows how the teacher-student parity index has changed in these states between 1993-2016. Figure 2 also includes a line representing the teacher-student parity in all other U.S. states during this time for comparison. Figure 2 shows all states in the Mountain West and the rest of the U.S. are well below parity, and in general these measures are moving further from parity over the last 25 years. Parity index values for the rest of the U.S. declined from about 0.5 to 0.3 during this period, consistent with the claim above that the rate of teacher diversification lags behind that of students.

The Mountain West states have evolved in different ways during this period. Both Arizona and New Mexico slightly improved their parity index values from where they sat below the rest of the U.S. in 1993 and in 2016 emerged above the rest of the U.S. Both Utah and Colorado, on the other hand, have essentially mirrored the declines observed in the rest of the U.S., where both states sit about 0.05 points below the rest of the U.S. at both the beginning and the end of the period. The largest decline in the parity index is in Nevada, which began with a parity value slightly higher than the rest of the U.S. in 1993 and finds itself below all of the Mountain West states and the rest of the U.S. in 2016.

Figure 2
Trends in the Teacher-Student Parity Index



Source: Authors' calculations based on the Schools and Staffing Survey, 1993-1994, 1999-2000, 2003-2004, 2007-2008, 2011-2012, the Common Core of Data, 2015, and the American Community Survey, 2016.

Recruiting and Retaining Teachers of Color in the Mountain West

The need to recruit and retain more teachers of color in the Mountain West region is clear, in light of the demographic trends presented above. As Figure 2 shows, the teacher workforces in Utah, Colorado, and particularly Nevada are not adapting quickly enough to the changing demographics in the state. Though Arizona and New Mexico are doing better on these measures, their large generational gaps by race and ethnicity imply a need to continue bringing diverse teachers of color into the profession and keeping them in the classroom.

States in the Mountain West region are ahead of the curve as far as bringing more novice teachers of color into the profession. Based on the Schools and Staffing Survey, 18 percent of novice teachers (those reporting three or fewer years of experience) identified as belonging to a minority racial or ethnic group in the 2003-04 school year; this number notably lagged the 23 percent minority teachers among the rest of the U.S. in that year. The most recent demographic information from the 2015-16 National Teacher and Principal Survey (the most recent data available) shows increases in the prevalence of

minority groups among novice teachers across the board, though the Mountain West states now slightly lead (27 percent) in comparison to the rest of the U.S. (25 percent). The Mountain West's recruitment numbers, though, may in part reflect the region's quickly shifting demographic profile. Thus, in spite of these improved recruitment figures, states still need to maintain a focus on recruiting and retaining strong teachers of color in the region to stay ahead of the quickly changing demographic trends.

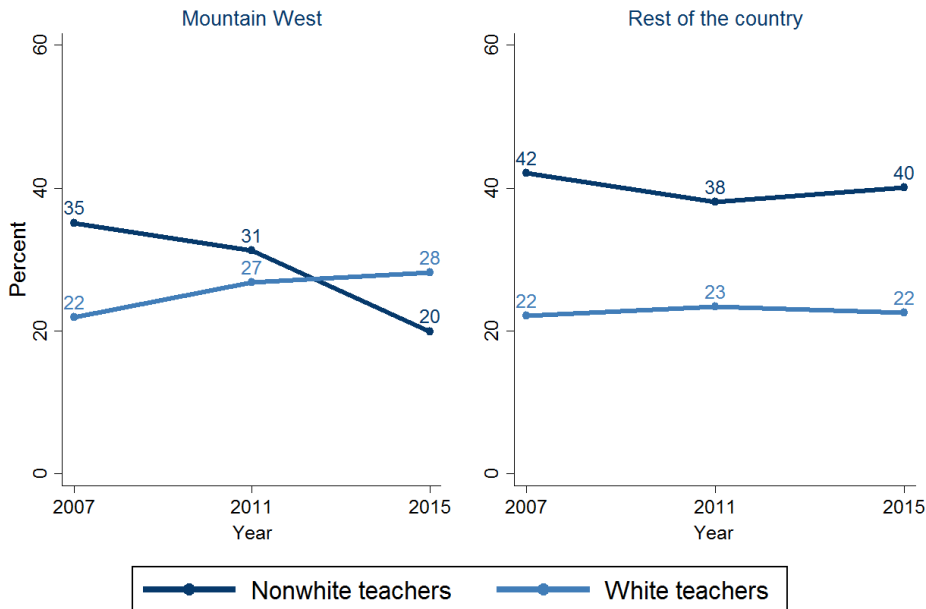
Alternative certification may be a viable policy focus that states in the region could utilize to continue bringing more teachers of color into classrooms. Historically, the main pathway into teaching has been through an undergraduate or graduate teacher-training program in education schools. Yet, since the mid-1980s, alternative routes to teaching have emerged as a response to teacher shortages. Since then, alternative certification programs have been adopted in all 50 states and the District of Columbia (Woods, 2016; National Education Association, n.d.). By the 2015-16 school year, roughly one in four novice teachers have entered the profession through an alternative route based on our analysis of the National Teacher and Principal Survey (NTPS). These alternative certification programs have the particularity of attracting a broader pool of applicants into the profession in comparison to traditional training programs, accounting for a disproportionate share of racial and ethnic minorities and males in the teacher workforce. For instance, in the NTPS data, 20 percent of white recently hired teachers entered teaching through alternative certification programs, while 36 percent of Hispanic teachers and 44 percent of black teachers entered the profession through such programs.

Yet, puzzlingly, pathways into the teaching profession in the Mountain West do not follow this general pattern. Figure 3 plots the percentage of white and nonwhite teachers with three or fewer years of experience who have entered teaching through routes different from a university-based teacher training program between 2007 and 2015 (years in which alternative entry paths were collected in the survey). It is visually apparent that Mountain West states (on the left) differ from the rest of the U.S. (on the right) in two key ways. First, minority entry rates through alternative certification sit notably lower in the Mountain West states than the rest of the U.S. Second, the alternative entry rates in the Mountain West states have declined among nonwhites and increased among whites such that their relative positions have reversed by 2015; by comparison, these rates are essentially flat in the rest of the U.S.

This reversal in trend lines here is not necessarily problematic—for example, nonwhite entrants may be both more common and increasingly more prepared in the Mountain West over time. Yet, this reversal does suggest that alternative certification (one of the

most important sources of diverse teachers in the rest of the U.S.) is growing less diverse in the Mountain West precisely at the time when the need for diverse teachers in the region is growing. Understanding the reasons for this change and working to reverse it to bring more diverse teachers into the region could help improve the region’s demographic representation among teachers.

Figure 3
Percent of Novice Teachers Entering Through Non-Traditional Pathways



Source: Authors' calculations based on the Schools and Staffing Survey, 2007-2008, 2011-2012, and the National Teacher and Principal Survey, 2015-2016.

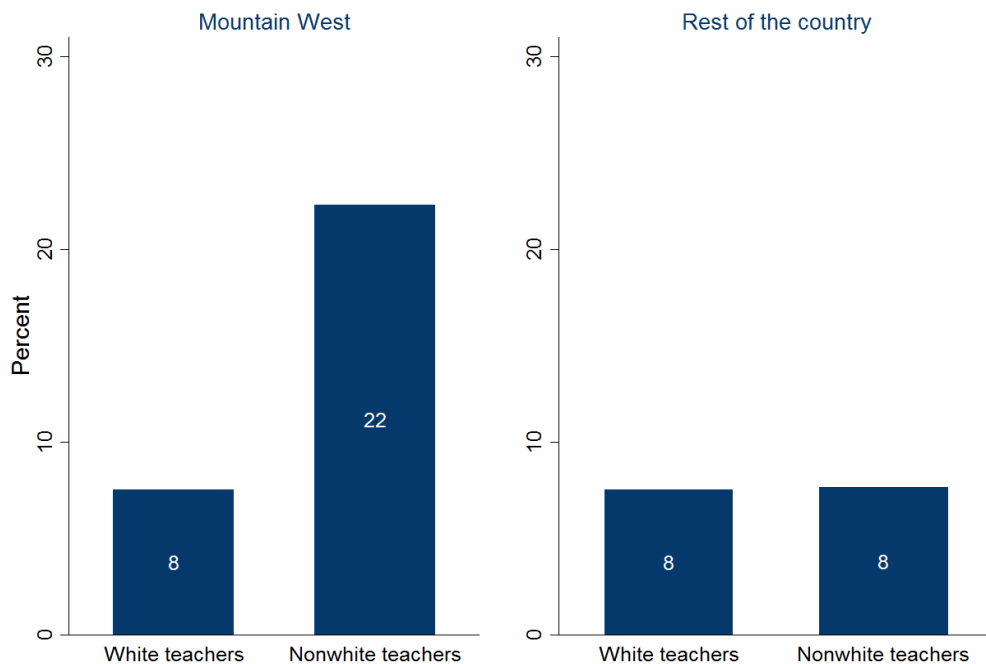
Furthermore, we have found few examples of intentional efforts to recruit minority teachers within the Mountain West region, and the ones we have found are typically at the local level rather than statewide. Cities such as Tucson (Killebrew, 2008), Phoenix (Ferralazzo, 2015), Denver (Asmar, 2017), and Las Vegas (Education Alliance at Brown University, 2004; Bruzda, 2016; Liu et al., 2017) have each targeted teacher diversity through methods including recruiting at minority-serving institutions, participating in job fairs and educational diversity fairs, and advertising within minority community organizations. Universities in the Mountain West have also taken several approaches to foster diversity in the teacher workforce. The University of Nevada, Las Vegas (UNLV), in partnership with the Clark County School District, has supported alternative routes to licensure programs, and has funded a research project on recruitment, preparation, and retention of teachers of color. In addition, UNLV is leading a project funded by the Nevada Department of Education that seeks to support and encourage high school students of color to go to college and to consider teaching (Liu et al., 2017). Similarly, the University

of Colorado Denver has been working with urban school districts to foster the interest of students of color in teaching by presenting the profession as an act of social justice (Gill, 2017).

Shifting focus to the state level, we find that New Mexico is the only state that has enacted legislation specifically to recruit teachers of color. Nonwhite teachers there are eligible for a loan on the condition of working in specific counties (Education Commission of the States, 2003; Aragon, 2017). In Colorado, the legislature commissioned a study on the state’s minority teacher representation in 2014 (House Bill 14-1175; Palaich et al., 2014), though no policy changes have resulted. More recently, both Colorado and New Mexico became part of the new Diverse and Learner-Ready Teacher initiative launched by the Council of Chief State School Officers. Participating states will receive support to promote diversity amongst teachers (Omeola, 2018).

Retaining teachers of color once they’ve entered the classroom is another path through which workforce diversity is determined—and here again, Mountain West states appear to show some room for improvement. Figure 4 compares teacher attrition among white and nonwhite teachers in the region (on the left) in comparison to the rest of the U.S. (on the right). Data for this figure comes from the 2012-13 Teacher Follow-up Survey (the most recent available national data on teacher retention).

Figure 4
Percent of Teachers Who Leave The Profession



Source: Authors' calculations based on the Teacher Follow-up Survey, 2012-2013.

Roughly one in five nonwhite teachers in the Mountain West region left the profession in the 2012-13 school year; this is nearly triple the 8 percent attrition rate observed among both white teachers in the region and nonwhite teachers in the rest of the U.S. Clearly, any progress on diversifying the teacher workforce will be extremely slow if 22 percent of nonwhite teachers are exiting in a typical year. Though not pictured here, we note that rates of moving between schools are equal for nonwhite teachers in both the Mountain West and the rest of the U.S. (11 percent); thus, the high attrition rates observed in the Mountain West is not countered with lower mobility but rather appears to be excessively high attrition unique to the region.

We should note that teachers of color often teach in high-poverty schools with high concentrations of nonwhite students, which tend to have higher rates of attrition overall (Putman et al., 2016). Research has documented factors that influence nonwhite teachers' attrition rates, which include less desirable organizational conditions including lack of instructional autonomy and lower levels of decision-making influence (Ingersoll et al., 2017) and low reported levels of administrative support (Bednar & Gicheva, 2017). Further, anecdotal evidence suggests that nonwhite teachers have multiple responsibilities beyond their classroom; they serve as mentors, liaisons between the school and parents of nonwhite students, and as disciplinarians. These extra duties, which are rarely compensated, are often cited as a leading contributor to teacher burnout among nonwhites (King, 2016; Machado, 2013; and Moss, 2016).

Together, the evidence presented here suggests that though the region is slightly ahead of the rest of the U.S. in bringing teachers of color into the classroom, there are still areas where the region could improve recruiting and certainly could benefit by retaining more teachers of color to keep pace with changing demographics among students. States in the region will need to work through multiple avenues if they, in fact, seek to not simply keep pace with student diversity but also intend to move closer to racial parity between teachers and students.

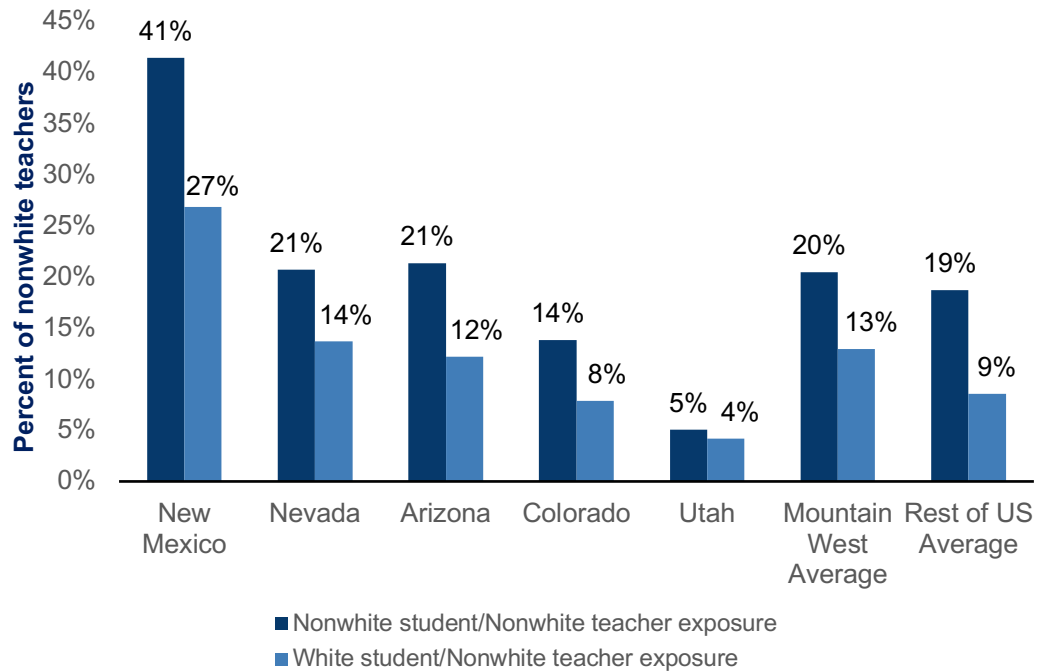
Access to Teachers of Color

Recruiting and retaining nonwhite teachers is insufficient on its own to mitigate the effects of racial and ethnic mismatch. Rather, the mechanism through which matching or mismatching occurs is direct exposure between different groups of students to a teacher of color in the same classroom. Thus, the placement of teachers of color across schools is an important determinant of how readily white or nonwhite students are exposed to teachers of color.

Schools have long been segregated along racial, ethnic, and socioeconomic lines. Teachers of color, as we described above, are overwhelmingly employed in high-poverty, high-minority urban schools. Nationwide, the average teacher of color is estimated between two to three times more likely than the average white teacher to teach in such a hard-to-staff school (Ingersoll & May, 2011). Our recent analysis of student and teacher segregation nationwide shows teachers now have a tendency to be more segregated across schools than students (Hansen & Quintero, 2018, August 15). The incidental advantage to this segregation of teachers is that most nonwhite students in public schools are much more likely to have a teacher of color at some point during their K-12 education. The disadvantage now falls on the nonwhite student in a predominantly white, or low-poverty school. Also, when nonwhite teachers are segregated across schools, relatively few white students have access to them; this is a lost opportunity because white students can benefit from exposure to nonwhite teachers.

We quantify this allocation of teachers across students through student exposure measures. Figure 5 calculates two exposure variables—the average exposure of nonwhite students to nonwhite teachers and the average exposure of white students to nonwhite teachers—and presents them for each state in the region compared to the rest of the U.S.

Figure 5
Student Exposure To Nonwhite Teacher



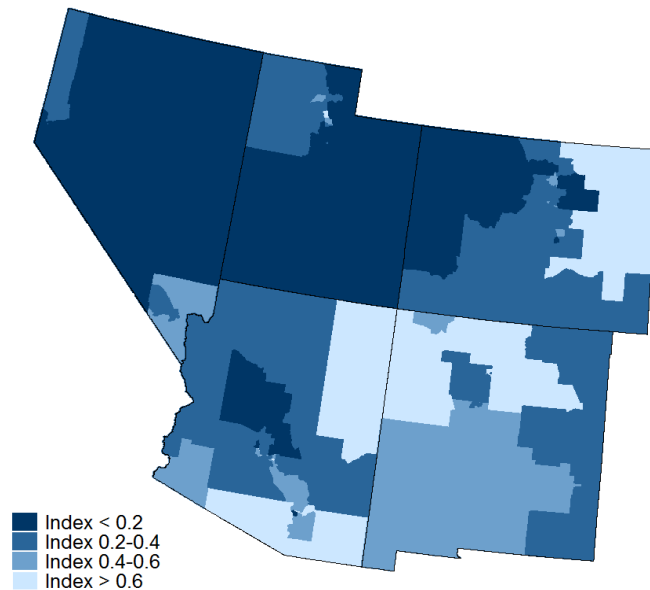
Source: Authors' calculations based on the Schools and Staffing Survey, 2011-2012.

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Figure 5 shows nonwhite students in the Mountain West region attend schools that, on average, have a teacher workforce comprised of 20% nonwhite teachers; white students in the region attend schools where nonwhite teachers account for 13% of the workforce. The region as a whole, in comparison to the rest of the U.S., has slightly higher levels of exposure to teachers of color for both white and nonwhite students. However, this masks considerable variation in exposure rates in different states. For example, New Mexico has high levels of exposure for both white and nonwhite students to teachers of color. Utah, on the other hand, has so few teachers of color in the state that both exposure measures are low.

Another way to illustrate access is through a geographical lens in the region. Using data from the 2016 American Community Survey, we calculated the teacher-student parity index among areas in the Mountain West states and present them in Figure 6.² This is an alternative method of quantifying access, since the parity index is not calculated in the same way as the exposure rate (which is not possible with this data, as we do not observe clustering within schools in this survey). Comparing the demographic information of sample public school students and teachers in each geographic region, we calculate how close each is to racial and ethnic parity between students and teachers (we define parity in this map as having a teacher-student parity index greater than 0.6). Figure 6 shows much of the Mountain West region has parity index values below 0.6, and large swaths of the region (particularly in the region’s north) have parity index values less than 0.2.

Figure 6
Teacher-Student Parity Index in the Mountain West



Measures are based on all nonwhite teachers treating Black, Hispanic, Asian, Native American Pacific Islander or other underrepresented races interchangeably.

Source: Authors' calculations, using the American Community Survey 2016, 5-year estimates.

Interestingly, many of the large cities in the region—which tend to exhibit the highest concentrations of nonwhite students—actually have some of the highest parity values, demonstrating high concentrations of teachers as well. On the other hand, suburbs and rural areas are predominantly white in much of the region (excluding New Mexico and southern Arizona) but have grown increasingly diverse in recent years, particularly driven by Hispanic population growth (Hansen & Quintero, 2017). The patterns in Figure 6 suggest many of these predominantly white areas demonstrate some of the lowest parity rates. It is clear, based on these results, states and districts should avoid the tendency to simply recruit teachers of color to cities—as these are the settings in which they are already most prevalent. As the entire region grows more diverse, there is a need for promoting a more diffuse allocation of teachers of color across the region.

Policy Recommendations

The evidence we have presented in this brief make clear that teachers of color are a scarce resource in the American public school system and the demographics of the Mountain West region make the need for teachers of color particularly acute. Though some states in the region are clearly lagging on teacher diversity while others are leading, all states need to continue recruiting and retaining teachers of color to keep pace with continuing demographic shifts. We offer several policy recommendations before concluding.

1. State governments in the region should consider making teacher diversity a priority. Based on our review of ongoing efforts to prioritize recruitment and retention in the region, the bulk of these efforts are based in cities. Conversely, our results show that racial mismatch in the Mountain West is occurring not just in cities but is often most acute in small towns and rural areas. A state-level strategic approach to promoting more teacher diversity may prove more effective in raising awareness of the issue and offers a broader potential reach for any results. Along the same lines, state universities and colleges that produce teachers for the region should develop robust, strategic plans, in partnership with school districts and state policymakers, that lay out clear and deliberate goals to swell the teacher pipeline in the near future.
2. Critically examine whether policies influence racial and ethnic demographics in subtle ways; consider amending them to be more accommodating. Current state and district policies, though implemented in race-blind ways, may inadvertently raise barriers for teacher candidates from nonwhite groups. For example, licensure exams, student teaching requirements, and license reciprocating policies across Mountain West states may raise barriers that are more onerous for teacher candidates of color. Conversely, supports in high-poverty schools or targeted financial incentives (e.g., loan forgiveness) might disproportionately help attract and keep teachers of color (see Hansen & Quintero, 2018, March 20). Considering the distinct traits of teachers of color and where they tend to work may illuminate myriad ways where race-neutral policies have consequences for different racial and ethnic groups.

3. Quick improvements in recruitment and retention of teachers of color might be feasible with a strategic focus. In this brief, we document patterns among teachers of color in the region that lag in significant ways behind averages observed across the rest of the U.S. Focusing on these lagging metrics first to simply achieve recruitment and retention rates on par with other states would be a marked improvement to the status quo. For example, alternative certification is a low-hanging fruit in the region and targeted efforts among nonwhite communities may yield quick results.
4. Finally, pursue strategies that can mitigate the effects of racial and ethnic mismatching in the near term. Due to both the current size of the gaps and the ongoing population shifts the Mountain West states will face, teacher diversity will pose an ongoing, long-term challenge. Yet, states and districts can consider strategies to help current teachers improve their interactions with students now to help mitigate some of the effects of mismatch—such efforts may include providing training to teachers about unconscious bias and culturally relevant pedagogy (Dee & Gershenson, 2017). Offering courses to students on ethnic studies also shows promise as an intervention (Dee & Penner, 2017).

As the topic of teacher diversity continues to grow in prominence nationally, we encourage study of the particular needs in the Mountain West states, both for its specific challenges and its potential to take the lead nationally as states in the region confronts these challenges.

Endnotes

¹ Our use of the Mountain West label refers to five states: Arizona, Colorado, Nevada, New Mexico, and Utah.

² We use the Census-defined geographic areas known as public-use microdata areas (PUMAs), which represent populations of approximately 100,000.

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